



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

CURRICULUM AND ASSESSMENT POLICY STATEMENT

(CAPS)

**FOUNDATION PHASE
MATHEMATICS**

RECEPTION YEAR

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**NATIONAL CURRICULUM AND ASSESSMENT POLICY STATEMENT
(CAPS) FOR MATHEMATICS FOUNDATION PHASE*****1.1 Background***

The *National Curriculum Statement Grades R – 12 (NCS)* stipulates policy on curriculum and assessment in the schooling sector.

To improve implementation, the National Curriculum Statement was amended, with the amendments coming into effect in January 2012. A single comprehensive Curriculum and Assessment Policy document was developed for each subject to replace Subject Statements, Learning Programme Guidelines and Subject Assessment Guidelines in Grades R - 12.

1.2 Overview

- (a) The *National Curriculum Statement Grades R – 12 (January 2012)* represents a policy statement for learning and teaching in South African schools and comprises the following:
 - (i) National Curriculum and Assessment Policy Statements for each approved school subject;
 - (ii) The policy document, *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12*; and
 - (iii) The policy document, *National Protocol for Assessment Grades R – 12 (January 2012)*.
- (b) The *National Curriculum Statement Grades R – 12 (January 2012)* replaces the two current national curricula statements, namely the
 - (i) *Revised National Curriculum Statement Grades R - 9, Government Gazette No. 23406 of 31 May 2002*, and
 - (ii) *National Curriculum Statement Grades 10 - 12 Government Gazettes, No. 25545 of 6 October 2003 and No. 27594 of 17 May 2005*.
- (c) The national curriculum statements contemplated in subparagraphs (a) and (b) comprise the following policy documents which will be incrementally repealed by the *National Curriculum Statement Grades R – 12 (January 2012)* during the period 2012-2014:
 - (i) The Learning Area/Subject Statements, Learning Programme Guidelines and Subject Assessment Guidelines for Grades R - 9 and Grades 10 – 12;

- (ii) The policy document, *National Policy on assessment and qualifications for schools in the General Education and Training Band d*, promulgated in *Government Notice No. 124 in Government Gazette No. 29626* of 12 February 2007;
 - (iii) The policy document, the *National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF)*, promulgated in *Government Gazette No.27819* of 20 July 2005;
 - (iv) The policy document, *An addendum to the policy document, the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF), regarding learners with special needs*, published in *Government Gazette, No.29466* of 11 December 2006, is incorporated in the policy document, *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12*; and
 - (v) The policy document, *An addendum to the policy document, the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF), regarding the National Protocol for Assessment (Grades R – 12)*, promulgated in *Government Notice No.1267 in Government Gazette No. 29467* of 11 December 2006.
- (c) The policy document, *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12*, and the sections on the Curriculum and Assessment Policy as contemplated in Chapters 2, 3 and 4 of this document constitute the norms and standards of the *National Curriculum Statement Grades R – 12*. It will therefore, in terms of *section 6A of the South African Schools Act, 1996 (Act No. 84 of 1996)*, form the basis for the Minister of Basic Education to determine minimum outcomes and standards, as well as the processes and procedures for the assessment of learner achievement to be applicable to public and independent schools.

1.3 General aims of the South African Curriculum

- (a) The *National Curriculum Statement Grades R - 12* gives expression to the knowledge, skills and values worth learning in South African schools. This curriculum aims to ensure that children acquire and apply knowledge and skills in ways that are meaningful to their own lives. In this regard, the curriculum promotes knowledge in local contexts, while being sensitive to global imperatives.
- (b) The *National Curriculum Statement Grades R - 12* serves the purposes of:
 - equipping learners, irrespective of their socio-economic background, race, gender, physical ability or intellectual ability, with the knowledge, skills and values necessary for self-fulfilment, and meaningful participation in society as citizens of a free country;

- providing access to higher education;
- facilitating the transition of learners from education institutions to the workplace; and
- providing employers with a sufficient profile of a learner's competences.

(c) The National Curriculum Statement Grades R - 12 is based on the following principles:

- Social transformation: ensuring that the educational imbalances of the past are redressed, and that equal educational opportunities are provided for all sections of the population;
- Active and critical learning: encouraging an active and critical approach to learning, rather than rote and uncritical learning of given truths;
- High knowledge and high skills: the minimum standards of knowledge and skills to be achieved at each grade are specified and set high, achievable standards in all subjects;
- Progression: content and context of each grade shows progression from simple to complex;
- Human rights, inclusivity, environmental and social justice: infusing the principles and practices of social and environmental justice and human rights as defined in the Constitution of the Republic of South Africa. The National Curriculum Statement Grades R – 12 is sensitive to issues of diversity such as poverty, inequality, race, gender, language, age, disability and other factors;
- Valuing indigenous knowledge systems: acknowledging the rich history and heritage of this country as important contributors to nurturing the values contained in the Constitution; and
- Credibility, quality and efficiency: providing an education that is comparable in quality, breadth and depth to those of other countries.

(d) The National Curriculum Statement Grades R - 12 aims to produce learners that are able to:

- identify and solve problems and make decisions using critical and creative thinking;
- work effectively as individuals and with others as members of a team;
- organise and manage themselves and their activities responsibly and effectively;
- collect, analyse, organise and critically evaluate information;
- communicate effectively using visual, symbolic and/or language skills in various modes;
- use science and technology effectively and critically showing responsibility towards the environment and the health of others; and
- demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation.

(e) Inclusivity should become a central part of the organisation, planning and teaching at each school. This can only happen if all teachers have a sound understanding of how to recognise and address barriers to learning, and how to plan for diversity.

The key to managing inclusivity is ensuring that barriers are identified and addressed by all the relevant support structures within the school community, including teachers, District-Based Support Teams, Institutional-Level Support Teams, parents and Special Schools as Resource

Centres. To address barriers in the classroom, teachers should use various curriculum differentiation strategies such as those included in the Department of Basic Education's *Guidelines for Inclusive Teaching and Learning* (2010).

1.4Time Allocation

1.4.1 Foundation Phase

(a) The instructional time in the Foundation Phase is as follows:

SUBJECT	GRADE R (HOURS)	GRADES 1-2 (HOURS)	GRADE 3 (HOURS)
Home Language	10	7/8	7/8
First Additional Language		2/3	3/4
Mathematics	7	7	7
Life Skills	6	6	7
▪ Beginning Knowledge	(1)	(1)	(2)
• Creative Arts	(2)	(2)	(2)
• Physical Education	(2)	(2)	(2)
• Personal and Social Well-being	(1)	(1)	(1)
TOTAL	23	23	25

- (b) Instructional time for Grades R, 1 and 2 is 23 hours and for Grade 3 is 25 hours.
- (c) Ten hours are allocated for languages in Grades R-2 and 11 hours in Grade 3. A maximum of 8 hours and a minimum of 7 hours are allocated for Home Language and a minimum of 2 hours and a maximum of 3 hours for Additional Language in Grades R – 2. In Grade 3 a maximum of 8 hours and a minimum of 7 hours are allocated for Home Language and a minimum of 3 hours and a maximum of 4 hours for First Additional Language.
- (d) In Life Skills Beginning Knowledge is allocated 1 hour in Grades R – 2 and 2 hours as indicated by the hours in brackets for Grade 3.

1.4.2 Intermediate Phase

(a) The instructional time in the Intermediate Phase is as follows:

SUBJECT	HOURS
Home Language	6
First Additional Language	5
Mathematics	6
Natural Science and Technology	3,5
Social Sciences	3
Life Skills	4
▪ Creative Arts	(1,5)
▪ Physical Education	(1)
▪ Personal and Social Well-being	(1,5)
TOTAL	27,5

1.4.3 Senior Phase

(a) The instructional time in the Senior Phase is as follows:

SUBJECT	HOURS
Home Language	5
First Additional Language	4
Mathematics	4,5
Natural Science	3
Social Sciences	3
Technology	2
Economic Management Sciences	2
Life Orientation	2
Arts and Culture	2
TOTAL	27,5

1.4.4 Grades 10-12

(a) The instructional time in Grades 10-12 is as follows:

Subject	Time allocation per week (hours)
i. Home Language	4.5
ii. First Additional Language	4.5
iii. Mathematics	4.5
iv. Life Orientation	2
v. A minimum of any three subjects selected from Group B <u>Annexure B, Tables B1-B8</u> of the policy document, <i>National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12</i> , subject to the provisos stipulated in paragraph 28 of the said policy document.	12 (3x4h)

The allocated time per week may be utilised only for the minimum required NCS subjects as specified above, and may not be used for any additional subjects added to the list of minimum subjects. Should a learner wish to offer additional subjects, additional time must be allocated for the offering of these subjects.

2.1. Introduction

In Section 2, the Foundation Phase Mathematics Curriculum and Assessment Policy Statement (CAPS) provides teachers with a definition of mathematics, specific aims, specific skills, focus of content areas, weighting of content areas, recommended resources for the Foundation Phase Mathematics lessons, suggested guidelines to support learners with barriers to learning Mathematics, mental mathematics and enhancing the teaching of early numeracy skills in Grade R.

2.2. What is Mathematics?

Mathematics is a language that makes use of symbols and notations to describe numerical, geometric and graphical relationships. It is a human activity that involves observing, representing and investigating patterns and qualitative relationships in physical and social phenomena and between mathematical objects themselves. It helps to develop mental processes that enhance logical and critical thinking, accuracy and problem-solving that will contribute to decision-making.

2.3. Specific Aims

The teaching and learning of Mathematics aims to develop the following in the learner:

- critical awareness of how mathematical relationships are used in social, environmental, cultural and economic relations
- confidence and competence to deal with any mathematical situation without being hindered by a fear of Mathematics
- a spirit of curiosity and a love of Mathematics
- appreciation for the beauty and elegance of Mathematics
- recognition that Mathematics is a creative part of human activity
- deep conceptual understanding in order to make sense of Mathematics and
- acquisition of specific knowledge and skills necessary for:
 - the application of Mathematics to physical, social and mathematical problems
 - the study of related subject matter (e.g. other subjects) and
 - further study in Mathematics.

2.4. Specific Skills

To develop essential mathematical skills the learner should:

- develop the correct use of the language of Mathematics
- develop number vocabulary, number concept, calculation and application skills
- learn to listen, communicate, think, reason logically and apply the mathematical knowledge gained
- learn to investigate, analyse, represent and interpret information
- learn to pose and solve problems and
- build an awareness of the important role that Mathematics plays in real-life situations, including the personal development of the learner.

2.5. Focus of Content Areas

Mathematics in the Foundation Phase covers five content areas. Each content area contributes to the acquisition of specific skills. The table below shows the general focus of the content areas as well as the specific focus of the content areas for the Foundation Phase.

Table 2.1 Foundation Phase Mathematics Content Focus

MATHEMATICS CONTENT KNOWLEDGE		
Content Area	General Content Focus	Foundation Phase: Specific Content Focus
Numbers, Operations and Relations	<p>Development of number sense that includes:</p> <ul style="list-style-type: none"> the meaning of different kinds of numbers; the relationship between different kinds of numbers; the relative size of different numbers; representation of numbers in various ways; and the effect of operating with numbers. 	<p>The number range developed by the end of Grade 3 includes whole numbers to at least 1 000 and common fractions. In this phase, the learners' number concept is developed through working with physical objects to count collections of objects, partition and combine quantities, skip count in various ways, solve contextual (word) problems, and build up and break down numbers.</p> <ul style="list-style-type: none"> Counting enables learners to develop number concept, mental mathematics, estimation, calculation skills and recognition of patterns. Number concept development helps learners to learn about properties of numbers and to develop strategies that can make calculations easier. Solving problems in context enables learners to communicate their own thinking orally and in writing through drawings and symbols. Learners build an understanding of basic operations of addition, subtraction, multiplication and division. Learners develop fraction concepts through solving problems involving the sharing of physical quantities and by using drawings. Problems should include solutions that result in whole number remainders or fractions. Sharing should involve not only finding parts of wholes, but also finding parts of collections of objects. In this phase, learners are not expected to read or write fraction symbols.
Patterns, Functions and Algebra	<p>Algebra is the language for investigating and communicating most of Mathematics and can be extended to the study of functions and other relationships between variables. A central part of this content area is for the learner to achieve efficient manipulative skills in the use of algebra. It also focuses on the:</p>	<p>In this phase, learners work with both number patterns (e.g. skip counting) and geometric patterns (e.g. pictures).</p> <ul style="list-style-type: none"> Learners should use physical objects, drawings and symbolic forms to copy, extend, describe and create patterns. Copying the pattern helps learners to see the logic of how the pattern is made. Extending the pattern helps learners to check that they have properly understood the logic of the pattern. Describing the pattern helps learners to develop their

	<ul style="list-style-type: none"> description of patterns and relationships through the use of symbolic expressions, graphs and tables and identification and analysis of regularities and change in patterns, and relationships that enable learners to make predictions and solve problems. 	<p>language skills.</p> <ul style="list-style-type: none"> Focusing on the logic of patterns lays the basis for developing algebraic thinking skills. Number patterns support number concept development and operational sense built in Numbers, Operations and Relationships. Geometric patterns include sequences of lines, shapes and objects but also patterns in the world. In geometric patterns learners apply their knowledge of space and shape.
Space and Shape (Geometry)	<p>The study of Space and Shape improves understanding and appreciation of the pattern, precision, achievement and beauty in natural and cultural forms. It focuses on the</p> <ul style="list-style-type: none"> properties, relationships; orientations, positions and transformations of two-dimensional shapes and three-dimensional objects. 	<p>In this phase learners focus on three-dimensional (3D) objects, two-dimensional (2D) shapes, position and directions.</p> <ul style="list-style-type: none"> Learners explore properties of 3D objects and 2D shapes by sorting, classifying, describing and naming them. Learners draw shapes and build with objects. Learners recognise and describe shapes and objects in their environment that resemble mathematical objects and shapes. Learners describe the position of objects, themselves and others using the appropriate vocabulary. Learners follow and give directions.
Measurement	<p>Measurement focuses on the selection and use of appropriate units, instruments and formulae to quantify characteristics of events, shapes, objects and the environment. It relates directly to the learner's scientific, technological and economic worlds enabling the learner to:</p> <ul style="list-style-type: none"> make sensible estimates; and be alert to the reasonableness of measurements and results. 	<ul style="list-style-type: none"> In this phase the learners' concept of measurement is developed by working practically with different concrete objects and shapes, learning the properties of length, capacity, mass, area and time. Learners measure the properties of shapes and objects using informal units where appropriate, e.g. hands, paces, containers, etc. Learners compare different quantities by using comparative words e.g. taller/shorter, heavier/lighter, etc. Learners are introduced to standard units such as grams, kilograms; millilitres, litres; centimetres, metres. <p>Activities related to time should be structured with the awareness that learners' understanding of the passing of time should be developed before they read about time.</p>
Data Handling	<p>Through the study of data handling, the learner develops the skills to</p> <ul style="list-style-type: none"> collect; organise; display and analyse and interpret given data. 	<p>The focus in the teaching and learning of data handling in the Foundation Phase is on sorting objects and data in different ways, based on the different features of the objects or data.</p> <ul style="list-style-type: none"> Learners are expected to interpret and construct pictographs and bar graphs with one-to-one correspondence with the given data.

2.6. Weighting of Content Areas

The weighting of mathematics content areas serves two primary purposes: firstly the weighting gives guidance on the amount of time needed to address the content within each content area adequately; secondly the weighting gives guidance on the spread of content in assessment. The weighting of the content areas is not the same for each grade in the Foundation Phase.

Table 2.2 Weighting of Content Areas in the Foundation Phase

WEIGHTING OF CONTENT AREAS			
Content Area	Grade 1	Grade 2	Grade 3
Numbers, Operations and Relationships*	65%	60%	58%
Patterns, Functions and Algebra	10%	10%	10%
Space and Shape (Geometry)	11%	13%	13%
Measurement	9%	12%	14%
Data Handling (Statistics)	5%	5%	5%
	100%	100%	100%

In Grades R – 3, it is important that the area of Numbers, Operations and Relationships is the main focus of Mathematics. Learners need to exit the Foundation Phase with a secure number sense and operational fluency. The aim is for learners to be competent and confident with numbers and calculations. For this reason the notional time allocated to Numbers Operations and Relationships has been increased. Most of the work on patterns should focus on number patterns to consolidate learners' number ability further.

2.7. Mathematics in the Foundation Phase

Foundation Phase Mathematics forges the link between the child's pre-school life and life outside school on the one hand, and the abstract Mathematics of the later grades on the other hand. In the early grades children should be exposed to mathematical experiences that give them many opportunities "to do, talk and record" their mathematical thinking.

The amount of time spent on Mathematics has a decisive impact on learners' development of mathematical concepts and skills. The activities learners engage in should, not be "keep busy" activities, but should be clearly focused on the mathematics as outlined in the curriculum.

2.7.1 Suggested guidelines for classroom management

All the time allocated to Mathematics on a single day should be considered as one period. During the Mathematics period the following should usually happen:

- **Whole class activity**
 - Mental mathematics
 - Consolidation of concepts

- Classroom management (allocation of independent activities, etc.)
- **Small group teaching**
 - Counting
 - Number concept development (oral and practical activities)
 - Problem-solving (oral and practical activities)
 - Written recording
 - Development of calculating strategies (oral and practical activities)
 - Patterns
 - Space and shape
 - Measurement
 - Data handling.

- **Independent work**

Learners practise and consolidate concepts developed in whole class and small group teaching.

Whole class activity: where the focus will be mainly on mental mathematics, consolidation of concepts and allocation of independent activities for at least 20 minutes per day at the start of the Mathematics lesson. During this time the teacher will work with the whole class to determine and record (where appropriate) the name of the day, the date, the number of learners present and absent, and the nature of the weather. Mental mathematics will include brisk mental starters such as “the number after/before 8 is; 2 more/less than 8 is; $4 + 2$; $5 + 2$, $6 + 2$ ”, etc. During this time the teacher can consolidate concepts that are slightly challenging. It is important that the teacher should assign the class their general class activity as well as independent activities that they do on their own while she gets on with the small group focused sessions.

- *Small group focused lessons:* are most effective when the teacher takes a small group of learners (88 to 1212) who have the same ability with her on the floor or at their tables, while the rest of the class is engaged in independent activities. The teacher works **orally** and **practically** with the learners, engaging in such activities as counting, estimation, number concept development and problem-solving activities, as well as activities concerning pattern, space and shape, measurement and data handling, which should be carefully planned.
- In order to reinforce learning, written work (work book, work sheet examples, work cards, etc.) should form part of the group session where possible. Learners should have writing materials (class work books, etc.) available for problem-solving activities. The group sessions should be very interactive and learners should be encouraged to “**do, talk, demonstrate and record**” their mathematical thinking.
- Teachers should take care not to underestimate the slower learners; they should also be stretched. It is easier to match the difficulty level of the work to the learners if the group the teacher is working with is of approximately equal ability. Mixed ability groups can work well for construction, measurement and patterning or sorting activities, or for games.
- *Independent activities:* While the teacher is busy with the small group focused lesson, the rest of the class should be purposefully engaged in a variety of mathematical activities that focus on reinforcing and consolidating concepts and skills that have already been taught during small group focused lessons. These independent activities should be differentiated to cater for different ability levels. Independent activities may include:

- work book activities
 - graded worksheets/work cards for counting, manipulating numbers, simple problems in context (word problems), etc.
 - mathematics games like Ludo, dominoes, jigsaw puzzle and
 - tasks that involve construction, sorting, patterning or measurement.
- The Mathematics period should also support learners experiencing barriers to learning, enrichment activities for high flyers, assessment activities, etc.
 - Both independent and small group focused lesson activities have to be observed (practical, oral), marked and overseen (written recording) by the teacher as part of her informal and formal assessment activities.
 - Close tracking of learners' responses (verbal, oral, practical, written recording) in learning and teaching situations enables the teacher to do continuous assessment, monitor learners' progress and plan support for learners experiencing barriers to learning.

2.7.2 Learners with barriers to learning Mathematics

It is important for learners who experience barriers to learning Mathematics to be exposed to activity-based learning. Practical examples using concrete objects combined with practical activities should be used for a longer time than with other learners, as moving to abstract work too soon may lead to frustration and regression. These learners may require and should be granted more time for:

- completing tasks
- acquiring thinking skills (own strategies) and
- assessment activities.

The number of activities to be completed should be adapted to the learner without compromising the concept and skills that are addressed.

2.7.3 Mental mathematics

Mental mathematics plays a very important role in the curriculum. The number bonds and multiplication table facts that learners are expected to know or recall fairly quickly, are listed for each grade. In addition, mental mathematics is used extensively to explore the higher number ranges through skip counting and by doing activities such as “up and down the number ladder”, e.g. the Grade 3 teacher might ask the following “chained” questions: “Start with 796. Make that 7 more. Yes, it is 803. Make that 5 less. Yes, it is 798. Make that 10 more ... 2 more ... 90 more ... 5 less ...” etc. These activities help learners to construct a mental number line.

Mental mathematics therefore features strongly in both counting and number concepts development sections relating to the topics Number and Patterns, and may also occur during Measurement and Data Handling activities. When doing mental mathematics, the teacher should never force learners to do mental calculations that they cannot handle — writing materials and/or counters should always be available for those learners who may need them.

2.8 Grade R

The approach to learning Mathematics should be based on the principles of integration and play based learning. The teacher should be pro-active, a mediator rather than a facilitator. A mediator makes the most of incidental learning opportunities that arise spontaneously during a range of child-centred activities such as free play in the fantasy corner or block construction site, sand and water play activities as well as teacher-guided activities that focus on mathematical concepts such as counting, number concept development, space and shape, patterns, time and other emergent mathematics activities. Colour is not in itself a mathematical concept, but can be used to promote the acquisition of mathematical concepts in activities such as sorting, grouping and classifying.

All aspects of Grade R, including the classroom environment and teaching and learning practice, should promote the holistic development of the child. Development that is an integral part of emergent numeracy, includes cognitive development (problem-solving, logical thought and reasoning), language development (the language of mathematics) and perceptual-motor as well as emotional and social development. All these aspects can be developed through stories, songs, rhymes, finger games and water play, educational toys including board games, construction and exploration activities (mass, time, capacity, measurement, etc.), imaginative play, outdoor play and “playground games”. Many kinds of games and play could include aspects of numeracy, e.g. measuring during cooking or counting during shopping.

In other words, the acquisition of emergent mathematics and related mathematical concepts should, like all good teaching, adhere to the following learning principles where children move through three stages of learning, namely:

- the kinesthetic stage (experience concepts with the body and senses)
- the concrete stage (3D)3 – D, using a variety of different objects such as blocks, bottle tops, twigs and other objects in the environment) and
- paper and pencil representation (semi-concrete representations using drawings, matching cards etc.).

In the Grade R year the timetable is called **the daily programme** and it comprises three main components, namely:

- teacher-guided activities
- routines and
- child-initiated activities or free play.

The emphasis throughout should be on using these aspects of the daily programme to promote the acquisition of emergent numeracy in a fun and spontaneous context. Teacher-guided numeracy learning opportunities are offered during ring time. Most rings can be given a mathematical focus. The early morning ring when children are greeted and a roll-call is taken provides an opportunity for playing with numbers and counting. Other rings, such as the Mathematics ring, perceptual-motor rings, movement, music and science rings can also provide a Mathematics focus.

Creative art activities could also have a mathematical emphasis, when using geometric shapes such as circles and squares to make a collage or designing a pattern to frame a picture. The weather chart, calendar and birthday rings also provide opportunities for exploring mathematical concepts. It is the teacher’s knowledge and initiative that maximises learning potential.

- *Routines*, where children participate actively, like snack time, arrival, home time and toilet routines, can also be given a Mathematics focus. Children wearing red, e.g. go to the toilet first (colour and ordinal number), each child gets a plate and a sandwich (one-to-one correspondence), Thandi would like a second sandwich, David doesn't want any more. What this amounts to is identifying and utilising a teachable moment, thus becoming a mediator of learning.
- During *free play* the teacher can promote **emergent mathematics** through the appropriate structuring of the free-play area. Outdoor free play such as climbing on a wooden climbing frame or riding on the cycle track might promote the acquisition of key mathematical vocabulary such as up/down, bottom/top, fast/slow, high/low, etc. Sand and water play will also enhance the understanding of concepts such as mass, volume and capacity. All these activities will also promote essential underpinning perceptual-motor skills, which become an inherent part of the successful acquisition of literacy and numeracy. Examples of these skills are:
 - developing an understanding of your position in space e.g. behind, in front, underneath or next to an object (this can be linked to place value in mathematics) and
 - directionality and laterality (this can be linked to number and letter formation and reading from left to right).

The practice outlined above is illustrative of a Grade R approach that promotes problem-solving, logical thinking and reasoning, as well as education for citizenship because of its focus on co-operative learning and negotiation. By utilising teachable moments, a teacher can encourage children to reflect on their decisions and predict possibilities, e.g. whether they think a container being used in water play will hold more than another container.

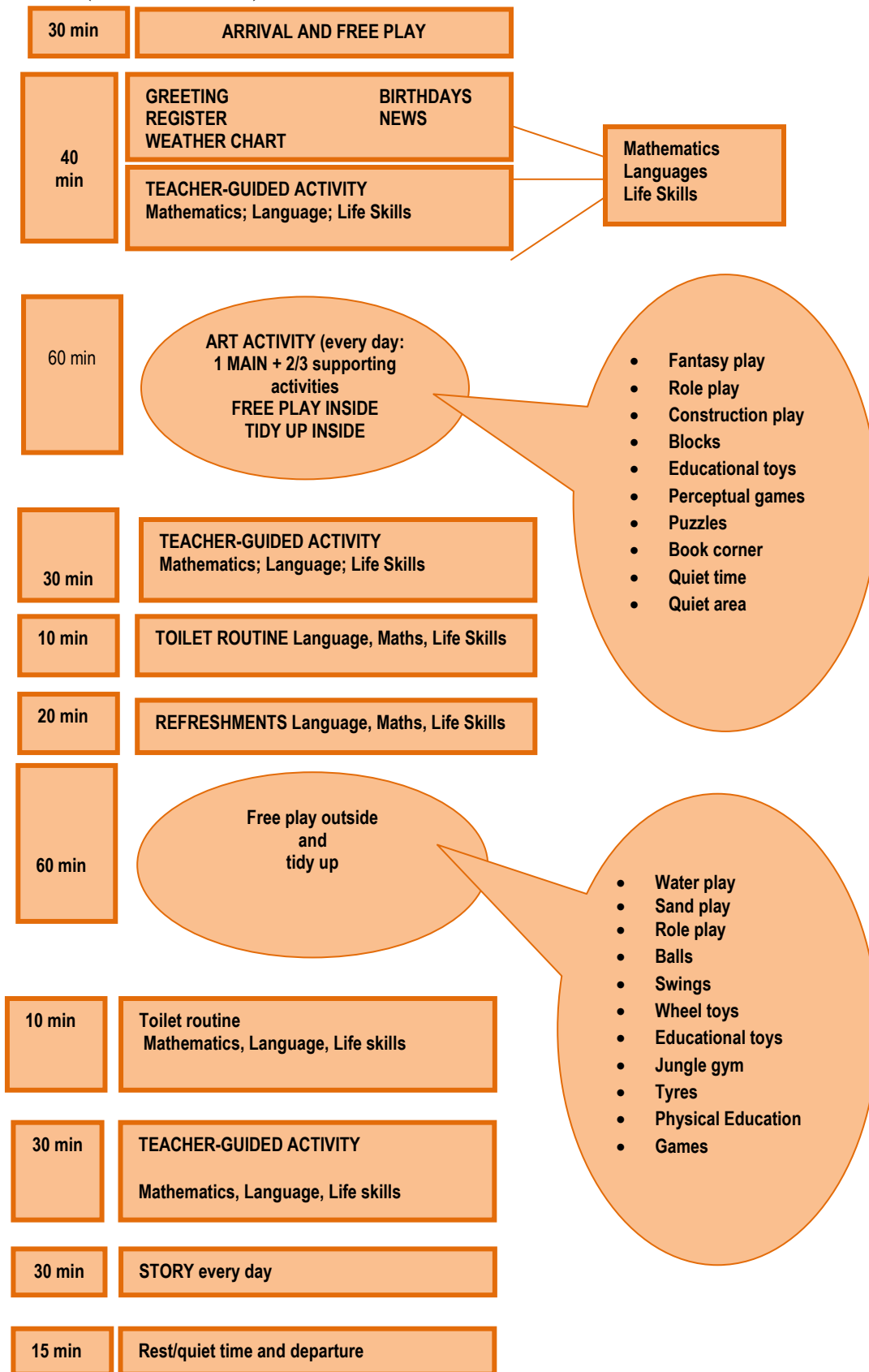
By making helpful suggestions and inviting a child to think about alternative positions and ways of problem-solving, a teacher can encourage children to think more deeply about an issue and find good reasons for the choices they make. In this way not only mathematical but also *holistic development* is addressed and critical premises underpinning CAPS are brought into play.

Assessment practices in Grade R should be informal and children should not be subjected to a 'test' situation. For this reason assessment activities have not been included in the Grade R CAPS. Each activity used for assessment should be carefully planned so that it integrates a variety of skills.

In Grade R most of the assessment takes place through observation, with the teacher recording the results of the assessment using a checklist. As the year progresses a full picture of each child, complete with challenges and strengths, is gradually built. This allows for challenges to be addressed and strengths to be maximised.

A traditional, formal classroom-based learning programme that is tightly structured and 'basics bound' should be avoided, as it does not optimise numeracy acquisition for the Grade R learner. Grade R should not be a 'watered down' Grade 1 class. It has its own unique characteristics based on how children in this age group make sense of their world and acquire the knowledge, skills, values and attitudes that will allow them to maximise the opportunities afforded in the formal learning years.

2.8.1 Daily Programme Grade R (± 7:30 – 13:00)



MATHEMATICS

- Activities designed from CAPS (mathematics)
- Songs and music activities
- Perceptual activities
- Counting rhymes
- Theme discussions
- Science experiments
- Free play
- Routines

LANGUAGES

- Activities designed from CAPS (home language)
- Stories
- Dramatisation
- Books/pictures
- Picture reading
- Picture discussions
- Perceptual activities
- Parent poster
- Parent letter
- News
- Poems/rhymes
- Music/songs/rhymes
- Tapes
- Theme discussions
- Human movement activities
- Routines
- Free play

LIFE SKILLS

- Activities designed from CAPS (life skills)
- Human movement activities
- Songs and music
- Poems and rhymes
- Theme discussion
- Birthdays
- Routines
- Free play

2.9 Recommended resources: Foundation Phase Mathematics classroom

- Counters
- Large dice
- A big counting frame
- A height chart
- Big 1 – 100 and 101 – 200 number grid posters (100-charts)
- Different number lines (vertical and horizontal)
- A set of flash cards (expanding cards)
- Play money — coins and notes
- A calendar for the current year
- A large analogue wall clock
- A balance scale
- Building blocks
- Modelling clay
- A variety of boxes of different shapes and sizes brought from home
- A variety of plastic bottles and containers to describe and compare capacities
- Good examples of a sphere (ball), a rectangular prism (box), cube, cone, pyramid and cylinder – the teacher can make this herself
- A number of plastic or cardboard squares, different rectangles, circles, different triangles all of different sizes
- Mathematical games, e.g. Ludo, Snakes and Ladders, jigsaw puzzles, dominoes, tangrams, etc.
- Essential for Grades R and 1:
 - Areas for sand and water play
 - Apparatus for climbing, balancing, swinging and skipping
 - A play-shop with items to be bought with play-money
 - A variety of appropriate games such as ‘what’s in a square’?
 - Blocks

SECTION 3

CONTENT AREAS OVERVIEW – GRADES R 3

3.1. Introduction

In the General Education and Training band there are five content areas in Mathematics:

- Numbers, Operations and Relationships
- Patterns, Functions and Algebra
- Space and Shape
- Measurement
- Data Handling

Each content area is broken down into mathematical topics, e.g. in Space and Shape in the Foundation Phase one topic is two-dimensional (2D) shapes. Concepts and skills are specified within each topic. Section 3 of the Foundation Phase Mathematics CAPS specifies and clarifies the Mathematics content required.

3.2. Specification of content to show progression

The phase overview tables show the specification of concepts and skills and the progression from Grade R to 3. The grade overview tables show the progression of concepts and skills across the four terms of the year.

In certain topics the concepts and skills are similar in two or three successive grades. The clarification of content will give guidelines on how progression should be addressed in these cases. The specification of content should therefore be read in conjunction with the clarification of content.

3.2.1 Foundation Phase (Grade R – 3) overview

The Foundation Phase overview shows progression of content areas; Number Operations and Relationships, Patterns, Functions and Algebra, Space and Shape, Measurement and Data Handling across Grades R – 3 as outlined in the table below:

MATHEMATICS PHASE OVERVIEW

1. NUMBERS, OPERATIONS AND RELATIONSHIPS

Progression in Numbers, Operations and Relationships

- The main progression in Numbers, Operations and Relationships happens in three stages:
 - The number range increases
 - Different kinds of numbers are introduced
 - The calculation strategies change.
- As the number range for doing calculations increases up to Grade 3, learners should develop more efficient strategies for calculations
- Contextual problems should take account of the number range for the grade as well as the calculation competencies of learners.

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
NUMBER CONCEPT DEVELOPMENT: Count with whole numbers				
1.1 Count objects	Count concrete objects Estimate and count to at least 10 everyday objects reliably	Count concrete objects Estimate and count to at least 50 everyday objects reliably; counting by grouping is encouraged.	Count concrete objects Estimate and count to at least 200 everyday objects reliably; counting by grouping is encouraged.	Count concrete objects Estimate and counts to at least 1 000 everyday objects reliably; counting by grouping is encouraged.
1.2 Count forwards and backwards	Count forwards and backwards in ones from 1 to 10 Use number rhymes and songs	Count forwards and backwards in ones from any number between 0 0 and 100100. Count forwards in: <ul style="list-style-type: none"> 10s10s from any multiple of 1010 between 0 0 and 100100 5s5s from any multiple of 55 between 0 0 and 100100 2s2s from any multiple of 2 2 between 0 0 and 100100 	Count forwards and backwards in: <ul style="list-style-type: none"> 1s1s from any number between 0 0 and 200200 10s10s from any multiple of 1010 between 0 0 and 220000 5s5s from any multiple of 5 5 between 00 and 200200 2s2s from any multiple of 22 between 0 0 and 200200 3s 3s from any multiple of 3 3 between 0 0 and 200 200 4s4s from any multiple of 4 b4 between 0 0 and 200200 	Counts forwards and backwards in: <ul style="list-style-type: none"> 1s1s from any number between 0 0 and 10001000 10s10s from any multiple of 1010 between 0 0 and 10001000 5s5s from any multiple of 5 5 between 00 and 10001000 2s2s from any multiple of 2 2 between 0 0 and 10001000 3s 3s from any multiple of 3 between 0 0 and 1000 1000 4s4s from any multiple of 4 4 between 0 0 and 10001000 in 20s, 25s, 50s, 100s 20s, 25s, 50s, 100s to at least 10001 000

NUMBER CONCEPT DEVELOPMENT: Represent whole numbers				
1.3 Number symbols and number names	Recognise, identify and read numbers <ul style="list-style-type: none"> Recognise, identify and read number symbols 1 to 10 Recognise, identify and read number names 1 to 10 	Recognise, identify and read number symbols <ul style="list-style-type: none"> Recognise, identify and read number symbols 1 to 100 Write number symbols 1 to 20. 1 to 20 Recognise, identify and read number names 11 to 10 Write number names 1 to 10 	Recognise, identify and read numbers <ul style="list-style-type: none"> Recognise, identify and read number symbols 0 to 2000 Write number symbols 0 to 1000 Recognise, identify and read number names 0 to 100. 0 to 100 Write number names 0 to 100 	Recognise, identify and read numbers <ul style="list-style-type: none"> Recognise, identify and read number symbols 0 to 10000 Write number symbols 0 to 10000 Recognise, identify and read number names 0 to 1000 Write number names 0 to 1000
NUMBER CONCEPT DEVELOPMENT: Describe, compare and order whole numbers				
1.4 Describe, compare and order numbers	Describe, compare and order collection of objects up to 10 <ul style="list-style-type: none"> Describe whole numbers up to 10 Compare which of two given collections of objects is big, small, smaller than, bigger than, more than, less than, is equal to, most, least, fewer up to 10 Order more than two given collections of objects from smallest to biggest up to 10 	Describe, compare and order objects up to 20 <ul style="list-style-type: none"> Describe and compare collection of objects according to most, least, the same as Describe and order collection of objects from most to least and least to most Describe, compare and order numbers up to 20 <ul style="list-style-type: none"> Describe and compare whole numbers according to smaller than, greater than and more than, less than, is equal to Describe and order numbers from smallest to greatest and greatest to smallest 	Describe, compare and order numbers up to 99 <ul style="list-style-type: none"> Describe and compare whole numbers up to 99 using smaller than, greater than, more than, less than and is equal to. Describe and order whole numbers up to 99 from smallest to biggest, and biggest to smallest Use ordinal numbers to show order, place or position <ul style="list-style-type: none"> Position objects in a line from first to twentieth or first to last e.g. first, second, third ... twentieth 	Describe, compare and order numbers up to 999 <ul style="list-style-type: none"> Describe and compare whole numbers up to 999 using smaller than, greater than, more than, less than and is equal to Describe and order whole numbers up to 999 from smallest to biggest, and biggest to smallest Use ordinal numbers to show order, place or position <ul style="list-style-type: none"> Use, read and write ordinal numbers, including abbreviated form (1st, 2nd, 3rd up to 31st)

	Use ordinal numbers to show order, place or position <ul style="list-style-type: none"> Develops an awareness of ordinal numbers e.g. first, second, third up to sixth and last 	Use ordinal numbers to show order, place or position <ul style="list-style-type: none"> Position objects in a line from first to tenth or first to last e.g. first, second, third ... tenth 		
NUMBER CONCEPT DEVELOPMENT: Place Value				
1.5 Place value		Begin to recognise the place value of at least 2-digit numbers up to 20 <ul style="list-style-type: none"> Decompose 2 digits numbers into multiples of 10 and ones/units 	Recognise the place value of at least 2-digits numbers up to 99 <ul style="list-style-type: none"> Decompose 2Digit numbers up to 99 into multiples of 10 and ones/units Identify and state the value of each digit 	Recognise the place value of 3-digit numbers up to 999 <ul style="list-style-type: none"> Decompose 3Digit numbers up to 999 into multiples of 100, multiples of 10 and ones/units Identify and state the value of each digit
SOLVE PROBLEMS IN CONTEXT				
1.6 Problem solving techniques	Use the following techniques up to 10: <ul style="list-style-type: none"> concrete apparatus e.g. counters physical number ladder 	Use the following techniques when solving problems and explain solutions to problems: <ul style="list-style-type: none"> concrete apparatus e.g. counters pictures to draw the story sum building up and breaking down numbers doubling and halving number lines 	Use the following techniques when solving problems and explain solutions to problems: <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down of numbers doubling and halving number lines 	Use the following techniques when solving problems and explain solutions to problems: <ul style="list-style-type: none"> building up and breaking down numbers doubling and halving number lines rounding off in tens
1.7 Addition and subtraction	Solve word problems (story sums) in context and explain own solution to problems involving addition and subtraction with answers up to 10	Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 20. 20	Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 99. 99	Solve word problems in context and explain own solution to problems involving addition and subtraction leading answers up to 999.999

1.8 Repeated addition leading to multiplication		Solve word problems in context and explain own solution to problems involving repeated addition with answers up to 2020.	Solve word problems in context and explain own solution to problems using repeated addition and multiplication with answers up to 5050.	Solve word problems in context and explain own solution to problems using multiplication with answers up to 100100.
1.9 Grouping and sharing leading to division	Solve and explain solutions to word problems in context (story sums) that involve equal sharing, grouping with whole numbers up to 10 and answers that can include remainders	Solve and explain solutions to practical problems involving equal sharing and grouping with whole numbers up to 20 and with answers that can include remainders	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 50 with answers that can include remainders	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 100 with answers that can include remainders
1.10 Sharing leading to fractions			Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary fractions	Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary and non-unitary fractions.
1.11 Money	Develop an awareness of South African coins and bank notes.	<ul style="list-style-type: none"> Recognise and identify South African coins (5c, 10c, 20c, 50c, R1, R2, R5) 5c, 10c, 20c, 50c, R1, R2, R5) and bank notes R10R10 and R20R20 Solve money problems involving totals and change to R20 R20 and in cents up to 20c20c . 	<ul style="list-style-type: none"> Recognise and identify South African coins (5c, 10c, 20c, 50c, R1, R2, R5) 5c, 10c, 20c, 50c, R1, R2, R5, and bank notes R10. R20, R50R10, R20, R50) Solve money problems involving totals and change to R99 R99 and in cents up to 90c90c. 	<ul style="list-style-type: none"> Recognise and identify all South African coins and bank notes Solve money problems involving totals and change in rands or cents. Convert between rands and cents.
CONTEXT-FREE CALCULATIONS				
1.12 Techniques (methods or strategies)		Use the following techniques when performing calculations: <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down numbers doubling and halving number lines 	Use the following techniques when performing calculations: <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down numbers doubling and halving number lines 	Use the following techniques when performing calculations: <ul style="list-style-type: none"> building up and breaking down numbers doubling and halving number lines rounding off in tens
1.13	Solve verbally stated addition	<ul style="list-style-type: none"> add to 2020 	<ul style="list-style-type: none"> add to 9999 	<ul style="list-style-type: none"> add to 999999

Addition and subtraction	and subtraction problems with solutions up to 10 10	<ul style="list-style-type: none"> subtract from 2020 use appropriate symbols (+, -, =, □) practise number bonds to 1010 	<ul style="list-style-type: none"> subtract from 9999 use appropriate symbols (+, -, =, □) practice number bonds to 2020 	<ul style="list-style-type: none"> subtract from 999999 use appropriate symbols (+, -, =, □) practice number bonds to 3030
1.14 Repeated addition leading to multiplication		<ul style="list-style-type: none"> add the same number repeatedly to 2020 use appropriate symbols (+, =, □) 	<ul style="list-style-type: none"> multiply numbers 1 to 10 by 2, 5, 3 and 4 to a total of 50 use appropriate symbols (+, ×, =, □) 	<ul style="list-style-type: none"> multiply any number by 2, 3, 4, 5, 102, 3, 4, 5, 10 to a total of 100100 use appropriate symbols (× □)
1.15 Division				<ul style="list-style-type: none"> divide numbers up to 9999 by 2, 3, 4, 5, 102, 3, 4, 5, 10 use appropriate symbols (÷, =, □)

				<ul style="list-style-type: none"> • Use the relationship between addition and subtraction • Use the relationship between multiplication and division
1.17 Fractions			<ul style="list-style-type: none"> • Use and name unitary fractions in familiar contexts including halves, quarters, thirds and fifths • Recognise fractions in diagrammatic form • Write fractions as 1 half 	<ul style="list-style-type: none"> • Use and name unitary and non-unitary fractions in familiar contexts including halves, quarters eighths, thirds, sixths, fifths • Recognise fractions in diagrammatic form • Begin to recognise that two halves or three thirds make one whole and that one half and two quarters are equivalent • Write fractions as 1 half, 2 thirds

MATHEMATICS PHASE OVERVIEW

2. PATTERNS FUNCTIONS AND ALGEBRA

Progression in Patterns, Functions and Algebra

- In Patterns, Functions and Algebra, we give learners opportunities to:
 - complete and extend patterns represented in different forms
 - identify and describe patterns.
- Describing patterns lays the basis for learners in the Intermediate Phase to describe rules for patterns. This in turn becomes more formalised in algebraic work in the Senior Phase.

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
2.1 Geometric patterns	Copy and extend Copy and extend simple patterns using physical objects and drawings (e.g. using colours and shapes)	Copy, extend and describe in words <ul style="list-style-type: none"> • simple patterns made up of physical objects • simple patterns made by drawing lines, shapes or objects Create own geometric patterns <ul style="list-style-type: none"> • with physical objects • by drawing lines, shapes or objects Patterns all around us Identify, describe in words and copy geometric patterns <ul style="list-style-type: none"> • in nature • from modern everyday life • from our cultural heritage 	Copy, extend and describe Copy, extend and describe in words <ul style="list-style-type: none"> • complex patterns made up of physical objects • complex patterns made by drawing lines, shapes or objects Create and describe own patterns <ul style="list-style-type: none"> • with physical objects • by drawing lines, shapes or objects Patterns all around us Identify, describe in words and copy geometric patterns <ul style="list-style-type: none"> • in nature • from modern everyday life • from our cultural heritage 	Copy, extend and describe Copy, extend and describe in words <ul style="list-style-type: none"> • more complex patterns made up of physical objects • more complex patterns made by drawing lines, shapes or objects Create and describe own patterns <ul style="list-style-type: none"> • with physical objects • by drawing lines, shapes or objects Patterns all around us Identify, describe in words and copy geometric patterns <ul style="list-style-type: none"> • in nature • from modern everyday life • from our cultural heritage
2.2 Number patterns		Copy, extend and describe <ul style="list-style-type: none"> • simple number sequences to at least 100100 	Copy, extend and describe <ul style="list-style-type: none"> • simple number sequences to at least 200200 	Copy, extend and describe <ul style="list-style-type: none"> • simple number sequences to at least 999999

		Create and describe own patterns	Create and describe own patterns	Create and describe own patterns
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MATHEMATICS PHASE OVERVIEW

3. SPACE AND SHAPE (GEOMETRY)

Progression in Space and Shape

The main progression in Space and Shape is achieved by:

- focusing on new properties and features of shapes and objects in each grade
- moving from learning the language of position and matching different views of the same objects to reading and following directions on informal maps.

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
3.1 Position, orientation and views	<p>Language of position Describe the position of one object in relation to another e.g. on top of , in front of , behind, left, right, up, down, next to</p> <p>Position and directions Follow directions to move around the classroom</p>	<p>Language of position Describe the position of one object in relation to another, e.g. on top of , in front of , behind, left, right, up, down, next to</p> <p>Position and views</p> <ul style="list-style-type: none"> • Recognise and match different views of the same everyday object <p>Position and directions</p> <ul style="list-style-type: none"> • Follow directions to move around the classroom • Follow instructions to place one object in relation to another, e.g. put the pencil behind the box 	<p>Language of position Describe the position of one object in relation to another, e.g. on top of , in front of , behind, left, right, up, down, next to</p> <p>Position and views</p> <ul style="list-style-type: none"> • Recognise and match different views of the same everyday object <p>Position and directions</p> <ul style="list-style-type: none"> • Follow directions to move around the classroom 	<p>Position and views</p> <ul style="list-style-type: none"> • Recognise and match different views of the same everyday object • Name an everyday object when shown an unusual view of it • Read, interpret and draw informal maps, or top views of a collection of objects • Find objects on maps <p>Position and directions</p> <ul style="list-style-type: none"> • Follow directions to move around the classroom, and school • Give directions to move around the classroom and school • Follow directions from one place to another on an informal map
3.2 3D objects	<p>Range of objects Recognize and name 3D objects in the classroom</p>	<p>Range of objects Recognize and name 3D objects in the classroom and</p>	<p>Range of objects Recognize and name 3D objects in the classroom and</p>	<p>Range of objects Recognize and name 3D objects in the classroom and</p>

	<ul style="list-style-type: none"> • ball shapes • box shapes <p>Features of objects Describe, sort and compare 3D objects in terms of:</p> <ul style="list-style-type: none"> • size • colour • objects that roll • objects that slide <p>Focused activities</p> <ul style="list-style-type: none"> • Use 3D objects such as building blocks, recycling material, etc. to construct composite objects e.g. towers, bridges, etc. 	<p>in pictures</p> <ul style="list-style-type: none"> • ball shapes (spheres) • box shapes (prisms) <p>Features of objects Describe, sort and compare 3D objects in terms of:</p> <ul style="list-style-type: none"> • size • colour • objects that roll • objects that slide <p>Focused activities</p> <ul style="list-style-type: none"> • Observe and build given 3D objects using concrete materials such as building blocks, recycling material, construction kits 	<p>in pictures</p> <ul style="list-style-type: none"> • ball shapes (spheres) • box shapes (prisms) • cylinders <p>Features of objects Describe, sort and compare 3D objects in terms of:</p> <ul style="list-style-type: none"> • size • objects that roll • objects that slide <p>Focused activities</p> <ul style="list-style-type: none"> • Observe and build given 3D objects using concrete materials such as cut-out 2D shapes, building blocks, recycling, construction kits, other 3D geometric objects 	<p>in pictures</p> <ul style="list-style-type: none"> • ball shapes (spheres) • box shapes (prisms) • cylinders • pyramids • cones <p>Features of objects Describe, sort and compare 3D objects in terms of:</p> <ul style="list-style-type: none"> • 2D shapes that make up the faces of 3D objects • flat or curved surfaces <p>Focused activities</p> <ul style="list-style-type: none"> • Observe and build given 3D objects using concrete materials such as cut-out 2D shapes, clay, toothpicks, straws, other 3D geometric objects
3.3 2D shapes	<p>Range of shapes Describe, sort and compare 2D shapes/pictures according to:</p> <ul style="list-style-type: none"> • Size • Colour • Geometric shapes 	<p>Range of shapes Recognize and name 2D shapes</p> <ul style="list-style-type: none"> • circles • triangles • squares <p>Features of shapes Describe, sort and compare 2D shapes in terms of:</p> <ul style="list-style-type: none"> • size • colour • straight sides • round sides 	<p>Range of shapes Recognize and name 2D shapes</p> <ul style="list-style-type: none"> • circles • triangles • squares • rectangles <p>Features of shapes Describe, sort and compare 2D shapes in terms of:</p> <ul style="list-style-type: none"> • size • shape • straight sides • round sides 	<p>Range of shapes Recognize and name 2D shapes</p> <ul style="list-style-type: none"> • circles • triangles • squares • rectangles <p>Features of shapes Describe, sort and compare 2D shapes in terms of:</p> <ul style="list-style-type: none"> • shape • straight sides • round sides <p>Draw shapes</p> <ul style="list-style-type: none"> • circles

				<ul style="list-style-type: none"> • triangles • squares • rectangles
3.4 Symmetry	Symmetry <ul style="list-style-type: none"> • Recognise symmetry in own body 	Symmetry <ul style="list-style-type: none"> • Recognise symmetry in own body • Recognise and draw line of symmetry in 2D geometrical and non-geometrical shapes 	Symmetry <ul style="list-style-type: none"> • Recognise and draw line of symmetry in 2D geometrical and non-geometrical shapes 	Symmetry <ul style="list-style-type: none"> • Recognise and draw line of symmetry in 2D geometrical and non-geometrical shapes • Determine line of symmetry through paper folding and reflection

MATHEMATICS PHASE OVERVIEW

4. MEASUREMENT

Progression in Measurement

- The main progression in measurement across the grades is achieved by the introduction of:
 - new forms of measuring
 - new measuring tools, starting with informal tools and moving to formal measuring instruments in Grades 2 and 3
 - new measuring units, particularly in Grades 2 and 3.
- Calculations and problem-solving with measurement should take cognisance of the number work that has already been mastered.

- | TOPICS | GRADE R | GRADE 1 | GRADE 2 | GRADE 3 |
|--------|---------|---------|---------|---------|
|--------|---------|---------|---------|---------|

<h3>4.1 Time</h3>	<p>Passing of time Discuss passing of time</p> <ul style="list-style-type: none"> • Discuss things that happen during the day and things that happen during the night • Sequence events that happen to them during the day • Order regular events from their own lives 	<p>Passing of time Discuss passing of time</p> <ul style="list-style-type: none"> • Order regular events from their own lives • Compare lengths of time using language e.g. longer, shorter, faster, slower • Sequence events using language such as yesterday, today, tomorrow <p>Telling the time</p> <ul style="list-style-type: none"> • Describe when something happens using language e.g. morning, afternoon, night, early, late • Name and sequence days of week and months of year • Place birthdays on a calendar 	<p>Telling the time</p> <ul style="list-style-type: none"> • Name and sequence days of week and months of year • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar • Tell 12-hour time in hours, half hours and quarter hours <p>Calculate lengths of time</p>	<p>Telling the time</p> <ul style="list-style-type: none"> • Read dates on calendars • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar • Tell 12-hour time in <ul style="list-style-type: none"> ▪ hours ▪ half hours ▪ quarter hours ▪ minutes on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones <p>Calculate lengths of time and passing of time</p>
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			and passing of time <ul style="list-style-type: none"> Use calendars to calculate and describe lengths of time in: <ul style="list-style-type: none"> days weeks Use clocks to calculate lengths of time in: <ul style="list-style-type: none"> hours half hours 	<ul style="list-style-type: none"> Use calendars to calculate and describe lengths of time in: <ul style="list-style-type: none"> days weeks months Use clocks to calculate lengths of time in: <ul style="list-style-type: none"> hours half hours quarter hours
4.2 Length	Informal measuring <ul style="list-style-type: none"> Compare and order the length, height or width of two or more objects by placing them next to each other. Use language to discuss the comparison e.g. longer, shorter, taller, wider 	Informal measuring <ul style="list-style-type: none"> Compare and order the length, height or width of two or more objects by placing them next to each other. Use language to discuss the comparison e.g. longer, shorter, taller, wider Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters Describe the length of objects by counting and stating the length in informal units 	Informal measuring <ul style="list-style-type: none"> Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters Describe the length of objects by counting and stating the length in informal units Introducing formal measuring <ul style="list-style-type: none"> Estimate, measure, compare order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length 	Informal measuring <ul style="list-style-type: none"> Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters Describe the length of objects by counting and stating how many informal units long they are Introducing formal measuring <ul style="list-style-type: none"> Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length Estimate and measure lengths in centimetres using a ruler No conversions between metres and centimetres required
4.3 Mass	Informal measuring <ul style="list-style-type: none"> Compare and order the mass of two or more 	Informal measuring <ul style="list-style-type: none"> Estimate, measure, compare, order and 	Informal measuring <ul style="list-style-type: none"> Estimate, measure, compare, order and 	Informal measuring <ul style="list-style-type: none"> Estimate, measure, compare, order and

	<p>objects by feeling them or using a balancing scale</p> <ul style="list-style-type: none"> • Use language to discuss the comparison e.g. light, heavy, lighter, heavier 	<p>record mass using a balancing scale and non-standard measures e.g. blocks, bricks</p> <ul style="list-style-type: none"> • Describe the mass of objects by counting and stating the mass in informal units • Use language to discuss the comparison e.g. light, heavy, lighter, heavier 	<p>record mass using a balancing scale and non-standard measures e.g. blocks, bricks</p> <ul style="list-style-type: none"> • Describe the mass of objects by counting and stating the mass in informal units • Use language to discuss the comparison e.g. light, heavy, lighter, heavier <p>Introducing formal measuring</p> <ul style="list-style-type: none"> • Compare, order and record the mass of commercially packaged objects which have their mass stated only in kilograms e.g. 2 kilograms of rice and 1 kilogram of flour • Measure their own mass in kilograms using a bathroom scale 	<p>record mass using a balancing scale and non-standard measures e.g. blocks, bricks</p> <ul style="list-style-type: none"> • Describe the mass of objects by counting and stating the mass in informal units • Use language to discuss the comparison e.g. light, heavy, lighter, heavier <p>Introducing formal measuring</p> <ul style="list-style-type: none"> • Compare, order and record the mass of commercially packaged objects which have their mass stated in: <ul style="list-style-type: none"> ▪ kilograms e.g. 2 kilograms of rice and 1 kilogram of flour ▪ grams e.g. 500 grams of salt • Measure their own mass in kilograms using a bathroom scale • No conversions between grams and kilograms required
4.4 Capacity/Volume	<p>Informal measuring</p> <ul style="list-style-type: none"> • Compare and order the amount of liquid (volume) in two containers placed next to each other. Learners check by pouring into a third container if 	<p>Informal measuring</p> <ul style="list-style-type: none"> • Compare and order the amount of liquid (volume) in two containers placed next to each other. Learners check by pouring into a third container if 	<p>Informal measuring</p>	<p>Informal measuring</p>

	<p>necessary</p> <ul style="list-style-type: none"> • Compare and order the amount of liquid that two containers can hold if filled (capacity) • Use language to discuss the comparison e.g. more than, less than, full, empty 	<p>necessary</p> <ul style="list-style-type: none"> • Compare and order the amount of liquid that two containers can hold if filled (capacity). Use language to discuss the comparison e.g. more than, less than, full, empty • Estimate, measure, compare, order and record the capacity of containers by using non-standard measures e.g. spoons and cups • Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container e.g. the bottle has the capacity of 4 cups 	<ul style="list-style-type: none"> • Estimate, measure, compare, order and record the amount the capacity of containers (i.e. the amount the container can hold if filled) by using non-standard measures e.g. spoons and cups • Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container e.g. the bottle has the capacity of 4 cups <p>Introducing formal measuring</p> <ul style="list-style-type: none"> • Estimate, measure, compare, order and record the capacity of objects by measuring in litres • Compare, order and record the capacity of commercially packaged objects on which capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint 	<ul style="list-style-type: none"> • Estimate, measure, compare, order and record the amount the capacity of containers (i.e. the amount the container can hold if filled) by using non-standard measures e.g. spoons and cups • Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container e.g. the bottle has the capacity of 4 cups <p>Introducing formal measuring</p> <ul style="list-style-type: none"> • Estimate, measure, compare, order and record the capacity of objects by measuring in litres, half litres and quarter litres • Compare, order and record the capacity of commercially packaged objects on which capacity is stated in litres No conversions between millilitres and litres required
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4.5 Perimeter and area				Perimeter Investigate the distance around 2D shapes and 3D objects using direct comparison or informal units. Area Investigate the area using tiling
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MATHEMATICS PHASE OVERVIEW

5. DATA HANDLING

Progression in Data Handling

- The main progression in Data Handling across the grades is achieved by:
 - moving from working with objects to working with data
 - working with new forms of data representation.
- Learners should work through the full data cycle at least once a year – this involves collecting and organising data, representing data, analysing, interpreting and reporting data.
- Some of the above aspects of data handling can also be dealt with as discrete activities.

CONTENT	CONTENT	CONTENT	CONTENT	CONTENT
5.1 Collect and sort objects	Collect and organise objects Collect and sort everyday physical objects	Collect and organise objects Collect and sort everyday physical objects		
5.2 Represent sorted collection of objects	Represent sorted collection of objects Draw a picture of collected objects (pictograph)	Represent sorted collection of objects Draw a picture of collected objects		
5.3 Discuss and report on sorted collection of objects	Discuss and report on sorted collection of objects Answer questions about <ul style="list-style-type: none"> • how the collection was sorted • drawing of the collection 	Discuss and report on sorted collection of objects <ul style="list-style-type: none"> • Give reasons for how collection was sorted • Answer questions about <ul style="list-style-type: none"> ▪ how the sorting was done (process) ▪ what the sorted collection looks like (product) • Describe the collection/drawing • Explain how the collection was sorted 		
5.4 Collect and organise data		Collect and organise data <ul style="list-style-type: none"> • Collect data about the class or school to answer questions posed by the teacher 	Collect and organise data <ul style="list-style-type: none"> • Collect data about the class or school to answer questions posed by the teacher 	Collect and organise data <ul style="list-style-type: none"> • Collect data about the class or school to answer questions posed by the teacher

			<ul style="list-style-type: none"> Organise data in tallies 	<ul style="list-style-type: none"> Organise data supplied by teacher in workbook/text book Organise data in <ul style="list-style-type: none"> lists tallies tables
5.5 Represent data		Represent data Represent data in <ul style="list-style-type: none"> pictograph (limited to pictographs with 1-to-1 correspondence) 	Represent data Represent data in <ul style="list-style-type: none"> pictograph limited to 1-to-1 correspondence 	Represent data Represent data in <ul style="list-style-type: none"> pictograph limited to 1-to-1 correspondence bar graphs
5.6 Analyse and interpret data		Analyse and Interpret data Answer questions about data <ul style="list-style-type: none"> in pictograph limited to 1-to-1 correspondence 	Analyse and Interpret data Answer questions about data in pictograph limited to 1-to-1 correspondence	Analyse and Interpret data Answer questions about data presented in <ul style="list-style-type: none"> pictograph (limited to 1-to-1 correspondence) bar graphs

3.3 Content Clarification

In this content clarification section, teachers are provided with:

- the Grade R – 3 term overview;
- suggested sequencing of topics into terms: not all aspects of all topics are taught in each term; some aspects of some topics need to be taught before other aspects of those topics.;
- suggested pacing of topics over the year. Just as some content areas require more time than others, so some topics require more time than others and
- clarification notes and teaching guidelines with examples where appropriate.

Each content area has been broken down into topics. All content areas should be taught every term. The sequencing of topics into terms gives an idea of how topics can be spread and revised throughout the year. It is not necessary to teach all the topics in Space and Shape, Measurement and Data Handling every term. However, all topics have to be taught during the year.

In Section 2 (paragraph 2.6) a weighting of content areas is provided. When this is combined with the hours available in the year (see 3.5 below), one can calculate notional hours for each content area.

Teachers may choose to sequence (or order) and pace the content differently from the recommendations in this section i.e. teachers may change the suggested time allocated to topics slightly. However, cognisance should be taken of the relative weighting and notional hours of the content areas for Foundation Phase Mathematics.

3.3.1 Allocation of teaching time for Mathematics Grades R – 3

- **Grade R** Mathematics is in the form of emergent mathematics and is therefore not broken up into lesson times. The Grade R teacher should weave the mathematics into the learners' daily activities although time should be set aside during the day when the teacher focuses exclusively on a mathematical activity, otherwise the learners will not become aware of and develop the desired mathematical concepts and skills.
- Time for Grades 1 – 3 has been allocated in the following way:
 - **Seven hours are to be used for Mathematics per week** (10 weeks x 4 terms x 7 hours = 280 hours per year)
 - Every Mathematics lesson should be **1 hour 24 minutes per day** for Grades 1 to 3.
 - This means that there are four terms of 10 weeks with five daily (Monday to Friday) lessons per week
 - Allow a week for orientation and consolidation at the start of each term, since young children tend to forget a lot of content during the holidays and they also get out of the rhythm of schooling. Allow a week at the end of each term for consolidation of concepts. This equals $8 \times 4 \times 5 = 160$ lessons.

3.4 Sequencing and pacing

The following tables are provided for each grade in Grade R – 3:

- Pacing of topics for the year (illustrates the spread of topics across terms and recommends the time to be spent on each topic of each content area)
- Sequencing of topics for the year (illustrates how topics have been allocated to the terms and the progression of content and skills across the terms)

- Clarification notes per topic – these tables provide content clarification and teaching guidelines for each topic as sequenced across terms.

3.4.1 Lesson plans – topic allocation per term

Number is the most important topic in Foundation Phase Mathematics. Most of the time each week, term and year is focused on Numbers, Operations and Relationships. On average three or more Mathematics lessons in each week should focus on Numbers, Operations and Relationships. The remaining time is split among the other content areas.

Space and Shape and Measurement require more time and attention than Data Handling and Patterns, Functions and Algebra. The tables below give an indication of how many lessons to allocate to each content area and topic for each grade in Patterns, Functions and Algebra, Space and Shape, Measurement and Data Handling.

Grade R Allocation of content areas and topics in lessons

As **Grade R** Mathematics is in the form of **emergent mathematics**, the following suggested time allocation provides for both the focused mathematical episodes and the interwoven, informal activities. This is to ensure comprehensive coverage of all the content available. Emergent mathematics activities may be to count the number of plates and mugs to put out for their snacks, counting games played outside, indoor games such as dominoes and jigsaw puzzles, etc. The teacher has to organise all the activities according to her learners' needs and the resources available in her classroom.

Shape and Space is an important part of the young learner's mathematical development, and should be spread out over the week, with some focused episodes under the guidance of the teacher, and many opportunities for construction, sand and water play.

Measurement should be incorporated in counting activities, e.g. estimation and counting when measuring distances with hands, feet and steps.

The attendance register and weather chart give ample opportunity for working with **Data Handling**.

Content Area	Topics	Suggested Time
Numbers, Operations and Relationships	Counting Number recognition Identify and describe whole numbers Number sense Solving problems	120 minutes
Patterns , Functions and Algebra	Copy, extend and create own patterns	80 minutes
Space and Shape	Recognise, identify and name 2D shapes/pictures Geometric shapes Build 3D objects using concrete materials Spatial relations Directionality	80 minutes
Measurement	Length Mass Capacity	80 minutes

Data Handling	Collect, sort, draw, read and represent data	60 minutes
TOTAL		420 minutes 7 hours per week

Grade 1 Allocation of content areas and topics in lessons

On average three lessons (i.e. between 4 and $4\frac{1}{4}$ hours) a week are spent on Numbers, Operations and Relationships. The remaining two lessons (i.e. between $2\frac{1}{2}$ and 3 hours) are split among the topics of the other content areas in the manner recommended below.

CONTENT AREA	TOPIC	Number of Lessons				
		Term 1	Term 2	Term 3	Term 4	Total
Numbers, Operations and Relationships	All topics of Numbers, Operations and Relationships	22	30	28	25	105
Patterns, Functions and Algebra	Number patterns	3	3	3	3	12
	Geometric patterns	1	1	1	1	4
Space and Shape (Geometry)	2D shapes		3		3	6
	3D objects	3		2	1	6
	Position, orientation and views	2			1	3
	Symmetry			1	1	2
Measurement	Time	2				2
	Length	2		2		4
	Mass	2			2	4
	Capacity/Volume	1	2		1	4
Data Handling	Collecting, sorting, representing and analysing objects	2	1			3
	Whole data cycle			3		3
	Sections of data cycle				2	2
Total Lessons		40	40	40	40	160

Grade 2 Allocation of content areas and topics in lessons

On average three lessons (i.e. between 4 and $4\frac{1}{2}$ hours) a week are spent on Numbers, Operations and Relationships. The remaining two lessons (i.e. between $2\frac{1}{2}$ and 3 hours) are split among the topics of the other content areas in the manner recommended below.

CONTENT AREA	TOPIC	Number of Lessons				
		Term 1	Term 2	Term 3	Term 4	Total
Numbers, Operations and Relationships	All topics of Numbers, Operations and Relationships	24	25	24	26	99
Patterns, Functions and Algebra	Number patterns	3	3	3	3	12
	Geometric patterns	1	1	1	1	4
Space and Shape (Geometry)	2D shapes		3		3	6
	3D shapes	3		2	1	6
	Position, orientation and views		2	1		3

	Symmetry		1		1	2
Measurement	Time	3	1	3	1	8
	Length	3			1	4
	Mass		3		1	4
	Capacity/Volume			3	1	4
Data Handling	Whole data cycle	3		3		6
	Sections of data cycle		1		1	2
Total Lessons		40	40	40	40	160

Grade 3 Allocation of content areas and topics in lessons

On average three lessons (i.e. between 4 and 4 ½ hours) a week are spent on Numbers, Operations and Relationships. The remaining two lessons (i.e. between 2 ½ and 3 hours) are split among the topics of the other content areas in the manner recommended below.

CONTENT AREA	TOPIC	Number of Lessons				
		Term 1	Term 2	Term 3	Term 4	Total
Numbers, Operations and Relationships	All topics of Numbers, Operations and Relationships	26	22	19	27	94
Patterns, Functions and Algebra	Number patterns	3	3	3	3	12
	Geometric patterns	1	1	1	1	4
Space and Shape (Geometry)	2D shapes	2		2		4
	3D shapes		3	3	1	7
	Position, orientation and views		2	3		5
	Symmetry		2		1	3
Measurement	Time	3	2	3	2	10
	Length		2	2		4
	Mass		2		1	3
	Capacity/volume	2			1	3
	Perimeter			1		1
	Area				2	2
Data Handling	Whole data cycle	3		3		6
	Sections of data cycle		1		1	2
Total Lessons		40	40	40	40	160

GRADE R MATHEMATICS OVERVIEW

1. NUMBERS, OPERATIONS AND RELATIONSHIPS

COUNTING

CONTENT	TERM 1	TERM 2	TERM 3	TERM 4
Estimate and count objects to develop number concept	Number range: 1 – 5 <ul style="list-style-type: none"> One-to-one correspondence <p>Introduce the Helper's Chart and the sequence in which refreshments are served</p> <ul style="list-style-type: none"> Count in ones <ul style="list-style-type: none"> Concrete apparatus Body parts Clapping hands Stamping feet Climbing steps Rote counting <ul style="list-style-type: none"> Number rhymes and songs 	Number range: 1 – 7 <ul style="list-style-type: none"> One-to-one correspondence <ul style="list-style-type: none"> Reinforce Helper's Chart on a daily basis Count in ones <ul style="list-style-type: none"> Concrete apparatus Body parts Clapping hands Stamping feet Climbing steps Rote counting <ul style="list-style-type: none"> number rhymes and songs Clap many times/fewer times 	Number range: 1 to 10 <ul style="list-style-type: none"> One-to-one correspondence <ul style="list-style-type: none"> Reinforce Helper's Chart on a daily basis Count in ones <ul style="list-style-type: none"> Concrete apparatus Body parts Clapping hands Stamping feet Climbing steps Rote counting <ul style="list-style-type: none"> number rhymes and songs Clap many times/fewer times <ul style="list-style-type: none"> which number of claps are more/less, most/least 	Number range: 0 to 10 <ul style="list-style-type: none"> One-to-one correspondence <ul style="list-style-type: none"> Reinforce Helper's Chart on a daily basis Count in ones <ul style="list-style-type: none"> Concrete apparatus Body parts Clapping hands Stamping feet Climbing steps Rote counting <ul style="list-style-type: none"> number rhymes and songs Clap many times/fewer times <ul style="list-style-type: none"> which number of claps are more/less, most/least
Count forwards and backwards	Number range: 1 <p>Incidental counting using number rhymes and songs, counters, 3D objects, counting with body movements</p>	Number range: 1 to 4 <p>Incidental counting using number rhymes and songs, counters, 3D objects, counting with body movements</p>	Number range: 1 to 7 <p>Incidental counting using number rhymes and songs, counters, 3D objects, counting with body movements and number ladder</p>	Number range: 0 to 10 <p>Incidental counting using number rhymes and songs, counters, 3D objects, counting with body movements and number ladder</p>

	Count in: <ul style="list-style-type: none"> ones 	Count in: <ul style="list-style-type: none"> ones 	Count in: <ul style="list-style-type: none"> ones 	Count in: <ul style="list-style-type: none"> ones twos
NUMBER RECOGNITION				
Use numbers in familiar contexts	Use numbers in familiar contexts <ul style="list-style-type: none"> Learner should know his/her age Completion of the daily attendance register Make use of a variety of ways to take the daily attendance register <ul style="list-style-type: none"> Is the learner with the ice-cream symbol/picture here today? Is the learner with the name Sipho here today? Is the learner with the name Sipho Alexander and surname Matlhola here today? Identify numbers in pictures and dot cards Play number card games 	Use numbers in familiar contexts <ul style="list-style-type: none"> Learner should know his/her house number and address Reinforce the use of numbers through completion of the daily attendance register as in first term Is the learner that lives in house number 123 here today? Is the learner living in 123 Wendy Street here today? Is the learner with the telephone/cell number 082 1234567 here today? Identify numbers in pictures and dot cards Play number card games Identify numbers in adverts/flyers, old birthday cards, etc. Money <ul style="list-style-type: none"> Develop an awareness of South 	Use numbers in familiar contexts <ul style="list-style-type: none"> Learner should now know his/her home telephone number and/or cell number (contact number of parent). Reinforce the use of numbers through completion of the daily attendance register as in first term Is the learner celebrating his/her birthday on 16 March here today? etc. Identify numbers in pictures and dot cards Play number card games Identify numbers in adverts/flyers, old birthday cards, etc Money <ul style="list-style-type: none"> Develop an awareness of South African bank notes 	Use numbers in familiar contexts <ul style="list-style-type: none"> Reinforce knowledge regarding age, house number, address, home telephone/cell number. (contact number) Reinforce the use of numbers through completion of the daily attendance register as in first term How many learners are absent today? How can we find out? The children discuss this amongst themselves. <ul style="list-style-type: none"> Guess Count empty lockers Count empty chairs, etc. Identify numbers in pictures and dot cards Play number card games Identify numbers in adverts/flyers, old birthday cards, etc. Identify numbers in magazines Money <ul style="list-style-type: none"> Provide play money in the house corner

		<p>African coins</p> <ul style="list-style-type: none"> ▪ 20c, 50c, R1, R2, R5 ▪ Identify colour and which animal appears on each coin ▪ Identify similarities and differences between coins e.g. sort play money according to colour and size ▪ Provide play money in the house corner 	<ul style="list-style-type: none"> ▪ R10, R20, R50, R100, R200 ▪ Identify similarities and differences between notes e.g. sort play money according to colour and size ▪ Provide play money in the house corner 	
<p>Recognise and identify number symbols and recognise number names</p>	<p>Number range: Number symbols: 1 Number names: one</p> <ul style="list-style-type: none"> • Kinesthetic (experience with body) • Concrete with 3D objects that involve the number 1 • Semi-concrete with picture cards that involve the number 1 • Semi-concrete with dots cards that involve the numbers 1 • Reinforce the knowledge gained that involves the number 1 	<p>Number range: Number symbols: 2 to 4 Number names: two, three, four</p> <ul style="list-style-type: none"> • Kinesthetic (experience with body) • Concrete with 3D objects that involve the numbers 2, 3 and 4 • Semi-concrete with picture cards that involve the numbers 2, 3 and 4 • Semi-concrete with dots cards that involve the numbers 2, 3 and 4 • Reinforce the knowledge gained that involve the numbers 1 to 4 	<p>Number range: Number symbols: 5 to 7 Number names: five, six, seven</p> <ul style="list-style-type: none"> • Kinesthetic (experience with body) • Concrete with 3D objects that involve the numbers 5, 6 and 7 • Semi-concrete with picture cards that involve numbers 5, 6 and 7 • Semi-concrete with dots cards that involve numbers 5, 6 and 7 • Reinforce the knowledge gained that involves the numbers 1 to 7 	<p>Number range: Number symbols: 0 to 10 Number names: zero (naught), eight, nine, ten</p> <ul style="list-style-type: none"> • Kinesthetic (experience with body) • Concrete with 3D objects that involve the numbers 0, 8, 9 and 10 • Semi-concrete with picture cards that involve the numbers 0, 8, 9 and 10 • Semi-concrete with dots cards that involve the numbers 0, 8, 9 and 10 • Reinforce the knowledge gained that involves the numbers 0 to 10

NUMBER SENSE (RELATIONSHIPS)				
Identify and describe whole numbers	Number range: 1 <ul style="list-style-type: none"> Identify and describes whole numbers up to 1 	Number range: 1 to 5 <ul style="list-style-type: none"> Identify and describes whole numbers 2, 3 and 4 Reinforce numbers 1 to 4 	Number range: 1 to 7 <ul style="list-style-type: none"> Identify and describes whole numbers 5, 6 and 7 Reinforce numbers 1 to 7 	Number range: 0 to 10 <ul style="list-style-type: none"> Identify and describes whole numbers 8, 9, 10 and 0 Reinforce numbers 0 to 10
Compare two given collections of objects: <ul style="list-style-type: none"> big and small bigger and smaller biggest and smallest 	Compare two given collections of objects: <ul style="list-style-type: none"> Big and small Bigger and smaller Biggest and smallest (introduce the concept) Order more than two given collections of objects from smallest to biggest and biggest to smallest 			
Compare two given collections of objects: <ul style="list-style-type: none"> more than less than equal to (the same) 	<ul style="list-style-type: none"> Many and fewer e.g. incidental clapping 	<ul style="list-style-type: none"> More than, less than, equal to Many and fewer e.g. incidental clapping 	<ul style="list-style-type: none"> More than, less than, equal to Many and fewer e.g. incidental clapping. Ask which was most/least 	<ul style="list-style-type: none"> More than, less than, equal to Many and fewer e.g. incidental clapping. Ask which was most/least
Ordinal numbers	Incidental development and awareness of ordinal numbers e.g. first, second, third...last, next <ul style="list-style-type: none"> Introduce during refreshment/snack routine and during toilet routine: 1st, 2nd, last, next 	Incidental development and awareness of ordinal numbers e.g. first, second, third, fourth...last, next <ul style="list-style-type: none"> Reinforce ordinal numbers incidentally through the daily toilet routine Apply during Life Skills Physical development activities. Apply during creative art activities (where appropriate) 	Incidental development and awareness of ordinal numbers e.g. first, second, third, fourth, fifth, last, next <ul style="list-style-type: none"> Reinforce ordinal numbers incidentally through the daily toilet routine Apply during Life Skills Physical development activities. 	Incidental development and awareness of ordinal numbers e.g. first, second, third, fourth, fifth, sixth, last, next <ul style="list-style-type: none"> Introduce ordinal numbers – first, second, third, up to sixth Reinforce ordinal numbers incidentally through the daily toilet routine Apply during Life Skills Physical development activities.

SOLVE PROBLEMS IN CONTEXT USING THE FOLLOWING TECHNIQUES:				
Use the following techniques and strategies	Use the following techniques <ul style="list-style-type: none"> concrete apparatus e.g. counters 	Use the following techniques <ul style="list-style-type: none"> concrete apparatus e.g. counters 	Use the following techniques <ul style="list-style-type: none"> concrete apparatus e.g. counters physical number ladder 	Use the following techniques <ul style="list-style-type: none"> concrete apparatus e.g. counters physical number ladder
Orally solve word problems (story sums) and explain own solution to problems involving: <ul style="list-style-type: none"> addition and subtraction with answers up to 10 equal sharing and grouping with whole numbers up to 10 with answers that include remainders 		<ul style="list-style-type: none"> Use counters and orally solve problems that involve the numbers 2, 3 and 4 Reinforce the solving of problems that involve numbers 1 to 4 	<ul style="list-style-type: none"> Use counters and orally solve problems that involve the numbers 5, 6 and 7 Reinforce the solving of problems that involve numbers 1 to 7 	<ul style="list-style-type: none"> Use counters and orally solve problems that involve the numbers 8, 9, 10 and 0 Reinforce the solving of problems that involve numbers 1 to 10
Solve orally stated addition and subtraction problems with solutions up to 10		<ul style="list-style-type: none"> Orally solve addition and subtraction problems with answers up to 4 	<ul style="list-style-type: none"> Orally solve addition and subtraction problems with answers up to 7 	<ul style="list-style-type: none"> Orally solve addition and subtraction problems with answers up to 10

Problem types for Grade R

The problems posed to Grade R learners should initially involve only objects that are present in the classroom, e.g. counters, children, shoes, but not, for example, sweets, rabbits, flowers, etc. Not all young children can pretend that counters or fingers are rabbits — they need the objects themselves. Only in the second half of the year may the teacher use pictures. The concrete objects should still be retained – the pictures are an addition NOT a replacement for the concrete objects. Twigs could be used if the teacher lacks resources. The following problems illustrate the problem types, and should be adjusted by the teacher to suit the level of her learners' understanding.

Grouping

Here are 8 cookies (teacher packs out 8 counters, or shows a picture of 8 cookies). Teddy gets 2 cookies every day. How many days will he get cookies?

Sharing

There are 6 cookies (teacher packs out 6 counters, or shows a picture of 6 cookies). The 3 teddies share the cookies so that they all get the same number of cookies. How many cookies can each teddy get?

Addition, subtraction, repeated addition

- How many eyes do 2 children have?
- How many ears do 4 children have?
- How many fingers on one hand?
- How many fingers on 2 hands?
- Linda has 6 counters. She gives 2 counters to Ben. How many counters does she have now?

Teachers should mix the problem types from day to day. Teachers should gradually increase the sizes of the numbers they use in the problems, and not simply assume that their learners cannot cope with bigger numbers.

GRADE R MATHEMATICS OVERVIEW

2. PATTERNS AND FUNCTIONS

CONTENT	CONTENT	CONTENT	CONTENT	CONTENT
Copy and extend simple repeating patterns using physical objects and drawings	<ul style="list-style-type: none">• Identify patterns in clothes, objects, and environment• Copy and complete patterns• Copy patterns using body percussion	<ul style="list-style-type: none">• Copy , extend and create own patterns• Copy a given pattern using coins	<ul style="list-style-type: none">• Copy , extend and create own pattern with pictures	<ul style="list-style-type: none">• Copy , extend and create own auditory patterns• Copy a noise pattern• Play a game “hop scotch”
Create own repeating patterns				

- | | | | | |
|--|---|--|--|--|
| | <ul style="list-style-type: none">• Copy, complete and create own pattern | | | |
|--|---|--|--|--|

GRADE R MATHEMATICS OVERVIEW

3. SPACE AND SHAPE (GEOMETRY)

CONTENT	TERM 1	TERM 2	TERM 3	TERM 4
Recognise, identify and name three dimensional objects in the classroom: <ul style="list-style-type: none"> balls boxes 	<ul style="list-style-type: none"> balls: introduce and explore balls boxes : introduce and explore boxes 			
Recognise, identifies and names two-dimensional shapes in the classroom and in pictures, including: <ul style="list-style-type: none"> Learner's symbols Class name 	<ul style="list-style-type: none"> Allow each learner to choose own symbol card the first day Display only the learner's symbol/photo for the first 3 months of the year Introducing the class name e.g. by using a picture – the “Teddy Bear” class. Label on classroom door with teachers name Label indicating Grade R class 	Display the learner's symbol/photo and learner's name the next 3 months Ongoing	Display only the learner's name on a label the last 6 months of the year Ongoing	Display the learner's name on a label the last 6 months of the year Ongoing
Building puzzles Minimum: <ul style="list-style-type: none"> Term 1: 6 pieces Term 2: 12 pieces Term 3: 18 pieces Term 4: 24 pieces 	Puzzles <ul style="list-style-type: none"> Introduce puzzles and give guidance on how to build them. Discuss the puzzle picture with special attention to detail such as colour, people/animals, objects, position of people/animals and objects The learners should be able to at least complete a 6-piece puzzle at the end of term 1 	Puzzles (Ongoing) <ul style="list-style-type: none"> Provide a variety of puzzles during free play inside on a daily basis The learners should be able to at least complete a 12-piece puzzle at the end of term 2 Make and complete own 4-piece puzzle 	Puzzles (Ongoing) <ul style="list-style-type: none"> Provide a variety of puzzles during free play inside on a daily basis Learners should be able to at least complete a 18 piece puzzle at the end of term 3 Make and complete own 5-piece puzzle 	Puzzles (Ongoing) <ul style="list-style-type: none"> Provide a variety of puzzles during free play inside on a daily basis The learners should be able to at least complete a 24-piece puzzle at the end of term 4
Figure-ground Perception		<ul style="list-style-type: none"> Reinforce figure-ground 	<ul style="list-style-type: none"> Reinforce figure-ground 	<ul style="list-style-type: none"> Reinforce figure-ground

<p>Geometric shapes</p> <ul style="list-style-type: none"> Circle Triangle Square Rectangle Conservation of shapes (form constancy) 	<ul style="list-style-type: none"> Introduce figure-ground perception (identify objects: “I spy with my little eye”) Reinforce the circle Introduce a circle Introduce a triangle Introduce a square 	<p>perception through sorting activities, matching and grouping activities and tidy-up routine.</p> <ul style="list-style-type: none"> Reinforce the triangle Shape conservation (form constancy of triangle) 	<p>perception through sorting activities, matching and grouping activities and tidy-up routine</p> <ul style="list-style-type: none"> Reinforce the square Shape conservation (form constancy of shapes learnt up to date) 	<p>perception through sorting activities, matching and grouping activities and tidy-up routine</p> <ul style="list-style-type: none"> Reinforce circle, triangle, square and rectangle Introduce rectangle Shape conservation (form constancy of shapes learnt up to date)
<p>Describe, sort and compare 3D objects and 2D shapes according to:</p> <ul style="list-style-type: none"> Size (big/small) Colour (red, blue, yellow, green) Shape (circle, triangle, square rectangle) Objects that roll Objects that slide 	<ul style="list-style-type: none"> Introduce tidy-up chart (sorting toys) Size: sort 3D objects according to size Colour: sort 3D objects and 2D shapes according to primary colours Shape: sort 3D objects and 2D shapes according to shapes Objects that roll <ul style="list-style-type: none"> Identify and explore objects that roll Reinforce objects that roll Objects that slide <ul style="list-style-type: none"> Identify and explore objects that slide Recognise and explore objects that can slide and roll 	<ul style="list-style-type: none"> Sort according to similarities and differences Size: sort 3D objects according to size Colour: identify and sort counters according to the colours red, blue, yellow, and green Shape: sort 3D objects and 2D shapes according to shapes 	<ul style="list-style-type: none"> Size: sort 3D objects according to size Colour: sort 3D objects and 2D shapes according to colours Shape: sort 3D objects and 2D shapes according to shapes 	<ul style="list-style-type: none"> Size: sort 3D objects according to size Colour: sort 3D objects and 2D shapes according to colours Shape: sort 3D objects and 2D shapes according to colours
<p>Build 3D objects using concrete materials (e.g.</p>	<p>Ongoing</p>	<p>Ongoing</p>	<p>Ongoing.</p>	<p>Ongoing</p>

building blocks)	<ul style="list-style-type: none"> • Provide building blocks and construction materials during free play inside on a daily basis • Explore with building blocks 	<ul style="list-style-type: none"> • Provide building blocks and construction materials during free play inside on a daily basis • Explore with building blocks 	<ul style="list-style-type: none"> • Provide building blocks and construction materials during free play inside on a daily basis • Let learners build own construction by copying from a given construction example • Copy the same construction from a design or picture card • Reinforce copying the same construction from a design or picture card 	<ul style="list-style-type: none"> • Provide building blocks and construction materials during free play inside on a daily basis • Ongoing during free play inside
Recognise line of symmetry in self, and own environment	<ul style="list-style-type: none"> • Identify body parts (under counting) • Head, eyes, nose, mouth, chin, neck, shoulders, arm, hand, fingers, chest, leg, knee, foot, toes • One's body has two sides • Reinforce the awareness that one's body has two sides e.g. "the one side" and "the other side" leading to "left and right" • Crossing the midline incorporated with counting • Above to be done during physical development • Using rhymes and songs • Incorporate during creative art 	<ul style="list-style-type: none"> • Crossing the midline performing actions • Apply crossing of the midline during Life Skills (Physical Development) • Rhymes and songs • Creative art activities 	<ul style="list-style-type: none"> • Crossing the midline – chalkboard activities • Apply crossing of the midline during Life Skills (Physical Development) 	<ul style="list-style-type: none"> • Develop the awareness that there is symmetry in objects • Apply crossing of the midline during Life Skills (Physical Development)
Describe one 3D object in relation to another (e.g. 'in front' and 'behind')	Spatial relationships The position of two or more objects in relation to the learner	Spatial relationships The position of two or more objects in relation to the learner	The position of two or more objects in relation to each other and to one another <ul style="list-style-type: none"> • In front of and behind 	Spatial relationships The position of two or more objects in relation to the learner

	<ul style="list-style-type: none"> • In front of and behind • On, on top, under and below • In and out • Up and down • Next to and between <p>Outdoor play is important. The jungle gym can be used to reinforce:</p> <ul style="list-style-type: none"> • Maths concepts • Creative art • Physical development 	<ul style="list-style-type: none"> • On and under 	<ul style="list-style-type: none"> • On, on top, under, bottom and below • Next to • Middle • Left and right • Pegboard work <p>Describe objects from different perspectives, e.g. a doll, house from the front, the back, the side depending on where you stand</p>	<ul style="list-style-type: none"> • In front of and behind • On top, under or below • Top and bottom • Next to, between and middle • Left and right <p>The position of two or more objects in relation to one another</p> <ul style="list-style-type: none"> • Pegboard work • In front of and behind • On top, under or below • Top and bottom • Next to, between and middle • Left and right
Follow directions (alone and/or as a member of a group or team) to move/place self within a specific space (directionality)	<ul style="list-style-type: none"> • Directionality forwards/backwards • Games such as tracking the train • Obstacle course following a direction • Physical education and music activities 		<ul style="list-style-type: none"> • Forward/Backwards • Arrow Chart 	

GRADE R MATHEMATICS OVERVIEW				
4. MEASUREMENT				
CONTENT	TERM 1	TERM 2	TERM 3	TERM 4
Time: Describes the time of day in terms of: <ul style="list-style-type: none"> day or night. 	<ul style="list-style-type: none"> Introduce both the concepts “day and night” and ”light /dark” Morning, afternoon, tonight- (incidental learning during daily programme and weather chart 			
Sequence recurring events in own daily life <ul style="list-style-type: none"> Daily programme 	<ul style="list-style-type: none"> Introduce the daily programme <ul style="list-style-type: none"> Learners experience the sequencing of events during a day Pictures are displayed from left to right developing reading direction The leader of the day moves a movable arrow as the activities on the daily programme progress 	<ul style="list-style-type: none"> Daily programme (ongoing) <ul style="list-style-type: none"> Reinforce the sequencing of recurring events in one day through the daily programme 	<ul style="list-style-type: none"> Daily programme (ongoing) <ul style="list-style-type: none"> Reinforce the sequencing of recurring events in one day through the daily programme 	<ul style="list-style-type: none"> Daily programme (ongoing) <ul style="list-style-type: none"> Reinforce the sequencing of recurring events in one day through the daily programme
<ul style="list-style-type: none"> Weather chart 	<ul style="list-style-type: none"> Introduce the weather chart (daily) <ul style="list-style-type: none"> The teacher guides learners to determine the name of the day, date and month with song and rhyme, flash cards and displays labels and symbols on a calendar representing a week Develop an awareness of the time concept 	<ul style="list-style-type: none"> Weather chart (daily) <ul style="list-style-type: none"> The teacher guides learners to determine the name of the day, date and month with flash cards and displays labels and symbols on a weekly calendar 	<ul style="list-style-type: none"> Weather chart (daily) <ul style="list-style-type: none"> The learners determine the name of the day, date and month with flash cards and displays labels and symbols on a weekly calendar Seasons chart <ul style="list-style-type: none"> The arrow indicating the present season is 	<ul style="list-style-type: none"> Weather chart (daily) <ul style="list-style-type: none"> The learners determine the name of the day, date and month with flash cards and displays labels and symbols on a weekly calendar

<ul style="list-style-type: none"> • Days of the week • Seasons chart 	<ul style="list-style-type: none"> ▪ Indicate birthdays, outings, special days, holidays during the week ▪ Sequencing months of the year through a song • Days of the week <ul style="list-style-type: none"> ▪ Teach learners a song or a rhyme about the days of the week. Repeat every day as weather chart is discussed ▪ Sequencing days of the week using a song • Seasons chart <ul style="list-style-type: none"> ▪ Introduce the chart showing the four seasons indicating: <ul style="list-style-type: none"> ○ Summer ○ Autumn ○ Winter ○ Spring 	<ul style="list-style-type: none"> • Days of the week (ongoing) <ul style="list-style-type: none"> ▪ Teach learners a song or a rhyme about the days of the week. Repeat every day as weather chart is discussed • Seasons chart <ul style="list-style-type: none"> ▪ The arrow indicating the present season is moved as the seasons change ▪ The first day after the school holiday the teacher should ask learners what they did during holidays ▪ Develop an awareness of what the learner does from the time he/she wakes up until going to school ▪ Develop an 	<p>moved as the seasons change</p> <ul style="list-style-type: none"> ▪ The first day after the school holiday the teacher should ask learners what they did during holidays 	<ul style="list-style-type: none"> • Days of the week (ongoing) • Seasons chart <ul style="list-style-type: none"> ▪ The arrow indicating the present season is moved as the seasons change ▪ The first day after the school holiday the teacher should ask learners what they did during holidays
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		awareness of what happens between supertime and bedtime		
Introduce birthday chart	<ul style="list-style-type: none"> • Introduce the birthday chart • Learners should know their age • Develop an awareness of reading direction • Learners should know their own birth date (day and month) 	<ul style="list-style-type: none"> • Continues whenever a learner has a birthday • Ongoing 	<ul style="list-style-type: none"> • Continues whenever a learner has a birthday • Ongoing 	<ul style="list-style-type: none"> • Continues whenever a learner has a birthday • Ongoing

<p>Length Concretely compare and order objects using appropriate vocabulary to describe length</p> <ul style="list-style-type: none"> Introduce height chart <ul style="list-style-type: none"> Measure with hands (visual and incidental) Measure with footprints (Visual and incidental) Measure with tape measure (visual and incidental) long, short, longer, shorter, tall, taller/tallest (visual) estimate 	<p>Length</p> <ul style="list-style-type: none"> Long and short, tall, taller and tallest (visual) Introduce the concept of length Height chart with hands/feet 	<p>Length</p> <ul style="list-style-type: none"> Longest and shortest, longer and shorter (explore length) Reinforce the concept of length Learners discover whether they have grown since the last term Learners can compare their heights against something in the class, e.g., cupboard 	<p>Length</p> <ul style="list-style-type: none"> Estimate the length of different objects Estimate and measure the length of different objects using feet, hands, a piece of string, a stick, etc. 	<p>Length</p> <ul style="list-style-type: none"> Measure the height of the learners with a tape measure Replace hands with tape measure
<p>Mass Compare and order objects using appropriate vocabulary to describe the following:</p> <ul style="list-style-type: none"> light, heavy lighter, heavier water-and sand play 			<p>Mass</p> <ul style="list-style-type: none"> Introduce the concept of mass by comparing the masses of different objects e.g. <ul style="list-style-type: none"> light/heavy lighter/heavier Reinforce mass (lightest/heaviest) 	
<p>Capacity Compare and order objects using appropriate vocabulary to describe the following:</p> <ul style="list-style-type: none"> empty, full, a lot, a little less than, more than water-and sand play 			<p>Capacity</p> <ul style="list-style-type: none"> Introduce the measuring concept of capacity by comparing how much various containers hold e.g. <ul style="list-style-type: none"> empty/full more than/less than Reinforce capacity 	<p>Capacity Compare and order objects using appropriate vocabulary to describe the following:</p> <ul style="list-style-type: none"> empty, full, a lot, a little less than, more than, water-and sand play

GRADE R MATHEMATICS OVERVIEW

5. DATA HANDLING

CONTENT	TERM 1	TERM 2	TERM 3	TERM 4
Collect data Collect physical objects of a similar kind (alone and/or as a member of a group or a team) e.g. ten leaves, ten shapes	<ul style="list-style-type: none"> Introduce the concept of data handling by collecting data of how many boys and how many girls are in the class 	<ul style="list-style-type: none"> Collect objects (twigs of different sizes) 	<ul style="list-style-type: none"> Pose a question: "Are names with six letters most popular?" Collect data to answer this question using the learners' name cards 	<ul style="list-style-type: none"> Use the birthday chart to determine whose birthdays are in which month Collect data from the learners to determine the colour of the play dough for the following week e.g. blue, yellow, green Collect data (Which mode of transport do learners use to come to school)
Sort and record data Sort physical objects according to one attribute. e.g. size of leaves	<ul style="list-style-type: none"> Sort the data by letting learners stand rows of boys and girls 	<ul style="list-style-type: none"> Sort the collected objects (twigs of different sizes) 	<ul style="list-style-type: none"> Sort the name cards according to the number of letters in each name 	<ul style="list-style-type: none"> Sort the data according to the relevant birthday month of each learner Each child selects one block representing the colour of his/her choice of play dough for the week Sort the collected data (walk, by parent's car, taxi or bus)
Draw graphs to display data Draw a picture as a record of collected objects	<ul style="list-style-type: none"> Make a graph representation the data using blocks or shapes 	<ul style="list-style-type: none"> Draw a graph of collected objects (twigs of different sizes) 	<ul style="list-style-type: none"> Draw a graph by pasting each name card below the relevant columns 	<ul style="list-style-type: none"> Draw a graph representing the learners' birthdays in each month Make use of real objects to make a graph such as blocks, stacking cubes, Lego or Duplo blocks representing the colours of dough e.g. blue, yellow, and green
				<ul style="list-style-type: none"> Draw a pictograph representing the learners

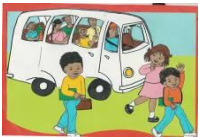








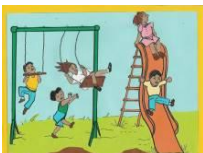




				walking, coming by taxi, with a parent's car and arriving by bus
Read and interpret graphs Answer questions based on own picture or own sorted objects (e.g. "How many big leaves did you draw? Which are the most, the big leaves or the small leaves?")	<ul style="list-style-type: none"> Read and interpret data by using play dough to make a representation of the number of boys and girls in the class 	<ul style="list-style-type: none"> Read and interpret graphs using questions 	<ul style="list-style-type: none"> Read and interpret data by counting the number of cards in each column and coming to a conclusion 	<ul style="list-style-type: none"> Read and interpret graphs using questions to determine which month has the most birthdays According to the choice of the learners, the colour of the play dough for the week will be yellow Read and interpret graphs (How many walk, come by taxi, bus, etc.?)

CLARIFICATION NOTES

GRADE R MATHEMATICS TERM 1

Week 1 Orientation	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Sequencing recurring events in own daily life <ul style="list-style-type: none"> Daily programme 	Introduce the daily programme <ul style="list-style-type: none"> Develop the sequencing of events within one day Pictures are displayed from left to right The leader of the day moves a movable arrow from left to right as the activities on the daily programme progress Learners experience the sequencing of events during a day 	Daily programme represented in picture format	Daily, after having been introduced































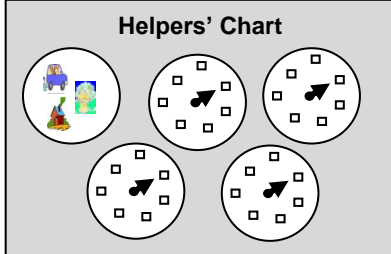
SUGGESTED DAILY PROGRAMME

							
Arrival	Register, birthdays, weather, news	Teacher-guided (planned from CAPS) class activity, Visual Art & Free play inside	Tidy up	Teacher-guided (planned from CAPS) class activity	Toilet routine		
							
Refreshment time	Free play outside and tidy-up	Toilet routine	Teacher-guided (planned from CAPS) class activity and story	Rest	Departure		

Notes:

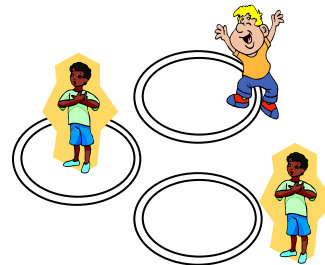
- Presentation of content is determined by the times lot in the daily programme.
- The daily programme is flexible, e.g. toilet routine could be moved to a different timeslot depending on the contextual factors of a school.
- Display all routine charts only after they have been introduced.
- The clarification notes column is NOT written in consecutive order per day, but according to content area. The teacher needs to decide which day a specific activity should be done.
- In some weeks there are more than five activities. This is merely to ensure that the teacher has sufficient activities to choose from and it does not mean all the activities need to be included.

Toilet routine	Introduce toilet routine		
Ordinal numbers	<ul style="list-style-type: none"> • Develop an awareness of sequence/order of toilet routine e.g. (first use toilet, flush, then wash hands, close the tap and then dry your hands, etc.) • Develop an awareness of ordinal numbers e.g. Liam is first, Jude is second, etc. 	Soap, facecloths Toilets Running water	After the toilet routine has been introduced, this activity takes place every day

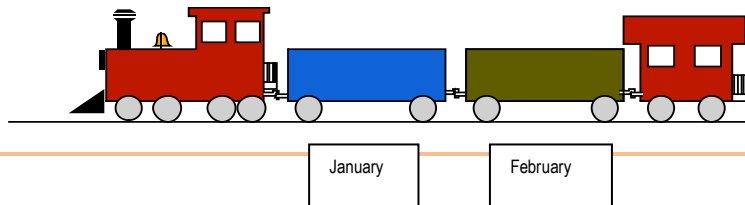
<div>Tidy-up routine</div> <div>Sorting</div>	<div>Introduce tidy-up chart</div> <div><ul style="list-style-type: none">Establish smaller working groupsPromote ordering and sorting of apparatusDivide number of learners in your class into the eight tidy-up areas. Each group should take responsibility to tidy up an area on a rotational basis, weekly</div>	<div>Tidy-up chart</div> <div><table><tr><td></td><td>Wash paint containers and brushes</td><td></td></tr><tr><td></td><td>Tidy-up book corner</td><td></td></tr><tr><td></td><td>Pack away blocks</td><td></td></tr><tr><td></td><td>Sweep floor</td><td></td></tr><tr><td></td><td>Tidy-up house corner</td><td></td></tr><tr><td></td><td>Pack away puzzles</td><td></td></tr><tr><td></td><td>Tidy-up art tables</td><td></td></tr><tr><td></td><td>Wipe tables clean</td><td></td></tr></table></div>		Wash paint containers and brushes			Tidy-up book corner			Pack away blocks			Sweep floor			Tidy-up house corner			Pack away puzzles			Tidy-up art tables			Wipe tables clean		<div>After the tidy-up routine has been introduced, this activity takes place every day</div>
	Wash paint containers and brushes																										
	Tidy-up book corner																										
	Pack away blocks																										
	Sweep floor																										
	Tidy-up house corner																										
	Pack away puzzles																										
	Tidy-up art tables																										
	Wipe tables clean																										
<div>Refreshment routine</div> <div>One-to-one correspondence</div>	<div>Introduce the helpers' chart and the sequence in which refreshments are served</div> <div><ul style="list-style-type: none">The helper's chart is used to identify the helper of the day attending to a table during refreshment timeThe 5 circles on the helpers' chart represent the five groups you divided your learners into, e.g. the red group, the blue group, the yellow group, the green group and the orange group. You can also make use of different fruits/animals/transport, etc.Each learner's symbol is placed inside the circle of the group he/she belongs toTurning the arrow attached in the middle of each circle identifies the leader of the group. The group leader rotates every day to ensure that each learner gets an opportunity to act as a leader</div>	<div>Helper's Chart</div> <div></div>	<div>After the helpers' chart has been introduced, refreshments are served this way every day</div>																								

	<ul style="list-style-type: none"> The group leader counts the number of learners and plates according to the number of learners present in his/her group for that day (one-to-one correspondence) 		
<p>Recognise, identify and name 2D shapes and/or pictures in the classroom</p> <ul style="list-style-type: none"> learner's symbol <p>One-to-one correspondence class name</p>	<p>Allow each learner to choose his/her own symbol card</p> <ul style="list-style-type: none"> Prepare the creative art display block with each learner's symbol (picture or photograph) Paste a symbol on each learner's locker Allow learner to identify own locker linked to own symbol Pin symbol with name on learner's clothes Learners identify own and friend's symbols by playing games to encourage learners to identify the different symbol cards, e.g. learners sit in circle with teacher displaying all the symbols and ask learners to identify their symbol Small photographs of learners can also be used as symbol cards, if available Promote the concept that learners belong in one big group by introducing the class name e.g. by using a picture – the “Teddy Bear” class Learners should also know their teachers' name. 	<p>Cards with learner's individual symbol Make snap from of symbol pictures Lockers, boxes or hooks against a wall marked with symbols</p> <p>Grade R label Picture of class name on door Label with teacher's name and surname</p>	
<p>Notes:</p> <ul style="list-style-type: none"> Display only the learner's symbol/photo the first 3 months of the year Display the learner's symbol/photo and learner's name the next 3 months Display only the learner's name on a label the last 6 months of the year Keep class symbol on door for the entire year Keep label with teacher's name on door for the entire year Keep label indicating Grade R class on door for the entire year 			

Week 2 Orientation	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Estimate and count everyday objects reliably	<p>Daily counting</p> <p>Oral: Rote/rhythmic counting from 1 – 5 Sing number songs and rhymes</p> <p>Although learners do not have a concept of number when they enter Grade R, they should be encouraged to sing number rhymes and songs and do rote counting on a daily basis.</p>	Number songs and rhymes	Daily
<p>Compare which of two given collection of objects is: big and small</p> <p>Describe, sort and compare 3D objects and 2D shapes according to size</p>	<p>Introduce the concept of big and small</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Learners experience the concept big and small by curling their bodies to make themselves as small as possible and then stretching out as big as possible. • Each learner matches his/her hands on a friend's hands to see whose hands are bigger or smaller.. • Compare teacher's hand to that of a learner. • Compare teacher's arm to that of a learner. <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Make big and small balls with play-dough • Find big and small objects in the classroom. Mark the big objects with red stickers and the small objects with yellow stickers. Discuss the different objects' sizes • Sort big and small objects according to size <p>Semi-concrete use of 2D shapes or pictures Apply the concept <u>big</u> and <u>small</u> during art activities:</p> <ul style="list-style-type: none"> • Look for pictures of big and small objects and cut them out • Learners trace their hands and cut them out. Compare to cut-outs for other learners. Decide whose hands are big and whose hands are small. • Divide a paper into 2 • Paste all the small objects on one side of the paper and all 	<p>Play-dough Big and small objects</p> <p>Magazines, newspapers, advertisements, scissors</p> <p>A3 paper, crayons, glue</p>	1 day

	the big objects on the other side of the paper		
Describe one or more 3D objects in relation to another	<p>The position of two or more objects in relation to the learner</p> <ul style="list-style-type: none"> • in and out <p>Kinesthetic</p> <ul style="list-style-type: none"> • Give each child a hoop. (Teacher demonstrates to the learners by doing the activity with them and saying the words: “in and out”) They must jump in and out the hoops acting on the instructions of the teacher • Stand on one leg in the hoop and the other leg out of the hoop • Take a box and let the learners jump in and out and let the learners discuss if the learner is in or out • Jump in and out of tyres as part of the physical development activity • Jump in and out the hoop with eyes closed <p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none"> • Put the doll (baby) in and take the doll out of the cot/bed • Throw a ball/beanbag into a hoop/tyre • Use clay and roll it into a ball then press it flat (bird’s nest); roll more than one small ball (eggs) and put them in/out the nest on instruction of the teacher <p>Semi-concrete use of 2D shapes or pictures Learners:</p> <ul style="list-style-type: none"> • Look at a picture and see if they can find objects that demonstrate the concepts in and out • Draw themselves in and out a hoop/bath,/etc. 	<p>Hoops</p> 	1 day
Build 3D objects using concrete material compare and sort	<p>Explore the many possibilities of building blocks during free play indoors</p> <ul style="list-style-type: none"> • The teacher’s role is to mediate this play • Explore the many possibilities of building blocks by guiding learners to build horizontally (flat), vertically (towers), high and low constructions • Sort and order the different blocks by matching the same shapes. 	<p>Blocks, packed on shelves, with the outlines of the different blocks at the back of the shelf</p> <p>Extra equipment such as small figures (pictures/faces pasted on clothes pegs) toy cars, farm animals, traffic signs, etc.</p>	Daily

	<ul style="list-style-type: none"> Sort and order the different shapes by matching according to same size Sort blocks according to big and small Each learner gets 3 rectangular blocks and arranges them in as many ways as possible e.g. line them up, stack them in various ways. Learners can compare and copy each other as well as share blocks in pairs to make them more aware of positioning <p>Promote the packing away of building blocks according to the outline provided at the back of the shelf by matching according to the same outline</p> <ul style="list-style-type: none"> 		
Describe, sort and compare 3D objects and 2D shapes according to colour	<p>Sort objects according to the primary colours, blue, red and yellow</p> <p>Show only one colour at a time. Do not link one colour to one shape</p> <p>Divide learners into 5 groups</p> <p>Give each group a pile of coloured 3D objects and 2D shapes</p> <ul style="list-style-type: none"> Teacher introduces each colour by holding up a card with the colour she wants learners to know e.g. blue. Repeat with each colour Let learners sort 3D objects and 2D shapes according to the different card shown <p>Kinesthetic</p> <ul style="list-style-type: none"> Pin different coloured circles (red, yellow, blue) cut out of cardboard on each learner's chest Let learners arrange themselves according to the different colours <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> The teacher calls five learners to the front and gives each one a different 3D object to hold in his/her hand The rest of the class remains seated in their groups with a heap of 3 – D objects in the middle of their tables The first learner in front holds up his/her 3D object e.g. a blue unifix block or a yellow circle Logi shape or puzzles, etc. The learners at the tables sort the different 3D objects 	<p>A variety of 3D objects and 2D shapes/pictures in the classroom e.g. bottle tops, Lego blocks, Logi coloured shapes, etc.</p> <p>Colour cards of blue, red, yellow</p> <p>A variety of 2D shapes and 3D objects</p> <p>Red, yellow and blue circles cut out of cardboard prepared by the teacher</p> <p>A variety of 3D objects collected beforehand and placed in the middle of each group</p> <p>Finger paint recipe:</p> <p>1 cup flour 1 cup sugar 3 drops of food colouring/powder paint 5 cups of boiling water (stir water in gradually)</p>	1 day

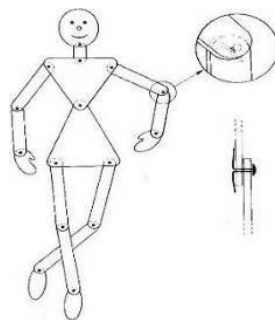
	<p>according to what the learner is holding up</p> <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • Teacher prepares finger paint • Learners draw shapes in the paint using their fingers • Trace 2D shapes and paint them 		
<p>Sequencing of recurring events in own daily life</p> <p>months of the year</p> <p>time</p>	<p>Introduce the birthday chart</p> <ul style="list-style-type: none"> • Design a colourful birthday chart, e.g. a train with 12 coaches (for each month) – the months are sequenced from left to right on the coaches. Place the name and symbol/photo of each learner in the applicable birthday month • Develop an awareness of the time concept e.g. months of the year by singing the names of the months while pointing at the month's name • Develop an awareness of reading direction e.g. display a label of each month of the year in one row from left to right • Let learners identify their symbol/photo and memorise their birth month • Encourage them to know their age • Repeat this activity on a continuous basis <p>A Birthday Chart with twelve months of the year displayed from left to right</p> <p>A crown or picture of a birthday cake indicates birthdays past. Birthdays to come have no crown or birthday cake</p> <p><i>Song: Compose your own tune</i></p> <p><i>January, February, March.</i></p> <p><i>April, May, June July.</i></p> <p><i>August, September, October November, December.</i></p> <div>  </div>		

Note:

- A learner's birthday is a very special occasion and time should be set aside for a birthday ring where the rest of the class sings Happy Birthday and clap a number of times, demonstrating the birthday learner's age.
- Each learner in the class can draw a picture and the teacher can collate all the drawings into a birthday book for the learner who is celebrating a birthday.
- The teacher can also make a crown for the birthday learner and the other learners can decorate it with collage materials.

Week 3 Orientation	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Estimate and count everyday objects reliably	<p>Daily counting</p> <p>Oral: Rote /rhythmic counting from 1 – 5 Sing number songs and rhymes</p> <p>Although learners might not have a concept of number when they enter Grade R, they should be encouraged to sing number rhymes and songs and do rote counting on a daily basis.</p>	Number songs and rhymes	Daily
Body image	<p>Identify and count the different body parts</p> <ul style="list-style-type: none"> Oral daily rote counting from 1 – 5 <p>Kinesthetic (Integrate with Life Skills-Personal Well-being)</p> <ul style="list-style-type: none"> Develop an awareness of the number of the different body parts by counting the body parts Show me your nose and count it. How many noses do you have? Show me your ears and count them. How many? Is it one more? Show me your hands. How many? Let's count them. What else can you see on your hands? Fingers! Can you count them? Let's count the one hands' fingers: 1, 2, 3, 4, 5 How many eyes? Count your ears and your eyes. Touch your ears and eyes as you count, starting with your ears Sit opposite a friend and count his body parts but first touch it/them and then count it/them. Teacher will guide this process, e.g. touch your friend's one ear; touch his other ear; count it/them: 1, 2. Is it the same as yours? Proceed with this exercise Identify those body parts of which a person only has one e.g. one nose, one mouth, one chin, etc. <p>Semi-concrete use of 2D-shapes or pictures Learners:</p>	<p>Action song/rhyme</p> <p>Puzzles/games that represent different people and body images Card games</p> <p>Full length mirror A4 paper, crayons magazines, adverts, flyers, scissors</p>	1 day

- | | | | |
|--|--|--|--|
| | <ul style="list-style-type: none">• Look in mirror and trace/draw themselves• Draw an outline of their bodies on newspaper and decorate appropriately; draw a line through the mid-line• Cut out pictures of different body parts from a magazine or advert and complete a face• Cut out a face from a magazine and draw the rest of the body parts | | |
|--|--|--|--|

Recognise the line of symmetry in self	Develop the awareness that one’s body has two sides Kinesthetic Emphasize the concepts of “one side/the other side” The teacher talks to the learners about the front of the body and the back of the body as well as the top and the bottom of the body. Learners <ul style="list-style-type: none">• Look at themselves in a mirror in which they can see the whole body• Identify which of their body parts on the one side are also on the other side of their body• Touch parts of their bodies as required e.g. “Touch your toes, touch your feet, touch your legs” .Learners can also do this exercise with their eyes closed• Touch one part of his/her body with another part e.g. Touch your knee with your nose, etc. (also an activity for mid-line crossing)	Learners  Full-length mirror Split-pin figure/mannequin of hard cardboard	1 day
Recognise, identify and name 3D objects in the classroom <ul style="list-style-type: none">• balls	Recognise, identify and name balls <ul style="list-style-type: none">• Learners play with balls and demonstrate and name all the things they can do with a ball. Teacher leads the discussion through questions.• Identify all the objects that can roll e.g. show the blocks and ask the question: “Do you think the block can roll? Let’s see”.• Roll all the objects and observe how they roll e.g. tins only roll on one side.• Use clay/dough to mould balls that can roll during creative activities (free play inside).• During movement the learners can try to let their bodies roll by rolling while lying or making their bodies like balls and roll.	Round objects e.g. oranges, apples, balls, empty round tins. (Make balls from waste e.g. newspaper balls stuffed into an old pantyhose) Square objects e.g. blocks, books, etc.. Play-dough recipe: <div><div>1 cup flour</div><div>½ cup salt</div><div>1 cup water</div><div>2 teaspoons cooking oil</div><div>A few drops food colouring</div></div> <div>} Mix all ingredients</div>	1 day
Recognise, identify and name 2D shapes in the classroom and in pictures <ul style="list-style-type: none">• circle Sort and compare 3D	Introduce a circle When introducing a circle for the first time the objects used should be exactly alike in every way (same size, same colour, same texture)	Song, “Here we go round the Mulberry bush” Game, ‘Hot potato, pass it on”	1 day

<p>objects according to size and colour</p>	<p>Kinesthetic The teacher draws a circle on the floor/ground. Learners walk along the outline of the circle while saying, “I am walking along the circle ... round and round”</p> <p>Learners</p> <ul style="list-style-type: none"> • Hold hands and form a circle • Form a circle with their bodies • Walk around in the circle while singing the ‘‘Mulberry bush’’ song • Sit down in the circle and pass an object from one to the other while singing “Hot potato pass it on”. The learner still having the object when the song stops, should go and sit in the centre of the circle <p>Concrete use of 3D objects The teacher shows the learner a hoop and explains to them that this shape is called a circle. A circle has no corners. Learners:</p> <ul style="list-style-type: none"> • Handle the 3D hoop while running their fingers around the circle • Find 3D objects in the classroom that are the same shape as a circle <p>Sort and compare objects The teacher provides learners with a variety of 3D objects and 2D shapes in different sizes (big and small) and colours (red, yellow and blue) such as tennis balls, marbles, balloons, etc. Let the learners:</p> <ul style="list-style-type: none"> • Sort objects into big and small • Group objects into different colours 	<p>Hoop</p> <p>A variety of round 3D objects such as tennis balls, marbles, and balloons, etc. 2D shapes such as cut out plastic circles</p>	
<p>Weather and calendar</p> <p>Time</p> <p>Days of the week</p> <p>Sequence of events</p> <p>Counting</p>	<p>Introduce the weather chart</p> <ul style="list-style-type: none"> • The weather represents a week (5 days) using symbol cards. e.g. 5 days of the week ordered from left to right using weather symbols.(see example) • The weather should be dealt with every day • The teacher guides learners to determine the name of the day, date and month with flash cards as in diagram (later the learners can identify and display flash cards themselves) 	<p>The weather chart should represent a week e.g. days of the week ordered from left to right for the first 6 months and dealt with every day</p> <p>Flash cards of:</p> <ul style="list-style-type: none"> • Seven days of week • Numbers 1 – 31 • Names of the 12 months 	<p>After the weather chart is introduced this activity takes place every day.</p>

- The leader of the day observes the weather outside and shares findings with the rest of the group e.g. rainy-, cloudy-, sunny day
- The teacher displays findings with a flash card as in diagram (later the learners can display cards themselves)
- Learners learn about the weekdays and weekends
- They learn about today, yesterday, tomorrow, etc. incidentally
- The learners are given many opportunities to count up to 5 counting sunny days, cold days, windy days, etc.
- Display learner's symbol if there are any birthdays during that week
- Display any activities taking place during that week e.g. going to the zoo (represented by a picture of an animal)

- Year e.g. 2012
- Cards with the weather conditions e.g.
 - windy
 - sunny
 - rainy
 - cloudy








A song to memorise the days of the week

Example of Weather Chart

Weather Chart

June

2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12	13	14	15	16	17	17
						

Sequence recurring events in own daily life

Days of the week

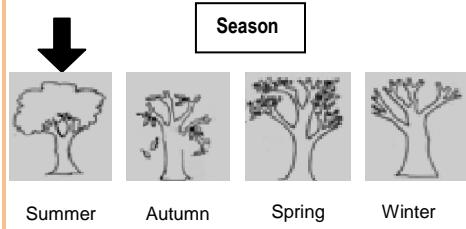
Teach learners a song or a rhyme about the days of the week. Repeat every day as weather chart is discussed.

Song:

"There are seven days, there are seven days, there are seven days in a week.

"Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday." (X2)

Song: 'Days of the week', or compose own song illustrating days of the week

<p>The four seasons</p> <p>Time</p>	<p>Introduce the chart showing the four seasons indicating with an arrow indicating:</p> <ul style="list-style-type: none"> • Which season we are in at present • Which season has just passed • Which season is next? • Display the picture of the present season linked with the relevant months. e.g. January to March you can display the summer picture. 	<p>Four different cards with a picture of one of the seasons on it.</p> <div>  <p>Summer Autumn Spring Winter</p> </div>	<p>Adjust when seasons change</p>
<p>Notes:</p> <p>All new concepts should be presented according to these stages:</p> <ul style="list-style-type: none"> • Kinesthetic stage (experience concepts with body and senses) • Concrete stage (use 3D objects) • Semi-concrete stage (representation of a 3D object on paper e.g. drawings, matching pictures, card games, worksheets, etc.) All “flat” shapes are regarded as 2D. 			

	<ul style="list-style-type: none"> • Are the patterns all the same, what are the differences and what are the similarities? • What makes a pattern? • A pattern is repetitive – lines/blocks/shapes <p>Kinesthetic</p> <ul style="list-style-type: none"> • The teacher ties a red ribbon and a blue ribbon on four learners' arms. She creates a pattern by placing a learner with a red ribbon in front of the classroom, then a learner with a blue ribbon, then a learner with a red ribbon. Let the learners complete the pattern. <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • The teacher designs a pattern with 3 blue and 3 red bottle top • Let the learners copy the teacher's pattern 	<p>Red and blue ribbons</p> <p>Red and blue bottle tops for each learner</p>	
Recognise, identify and name 3D objects and 2D shapes in the classroom and pictures	<p>Develop the ability to distinguish between objects in the foreground and background</p> <p>Concrete use of 3D objects The teacher places different objects in the classroom and outside on the playground.</p> <p>Learners</p> <ul style="list-style-type: none"> • Indicate different objects in the classroom e.g. wooden objects, red objects, plastic objects, etc. • Look for specific objects in the classroom on instruction of the teacher e.g. the ball in the Lego blocks container, the toy car in the cupboard, a pencil in the tin, etc. • Look for identical objects e.g. round buttons among square ones, a red marble amongst coloured ones, etc. • Sort objects according to their kind e.g. size, colour, texture or shape • Play the game, "I spy with my little eyes, something that is round ..." • Look for specific objects in the environment on instruction of the teacher e.g. the bird in the tree, the ribbon in the tree, the pretty flower, the ant walking on the leaf, etc. • At home the learner should be encouraged to fetch all the spoons, or knives, or forks out of the drawer 	<p>A variety of objects in the classroom and the environment</p>	1 day

Semi-concrete use of 2D shapes or pictures

Show the learners a picture and ask questions related to the picture.

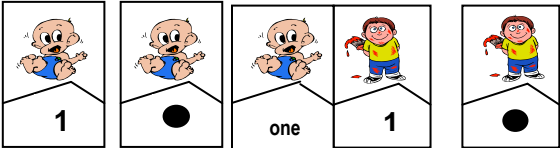
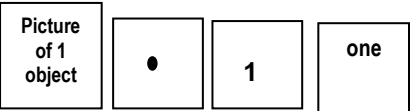
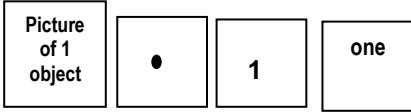
- What is the little girl holding in her hand?
- How many people are in the boat?
- Building of **puzzles** and playing picture dominoes are ideal to develop learners' figure-ground perception

Any large picture to discuss (poster)

Puzzles

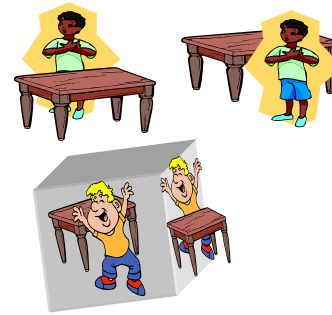
<p>Recognise, identify and name 3D objects</p> <p>Describe, sort and compare 3D objects and 2D shapes</p>	<p>Explore the shapes and sizes of boxes</p> <p>Kinesthetic</p> <p>Learners</p> <ul style="list-style-type: none"> • Climb into and out of a big cardboard box • Explore the inside of the box by communicating what they see inside the box e.g. the box has a floor/bottom, four sides/walls and a lid • Fold the box open to observe the shape <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Use boxes to build structures e.g. a house, a garage (apply during Visual Arts to build a construction using different sized boxes) • Provide learners with different objects such as buttons, unifix blocks, bottle tops, plastic bread clips <p>Learners</p> <ul style="list-style-type: none"> • Sort the objects into groups of the same types • Explore what are the differences between the objects • Explore which objects are square and which are round • Sort objects according to the same colour 	<div> </div> <p>A variety of big and small boxes (empty refrigerator and stove boxes)</p> <div> </div> <p>Unifix blocks, bottle tops, plastic bread clips (learners can bring from home)</p>	<p>1 day</p>
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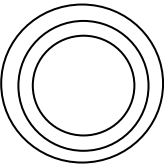
<p>Recognise, identify and name 2D shapes in the classroom and in pictures</p> <ul style="list-style-type: none"> • a triangle <p>Describe, sort and compare 3D objects and 2D shapes</p>	<p>Introduce a triangle When introducing a triangle for the first time the objects used should be exactly alike in every way (same size, same colour, and same texture). A triangle consists of three straight sides.</p> <p>Kinesthetic Learners</p> <ul style="list-style-type: none"> • Make/form shapes with their bodies e.g. 3 learners form a triangle with their bodies • Form a triangle using their fingers • Make/form a triangle with pieces of wool or play dough • Walk on the outline of a triangular shape. While walking say, ‘I am walking along the triangle, one, two, three sides or one, two, three corners (angles) • Feel the shapes. Use giant sized shapes or place different shapes in a “feely bag”. The learner “feels” the shape in the bag and matches it with a set of matching cards (cards with shapes drawn on them) • Draw the triangle shape in the air, on the ground/floor (chalk) and eventually on paper <p>Concrete use of 3D objects Learners</p> <ul style="list-style-type: none"> • Sort Logi shapes according to shape (circle and triangles), size (big and small) and colour (red, yellow, blue) • Look for triangular shapes in the classroom and environment 	<p>Card games that develop the recognition of shapes</p> <p>Wool or play-dough</p> <p>“Feely bag” (A cloth bag with elastic at the top) with different geometric shapes</p> <p>Matching set of cards with shapes drawn on them</p> <p>A4 paper and crayon</p> <p>Logi shapes Objects in the classroom and environment</p>	<p>1 day</p>
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Week 5	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Describe and identify whole numbers	<p>Reinforce the knowledge gained in Week 4 involving the number 1</p> <p>Oral: Rote counting from 1 to 5</p> <p>Kinesthetic Learners</p> <ul style="list-style-type: none"> Do body percussion e.g. clap hands once The teacher shows a flash card representing the number 1 and learners hold up 1 finger, 1 hand, 1 foot, etc. <p>Concrete use of 3D objects Learners</p> <ul style="list-style-type: none"> Find one object in the classroom Count one counter <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> Match a variety of one picture, and one dot flash card Match a variety of picture and dot flashcards with the number symbol 1 Match the number symbol and number name flash cards Make number puzzles and allow learners to match them, e.g. 	<p>Number songs and rhymes</p>  <p>One object One counter</p> <p>A variety of flash cards with one picture, and one dot on them</p> <p>Flash card with number symbol and number name</p> 	1 day
Recognise the line of symmetry	<p>Reinforce the awareness that one's body has two sides e.g. the one side and the other side leading to <u>left</u> and <u>right</u></p> <p>Kinesthetic The teacher explains the two sides of the body</p>		1 day

	<p>Learners</p> <ul style="list-style-type: none"> Stand on one leg and then stand on the other leg Move rhythmically to the beat of the shaker to the one side of the classroom; when the shaker stops, the learners move to the other side of the classroom. <p>Concrete use of 3D objects Each learner is given a beanbag.</p> <p>Learners</p> <ul style="list-style-type: none"> Put the beanbag on the floor next to themMove the beanbag to the other side of their bodies using their toes, hands, etc. Put the beanbag on the floor on the one side of their bodies and then move it to the other side Reinforce this concept by integrating it with visual arts by letting the learners make butterfly pictures <p>(Fold paper in half; drop different colour of paint blobs on folded line; fold in middle and spread paint by rubbing picture; open and observe a butterfly; cut out on border line – the butterfly has two sides that are the same)</p>	<p>Shaker can be homemade – a container with a lid, filled with small stones</p> <p>A beanbag for each learner</p> <p>Paper and paint</p>	
Recognise, identify and names 3D objects	<p>Introduce and explore objects that roll</p> <ul style="list-style-type: none"> Discuss the <u>roundness</u> of objects. Put several round objects in a “feely bag” (a cloth bag). Learners take an object from it and describe its shape Learners demonstrate how various objects roll down a slope raising the table with two bricks 	<p>“Feely bag” (A cloth bag with elastic at the top) Inside the bag are different sized balls, marbles, cylinders, empty cold drink tins, round plastic shapes or bottle tops</p>	1 day
<p>Describe one 3D object in relation to another</p> <ul style="list-style-type: none"> in front/behind 	<p>The position of two or more objects in relation to the learner</p> <ul style="list-style-type: none"> in front/behind <p>Kinesthetic: The teacher chooses two learners using a counting rhyme</p> <ul style="list-style-type: none"> Place two chairs in front of the classroom The two learner’s demonstrates the concepts <u>in front</u> and <u>behind</u> on the teachers instructions. e.g. <ul style="list-style-type: none"> Sipho, stand in front of the chair Carl, stand behind the chair 	<p>Chairs</p> <p>Flash cards with the action in front of and behind</p>	1 day

- Once achieved the teacher holds up a flash card and the learners demonstrate the action using their own chairs
- This can also be demonstrated by using three learners
 - Amy is standing behind Siphos, but Carl is standing in front of Amy
- The teacher provides learners with a big dice with different pictures showing in front of and behind written on the sides e.g. stand in front of someone with long hair; stand behind someone wearing pants; sit behind each other, etc.
- Let the learners play a game in their groups by throwing the dice and performing the action displayed



<p>Compare two given objects:</p> <ul style="list-style-type: none"> • bigger and smaller 	<p>Reinforce the concept of bigger and smaller</p> <p>Kinesthetic Learners</p> <ul style="list-style-type: none"> • Make their bodies big by stretching their arms above their heads. • Make bodies small by bending down and curling up. • Determine whether a dog is bigger than a mouse. <p>Concrete use of 3D objects Always present at least two objects for comparison.</p> <ul style="list-style-type: none"> • Compare different sizes of the same type of block, balls, plates, buttons, table, chair, etc. and determine which objects are big/small, bigger/smaller and biggest/smallest. • Build constructions with the building blocks and learners compare whose construction is the biggest and whose is the smallest. <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • Compare pictures illustrating the concepts of big/small and bigger/smaller. • Apply the concept of ‘big/small’ during creative art. 	<p>Picture of a mouse and a dog (ensure that the picture of the dog is bigger than the picture of the mouse)</p> <p>Objects in the classroom such as blocks, balls, plates, buttons, beads, sticks, pegs, matchboxes, tins, pebbles, corks, shells, bottle tops, etc.</p> <p>Pictures illustrating big/small</p>	<p>1 day</p>
<p>Compare two given objects:</p> <ul style="list-style-type: none"> • big and small • bigger and smaller • biggest and smallest 	<p>Compare two given objects:</p> <ul style="list-style-type: none"> • big and small • bigger and smaller • biggest and smallest <p>Kinesthetic The teacher draws a small circle in the sand, on the ground/floor.</p> <ul style="list-style-type: none"> • The learners walk on the outline of the small circle <p>The teacher draws a bigger circle on the outside of the circle</p> <ul style="list-style-type: none"> • The learners walk on the outline of the bigger circle • The teacher asks: <ul style="list-style-type: none"> ▪ Which circle is the smallest? ▪ Which circle is biggest? ▪ Walk on the small circle ▪ Walk on the big circle <p>The teacher draws an even bigger circle on the outside of the</p>	<p>Big and small circles drawn in the sand/on the floor/ground</p> 	<p>1 day</p>

circle.

- The learners walk on the outline of the biggest circle
- The teacher asks questions such as:
 - Which circle is the biggest?
 - Which circle is the smallest?

Concrete use of 3D objects;

Learners sort and compare different objects according to size.(bigger , smaller) e.g.

- big buttons from small ones
- big spoons from small ones
- big boxes from small boxes

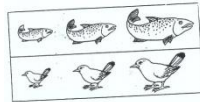
This activity can be extended to outdoor play (sand play and water play) where learners can compare objects and discuss which one is smaller/bigger, biggest and smallest

It could also be integrated with Visual Arts – make a collage using big/small objects

Semi-concrete use of 2D shapes and pictures

Learners

- Play card games and identify the small/big/biggest from pictures.
- Ask questions such as: Which fish is first or which fish is last? Which fish is in the middle?




- Progress to letters so that learners realise that pictures represent words. Learners do not have to read the letters.





Building blocks and balls of different sizes


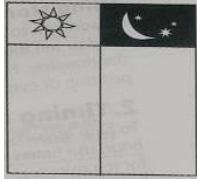
Buttons, spoons, medicine boxes, shoe boxes, empty milk cartons, empty medicine containers , etc





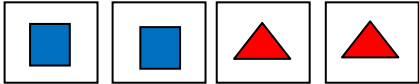
Week 6	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Estimate and count everyday objects reliably	Daily counting Oral: Rote /rhythmic counting from 1 – 5 Sing number songs and rhymes	Number songs and rhymes	Daily
Copy and extend patterns	Copy a pattern Kinesthetic: <ul style="list-style-type: none"> Teacher demonstrates a body percussion pattern and learners copy the pattern e.g. clap, clap, stomp; clap, clap, stomp; ... click, snap, snap, click, etc. Concrete use of 3D objects: Copy pattern with objects e.g.: <ul style="list-style-type: none"> Using different types of leaves Using shapes e.g. circle, circle, triangle, circle ... Using objects e.g. red peg, blue peg, yellow peg, red peg ... Semi-concrete use of 2D shapes or pictures Learners <ul style="list-style-type: none"> Create their own patterns with the picture cards e.g. flower, leaf, leaf, flower ... Create their own patterns with colour cards e.g. red, blue, red, blue, red ... During creative art let learners print patterns using sponge shape cut-outs 	 Logi shapes Pegboard pegs Provide the learners with picture cards Colour cards Teacher can cut sponges in different shapes	1 day

<p>Recognise, identify and name a square</p>	<p>Introduce a square When introducing a square for the first time the objects used should be exactly alike in every way (same size, same colour, and same texture). A square consists of four sides, this is called a square.</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • The whole class forms a square • Let the learners walk on a square made with rope on the carpet while saying, I am walking along a square one side, two sides, three sides, four sides. Are the sides all the same? • Let groups of learners form smaller squares <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • The teacher shows the difference between a circle and a square by holding up the round lid of a tin and a square tile • The lid feels round and the tile has edges and corners <p>Semi concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • The teacher draws around the lid and around the tile • The lid represents a circle and the tile represents a square • Let the learners trace around the lid and the tile using crayons 	<p>Rope</p> <p>Lid of a round tin A square tile A variety of round lids and square objects Newsprint Crayons</p>	<p>1 day</p>
<p>Describe, sort and compare 3D objects and 2D shapes</p>	<p>Sort 3D objects and 2D shapes or pictures Divide learners into groups. Learners</p> <ul style="list-style-type: none"> • Sort a variety of 3D objects and 2D shapes provided by the teacher according to size and colour • Reinforce shapes through playing of games and game cards during free play indoors 	<p>Shape cards 3D objects such as blocks, Lego blocks 2D shapes Games that reinforce shapes such as “What’s in a square?”</p>	

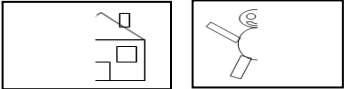
<p>Recognise, identify and name 3D objects that slide</p>	<p>Introduce objects that can slide</p> <p>Provide learners with a variety of different 3D objects and 2D shapes such as blocks, boxes, balls, etc.</p> <ul style="list-style-type: none"> • Allow learners to experiment through play which objects can slide and which objects can roll • The learners can use the slide in the playground or the teacher can use a table to make a slope by placing 2 blocks underneath it • Can any of the objects slide upwards? • Which objects slide downwards? • Why are these objects able to slide? 	<p>Blocks Balls Boxes Slide/table with blocks</p>	
<p>Describe one 3D object in relation to another</p> <ul style="list-style-type: none"> • on /under, • below/on top 	<p>Develop the concept of <u>on</u>, <u>under</u>, <u>below</u>, <u>on top</u></p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Learners each sit on their own chairs • Learners listen to the teacher's instructions and follow whilst performing actions e.g. sit on your chair, lie under your chair • Stand on top of your chair • Sit under the table • Put your hands on your head • Put your hands under your legs • Put a beanbag in your armpit • Sit on the beanbag • Hold the hoop under your knees <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Two learners hold a skipping rope and the rest of the class crawl under the rope • Look for an object under the carpet/table/box, etc. <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • The teacher provides the learners with a variety of pictures where the concept of <u>on</u>, <u>under</u> and <u>on top</u> is illustrated e.g. a person sitting on a horse, a baby lying under a blanket, etc. <p>Learners</p> <ul style="list-style-type: none"> • Identify the concept of <u>on</u>, <u>under</u> and <u>on top</u> from the picture 	<p>Chair for each learner</p> <p><u>on top of the table</u></p>  <p><u>under/below</u> the table</p> 	

<p>Describe the time of day in terms of day and night/light and dark</p>	<p>Introduce both the concepts day/night and light /dark</p> <p>Integrate these concepts with Beginning Knowledge topics in Life Skills.</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Experience darkness by sitting under the table and chairs which has been covered with a blanket • Darken classroom by closing curtains and switching off the light • Learners discuss their experiences when the classroom was dark and when it was light • Provide a torch for light under the blanket • Discuss activities which take place during the day and at night. <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • The teacher prepares a poster of the sun and the moon and provides pictures showing what happens during the day and night time • Learners should place their pictures under the sun and/or the moon. 	<p>Chairs and blankets Torch</p>  <p>Poster of day and night Pictures of day-time and night time activities</p> 	
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Week 7	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Recognise, identify and name 3D objects and 2D shapes in the classroom match and compare counting	Introduce puzzles and give guidance on how to build them <ul style="list-style-type: none"> Discuss the puzzle picture with special attention to detail such as colour, people/animals, objects, position of people/animals and objects Identify, recognise and match the different types of puzzle pieces, e.g. <ul style="list-style-type: none"> corner pieces pieces with one straight edge pieces with no straight edge counting the puzzle pieces 	A variety of puzzles – minimum 6 pieces <ul style="list-style-type: none"> Pack all puzzle pieces face up Identifying the corner pieces and matching the colours, objects, etc. on them with the corners of the puzzle Building the four sides (frame) using all the pieces with one straight edge If learner struggles, build the puzzle on top of the given picture All puzzles should be completed before stored 	
Describe one 3D object in relation to the learner <ul style="list-style-type: none"> in/out 	The position of two or more objects in relation to the learner <ul style="list-style-type: none"> in /out <p>Kinesthetic</p> <ul style="list-style-type: none"> The teacher uses masking tape or skipping rope to make two lines on the floor. The learners all stand on the one side and the teacher calls, “in the river. All the learners jump between the two lines, and then she shouts ‘out of the river’. The learners all jump out on either side of the two lines. Learners who do not follow the instruction correctly are out and may not continue playing <p>Concrete use of 3D objects: Learners:</p> <ul style="list-style-type: none"> Stand a few steps away from a basket/bucket Throw beanbags into a basket. <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> Learners draw a picture illustrating <u>in</u> and <u>out</u> concepts 	<p>Game: In the river (between two lines), out of the river (on the outside of two lines)</p> <p>2 skipping ropes</p> <p>Bucket or basket</p> <p>Paper and crayons</p>	

<p>Describe one 3D object in relation to the learner</p> <ul style="list-style-type: none"> top/under/below 	<p>The position of two or more objects in relation to the learner</p> <ul style="list-style-type: none"> top/under/below <p>Kinesthetic Learners follow instructions such as:</p> <ul style="list-style-type: none"> Put the red block on top of your friend's head Put the yellow block under/below your table Put the block on your head and climb on your table Crawl under the table with your eyes closed <p>Concrete use of 3D objects: Learners:</p> <ul style="list-style-type: none"> Pack the triangles on top of each other Pack the blue squares on top of each other Put the red circle under the yellow square Put the yellow circle and the red triangle under/below the blue square <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> Teacher prepares individual cards with pictures on them as well as cards with shapes on them Learners must place the shapes on top/under/below the picture as the teacher requests e.g. Place the blue square on top of the fruit basket 	<p>Building blocks/Unifix blocks</p> <p>Logi shapes</p> <p>Different pictures</p>  <p>Shape cards</p> 	<p>1 day</p>
<p>Recognise line of symmetry in self</p>	<p>Reinforce the awareness of symmetry in self (own body)</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> Name their body parts Sing any action song about the body <p>he teacher demonstrates to the learners the concept of symmetry by hanging a rope in front of a learner.</p> <ul style="list-style-type: none"> Learners should imagine that their bodies are divided into 	<p>Song: "Head and shoulders, knees and toes"</p> <p>A single rope to demonstrate</p>	<p>1 day</p>



	<p>two sides.</p> <p>The teacher explains how the body is divided into two parts by the mid-line.</p> <ul style="list-style-type: none"> • Every part a person has two of, are found on both sides of the body e.g. eyes, ears, arms, legs. etc. • Every part a person has one of, is situated on the mid-line e.g. nose, mouth, navel. <p>For symmetrical control, let the learners:</p> <ul style="list-style-type: none"> • March, lifting the knees high • March like stiff 'tin soldiers' • Cross arms, cross legs while marching. <p>Integrate these actions with Performing Arts in Life skills.</p> <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • Draw incomplete pictures on a piece of paper and ask the learners to complete the picture. 	<p>Incomplete pictures</p> 	
Describe one 3D object in relation to another	<p>The position of two or more objects in relation to the learner</p> <ul style="list-style-type: none"> • up and down <p>Kinesthetic Let the learners:</p> <ul style="list-style-type: none"> • Demonstrate <u>up</u> and <u>down</u> by moving their bodies up and down on instruction of the teacher • Climb up two steps while counting the number of steps • Climb down the two steps while counting • Climb up and down on equipment outside • Climb up and <u>down</u> a rope climbing ladder if the school has one • Look up and down 	<p>Sing song , "Oh the grand old duke of York"</p> <p>Make use of the stairs at the school Jungle gym (climbing equipment) Rope climbing ladder</p> <p>Pictures illustrating <u>up</u> and <u>down</u> e.g. the stairs</p>	1 day

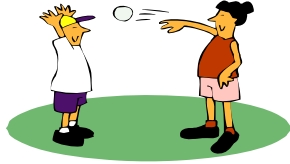
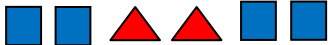
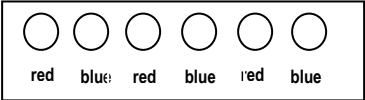
Semi-concrete use of 2D shapes or pictures


- The teacher provides the learners with a variety of pictures where the concept of up and down is illustrated e.g. a person climbing up a mountain, an air balloon going up into the air and coming down, someone walking down stairs, etc.

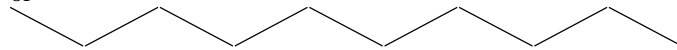
Learners:

- Identify the concepts of up and down from the pictures.

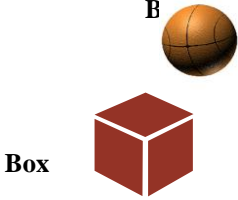


Week 8	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Recognise the line of symmetry in self	<p>Crossing the midline incorporated with counting</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> Twist and jump in rhythm while counting Stand facing each other and do criss-cross clapping (the left hand to the opposite learner's left hand) singing a number song/rhyme <p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none"> Throw the ball to a friend while counting Walk on a curved rope singing a song e.g. "One little elephant balancing" Kick a ball to each other <p>The above activity can be integrated with Life Skills</p>	<p>Number songs and rhymes</p>  <p>Ball, rope</p>	1 day
Create own patterns	<p>Create own patterns</p> <p>Kinesthetic Learners create a pattern using:</p> <ul style="list-style-type: none"> Their bodies e.g. one girl with dress, two boys with trousers, etc. <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> Using red and blue shapes. e.g. 2 blue squares, 2 red triangles, 2 blue squares ... Apply a pattern during art activities by using red and blue paint with bottle tops. 	<p>Red and blue plastic shapes</p>  <p>Using bottle tops and red and blue paint</p> 	1 day


	Semi-concrete use of 2D shapes using secondary colours Learners: <ul style="list-style-type: none"> • Use their thumbs to print a colour border with paint e.g. green, orange, green ... along the top edge of their papers • Activity can be done during Visual Arts 	A4 paper Paint in different colours.	
Recognise, identify and name 3D objects	Reinforce objects that roll Concrete use of 3D objects: Learners: <ul style="list-style-type: none"> • play with plastic bottles, tins, balls, an orange, etc. and explore the possibilities that they can roll <p>The teacher asks/explains:</p> <ul style="list-style-type: none"> • Which blocks in the block corner can roll? • Blocks cannot roll because they only have straight sides • Roll different objects and see which can roll and which can't • Learners should realise that objects that are round can roll. 	Plastic bottles, tins, oranges, etc. Blocks, Lego blocks Tins, plastic cups, toilet paper rolls, candles, an orange, balls, etc.	1 day
Follow directions to move or place self within a specific space <ul style="list-style-type: none"> • directionality 	Develop a sense of direction by introducing both the concepts at the front/at the back and forward/backward Kinesthetic Learners: Follow directions of the teacher (individually and/or as a member of a group) and move or position themselves within the classroom <ul style="list-style-type: none"> • Stand <u>at the front</u> of the classroom (consider the front of the classroom to be where the door is) • Stand <u>at the back</u> of the classroom • Walk forward and backward • Crawl forward and backward • Jump forward and backward 		1 day
	The teacher draws a pattern on the floor/ground with chalk e.g. 	Pattern drawn on the ground.	

	<p>or</p>  <p>Learners:</p> <ul style="list-style-type: none"> • Walk and/or crawl on the lines of the pattern • Put a piece of red paper on the corners to represent a traffic light When learners get to the corners they have to turn their whole body in order to get the sensation of direction <p>Concrete use of 3D objects</p> <p>Learners:</p> <ul style="list-style-type: none"> • Make a road with the building blocks • Push a toy car forwards and backwards on the “road” of building blocks • Push a toy car by turning to the one side and turning to the other side on the “road” of building blocks 	<p>Red paper.</p> <p>Building blocks</p>											
<p>Collect and sort objects in the environment according to stated features</p> <p>Draw graph to display data</p> <p>Read and represent the graph</p>	<p>Introduce the concept of Data Handling by (using their bodies) collecting objects in the class or environment according to stated features:</p> <p>Kinesthetic:</p> <p>Divide learners into groups</p> <ul style="list-style-type: none"> • In each group let all the boys stand in a row and let all the girls stand in a row next to the boys • Let the learners count the number of boys and the number of girls in each group • With this information, complete a boy(s) or girl(s) body graph per group <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Learners can use above information to develop a 3D object-graph by using blocks/shapes, etc. representing each learner <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • Learners make a graph by using play-dough to make small balls representing their own interpretation of the previous activity 	<table border="1"> <thead> <tr> <th>Girls</th> <th>Boys</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>2</td> <td>3</td> </tr> </tbody> </table> <p>Play-dough A4 paper</p>	Girls	Boys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	3	1 day
Girls	Boys												
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	<ul style="list-style-type: none"> • Give learners paper with a picture of a girl and boy on top of each learner's page • Let learners roll balls representing the number of girls and boys in their group • Learners place the number of balls under the applicable picture 		
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Week 9	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Recognise and explore objects that can slide and roll	Explore objects that slide and roll The teacher holds a ball and bounces it on the floor. She lets it roll on the floor. The teacher then takes a box and does the same. The teacher asks learners: <ul style="list-style-type: none"> • Which object can roll? • Why can the box not roll? • Which object can slide? Teacher shows learners that a box has four sides (corners) and therefore cannot roll, but the ball has no corners and can roll. <ul style="list-style-type: none"> • Encourage learners to find objects in the class that can roll and slide • Ask learners whether they can find an object(s) that can roll and slide 		1 day
Recognise, identify and name 2D shapes in the classroom and in pictures <ul style="list-style-type: none"> • a circle 	Reinforce the circle Kinesthetic Learners: <ul style="list-style-type: none"> • Make a circle using their fingers • Make a circle using both hands • Sit on a carpet, forming a circle while holding hands • Walk on a big circle, made with string, on the carpet • Play game where learners sit in a circle and sing a song <ul style="list-style-type: none"> ▪ One learner stands outside the circle and runs around it holding a ball in his/her hands ▪ The learner chooses to place the ball behind any of the learners seated in the circle ▪ The chosen learner picks up the ball and tries to throw the other learner with the ball, while he/she is running around the circle again to go and sit in the empty space ▪ If the ball touches the learner running away, he/she 	String Ball	1 day

	<p>must sit in the middle of the circle and the game continues.</p> <p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none"> Find round objects in the classroom Find shapes that represent a circle <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> Teacher names objects and learners identify which objects are round e.g. orange, apple, table, ball, marble, book, box, etc. 	<p>Soccer ball, tennis ball, golf ball, apple, orange, hoops, etc.</p> <p>Orange, apple, table, ball, marble, book, box, etc.</p>	
The position of one or two objects in relation to each other	<p>Concepts <u>next to</u>, <u>between</u> incorporated with colour</p> <p>Kinesthetic Teacher calls up three learners</p> <p>She illustrates the concepts <u>next to</u> and <u>between</u> by arranging the learners in different order saying:</p> <ul style="list-style-type: none"> Craig is standing next to Steve Mel is standing between Craig and Steve <p>Activity can be repeated with other learners</p> <p>The teacher provides learners with building blocks of different colours and gives them instructions such as:</p> <ul style="list-style-type: none"> Put the red block next to the yellow block Put the blue block between the red and the yellow block <p>Concrete use of 3D objects Using beanbags in different colours (red, blue, yellow, green), give learners the instruction to:</p> <ul style="list-style-type: none"> Put the blue bean bag next to the yellow bean bag Put the red bean bag between the blue and the yellow bean bag <p>This activity can be incorporated into Life Skills.</p>	<p>Coloured blocks</p> <p>Coloured bean bags</p>	1 day

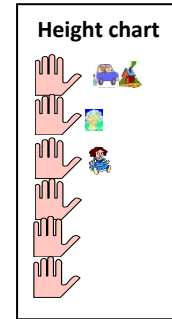
<p>Order more than two given objects from</p> <ul style="list-style-type: none"> smallest to biggest 	<p>Order more than two given collections of objects from smallest to biggest</p> <p>Kinesthetic: Provide learners with play-dough and let them shape a number of balls</p> <ul style="list-style-type: none"> In the groups they then have to arrange the dough balls from smallest to biggest and biggest to smallest <p>Concrete use of 3D objects:</p> <ul style="list-style-type: none"> Each group member selects an object in the classroom Let the learners arrange objects from smallest to biggest in their respective groups <p>Teacher provides each group with an old telephone directory Learners:</p> <ul style="list-style-type: none"> Tear paper from the directory and crumple up the paper shaping them into balls Learners compare which ball is the biggest and which ball is the smallest <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> Give learners a sheet with pictures of big and small items Learners can colour the big items and circle the small items 	<p>Play-dough</p> <p>Any objects in the classroom</p> <p>Old telephone directories</p> <p>A4 sheet with pictures</p>	<p>1 day</p>
<p>Concretely compare and order objects using appropriate vocabulary to describe height</p> <ul style="list-style-type: none"> tallest/shortest longest/shortest 	<p>Introduce the concept of height (tall and short, tallest and shortest, long and short)</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> The teacher calls up 4 learners and asks the class to help her to arrange them from tall to short Let learners arrange themselves in their groups from tallest to shortest One learner stands with his/her back against the wall while the other members of his/her group measure his/her height using their hands <p>Concrete use of 3D objects Teacher puts a variety of objects on each group's table such as</p>	 <p>Rulers, crayons, pencils, erasers, etc</p>	<p>1 day</p>

rulers, pencils, crayons, erasers, etc.

- Sort all the long objects and all the short objects together.
- Learners arrange the objects from longest to shortest.

Height chart

- The teacher has a height chart ready against the wall to plot each learner's height
- Use learners' symbol cards to indicate each one's height on the height chart

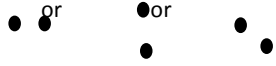


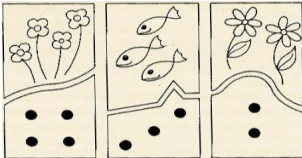
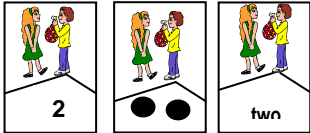
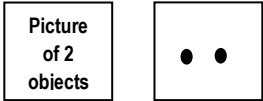
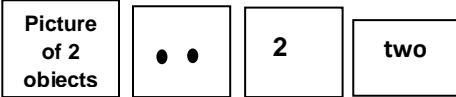
Sipho 6 hands

Abby 5 hands

WEEK 10 Use Week 10 to attend to conceptual weaknesses and/or identified barriers to learning.		
Content Area	Topic	Assessment Criteria
Numbers, Operations and Relationships	Counting	Estimate and rote count up to 5 (number songs & rhymes to develop number concept)
	Number recognition	Recognise numbers in familiar context (e.g. age, register)
		Understand ordinal numbers (e.g. during toilet routine)
	Number sense	Understand one-to-one correspondence (helpers' chart during refreshment time)
	Identify and describe whole numbers	Identify number pictures and dot cards that involve number one
		Know the number symbol 1
Patterns and Functions	Solving problems	Recognise the number name one
		Use concrete apparatus
		Explain own thinking in words and through drawings or concrete objects
Space and Shape	Copy, extend and create own patterns	Identify patterns in the environment
		Copy, extend and create own patterns
	Recognise, identify and name 3D objects	Recognise, identify and name balls
		Recognise, identify and name boxes
	Recognise, identify and name 2D	Recognise, identify and name his/her own symbol, his/her peer's symbol and the class

	shapes/pictures	name
		Build at least a 6 piece puzzle
		Show the ability to distinguish between objects in the <u>foreground</u> and <u>background</u>
	Geometric shapes	Identify and recognise the circle
		Identify and recognise the triangle
		Identify and recognise the square
	Describe, sort and compare 3D objects :	Compares which of two given collection of objects is bigger, smaller, biggest, smallest
		Sort objects in: Size big and small
		Colour – primary colours (red, yellow, blue)
		Shape – circle ,triangle and square
		Objects that roll
		Objects that slide
	Recognise line of symmetry:	Recognise line of symmetry in self
	Spatial relations: The position of two or more objects in relation to the learner	Know in <u>front of/behind</u>
		Know on <u>top of, on, under, below</u>
		Know <u>in, out</u>
		Know <u>up, down</u>
	Directionality	Understand the concepts: <u>forwards, backwards, front</u> and <u>back</u>
Measurement	Time	Use words like day, night, light and dark, morning, afternoon tonight to describe time of the day
		Order recurring events in own daily life (daily programme)
		Show awareness of days of the week, seasons and weather
		Know own birth date
	Length	Distinguish between tall, taller, tallest, short, shorter, shortest (height chart)
Data Handling	Collect, sort, draw, read and represent data	Collect, sort, draw, read and represent (analyse) objects according to one attribute

TERM 2 MATHEMATICS GRADE R			
Week 11	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Describe and identify whole numbers	<p>Introduce the meaning of the number 2</p> <p>Oral: Count everyday objects up to 2 Count forwards and backwards up to 2 Rote counting 1 – 7</p> <p>Reinforce concepts of <u>many</u> and <u>few</u>. Clap hands many times ... stop. Clap hands fewer times, the teacher claps up to 2 times</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Call 2 learners to the front; count them • Count 2 chairs, tables, etc. • Identify pairs of body parts such as eyes, ears, hands, legs, feet, knees, shoulders, etc. • Do body percussion e.g. clap hands twice, nod heads twice, tap on floor twice or jump twice, etc. • Hold up 2 fingers, 2 hands, 2 feet. <p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none"> • Identify two of the same objects in the classroom e.g. two shoes, two crayons, etc. • Develop an awareness of number conservation by letting learners pack two counters or any objects in different ways e.g. <div style="text-align: center;">  </div> <p>When counting, the number of objects is not affected by their size, or position, or whether they are of the same type.</p> <ul style="list-style-type: none"> • Arrange 2 buttons, 2 pencils, 2 hoops, 2 learners, etc. 	<p>Two pictures of birds for counting song “Two little Dickey birds”</p> <p>Counters or objects for each learner</p>	1 day

	<ul style="list-style-type: none"> Count them in a different order e.g. count them spread out, close together, in a line or stacked up 		
Number symbol and recognise number name	<p>Know the number symbol and recognise the number name involving the number 2</p> <p>Semi-concrete use of 2D shapes</p> <p>Learners:</p> <ul style="list-style-type: none"> Match picture cards with 2 pictures on them with two cards with two dots on them Show flash cards with a picture of selected number of items e.g. a pair of shoes, two crayons, etc. Let learners look for the same number of objects in the classroom Identify flash cards with different numbers of pictures on them Identify flash cards with the number symbol 2 Recognise flashcards with the number name Link the number symbol 2, with the number of objects and the number of dots Link the number name with the number symbol card, the number of pictures and the number of dots cards Add number 1 flashcards and let learners identify the numbers 1 and 2 Make number puzzles and allow learners to match them e.g.  	<p>Number flash cards with two objects</p> <p>Objects in class and environment</p>  <p>Flash card with two pictures, dots, number symbol and number name</p> 	1 day
Describe, sort and compare 3D objects and 2D shapes according to ;	<p>Describe, sort and compare 3D objects and 2D shapes according to</p> <ul style="list-style-type: none"> similarities and differences 		1 day

- similarities and differences

Kinesthetic

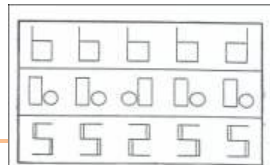
- Select two girls using a counting out rhyme
- The other learners identify in which way the two girls are the same
- Select a boy and a girl using a counting out rhyme
- The other learners identify in which way the boy and girl are different
- In pairs the one learner “poses” in a specific way and the other copy the exact “pose”
- one learner stands with his/her hands on his/her head and on one leg, the other copies the position
- Sort learners according to gender, those with shoes, those with sandals, and those that are barefoot.
- Call the following learners to the front
 - Girls and boys with trousers, a girl with a dress
 - All children wearing shoes, one who is barefoot
- Ask questions such as: Which learner does not match?
- Which learner is different?

Concrete use of 3D objects

- Two learners bounce balls: a big ball and a small ball
- The other learners identify in which way the balls are the same and different
- One learner rolls an orange, another rolls a ball
- The other learners identify in which ways the ball and the orange are the same and different
- Learners observe a boy’s shoes and a girl’s sandals
- The other learners identify in which ways the shoes are the same and different
- Learners find objects which are the same in the classroom

Semi-concrete use of 2D shapes or pictures

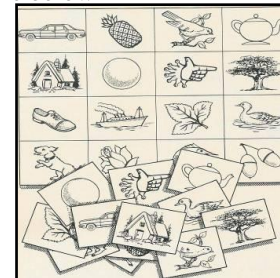
- Provide matching card games to promote similarities and differences e.g.



Oranges

Balls big and small

Make own matching card games as in example below

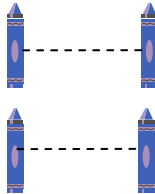




Matching card games

- Progress to more abstract cards **later in the year**.
Learners do not have to read the letters. e.g.

d	d	d	b	d
e	e	e	e	e
r	r	r	r	r
s	s	s	s	s

o	e	o	o	c	e	o	a
ad	da	pa	ad	ab	ad		
n	m	n	h	m	n	h	n
sc	sc	cs	ec	sc	cs		

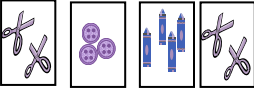
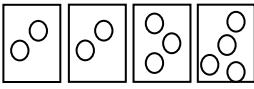
<p>Compare which of two given collections of objects are:</p> <ul style="list-style-type: none"> equal to (the same) 	<p>Order and compare collections of objects using “equal to” or “the same”</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> Develop the concepts of <u>same</u> and <u>different</u> Compare fingers and toes. Although they are the same number they look different Compare fingers, toes and eyes. They look different. We have the same number of fingers and toes namely 10 but we only have two eyes Compare ears, arms, legs and feet. They look different but they are the same number namely two of each The teacher draws two circles on the ground or forms two circles with a string on the floor. Instruct the learners to divide themselves so that there’s an equal number of learners in each circle. Count the number of learners. Point out the groups which are equal/the same <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> Develop the concepts of <u>same</u> and <u>different</u> Place a set of the learner’s symbols in the middle of the carpet Give each learner his/her symbol card. The learners try to match their symbols with the same one on the carpet Place a group of objects on the table and divide them into equal groups (one for you, one for me) Place two objects of the same type e.g. crayons, in a row on the table. Ask one learner to match each of teacher’s crayons with one of his/her own. (Learner needs to fetch two crayons to match teacher’s number of crayons. “Now we each have the same/equal number of crayons” Repeat the same exercise as above with 4 and 6 objects for the learners to understand the concept of “the same/equal” The teacher places 2 blocks in a row on a table. She gives two learners each a block. Ask the learner to match each of their blocks with the teacher’s blocks. (Learners each need to fetch another block to match teacher’s two blocks) <p>“Now we each have 2 blocks. We have the same number of blocks”.</p>	<p>String/rope</p> <p>Symbol cards Objects</p>  <p>Blocks</p>	<p>1 day</p>
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	<div>  </div> <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> Learners compare picture and dot flash cards. Identify the cards that are the same <div>  </div> <ul style="list-style-type: none"> Provide matching card games during free play time indoors where learners can distinguish between similarities and differences 	<p>Dot and flash cards</p>	
<p>Compare which of two given collection of objects are:</p> <ul style="list-style-type: none"> more than 	<p>Order and compare collections of objects using <u>more than</u></p> <p>Oral: Count everyday objects up to the number 2</p> <p>Reinforce concepts of <u>many</u> and <u>few</u> Clap your hands many times ... stop. Clap your hands fewer times. The teacher claps up to the number 2.</p> <p>Kinesthetic Learners Indicate which of two given collections of objects is: <u>more than</u></p> <ul style="list-style-type: none"> Count their eyes and their fingers. Ask question: "Which do they have more of?" Show two fingers on one hand and 1 finger on the other hand. "Which hand has more fingers?" Choose 3 learners using a counting out rhyme. Group them in groups of 2 and 1 		<p>1 day</p>



Week 12	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Number symbols and number names	<p>Recognise and identify the number symbol and the number name involving the number 2</p> <p>Oral: Count everyday objects up to the number 2 Count forwards and backwards up to 2 Rote counting 1 – 7</p> <p>Reinforce concepts of <u>many</u> and <u>few</u>. Clap hands many times ... stop. Clap hands fewer times. The teacher claps up to 2.</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> • Bounce a ball once, i.e. 1 time • Bounce a ball twice, i.e. 2 times • Draw the number two on the ground and let learners walk the number two • Draw the symbol two in the sand, in the air, on the carpet etc. • Make a number 2 with play-dough • Find 2 friends who are wearing shoes <p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none"> • Pick up one counter • Pick up two counters <p>Semi-concrete use of 2D shapes or pictures Learners:</p> <ul style="list-style-type: none"> • Identify picture flash cards and link them with the same number of objects • Identify flash cards marked with two dots and link them with the same number of objects • Identify the number symbol and number name flash cards 	<p>Number songs and rhymes</p> <p>Balls Play-dough</p> <p>Counters</p> <p>Flash cards with two pictures, dots, number symbol and number name</p> <div> <div>Picture of 2 objects</div> <div>• •</div> <div>2</div> <div>two</div> </div>	

	<p>and link them to the same number of counters</p> <ul style="list-style-type: none"> Identify the number symbol 2 on pictures provided by the teacher Where else in the class can you see a number 2? Divide class in groups and give opportunity to play number dominoes in groups 	<p>Dominoes Counters Pictures on which the number symbol 2 appears</p>	
<p>Orally solve word problems (story sums) and explain own solution to problems)</p> <p>Addition</p> <p>Subtraction</p>	<p>Orally solve and explain solutions to word problems (story sums) involving the number 2</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Teacher calls 1 learner to the front. Learners count him/her. Teacher calls another 1 and asks: How many learners altogether? 1 and 1 \rightarrow 2 (the teacher says: 1 and 1 makes 2) Teacher packs out 1 chair. Add 1 more. How many chairs are there now? 1 and 1 \rightarrow 2 Teacher holds up 2 fingers, and says: “Count my fingers. If I hide one finger, how many fingers can you see? 2 take away 1 \rightarrow 1 Teacher holds up 2 fingers, and says: “Count my fingers. If I don’t take away any fingers, how many fingers can you see? 2 take away 0 \rightarrow 2 One child is at home. One comes to play. How many children are there now? There are two children at the table. Each child wants his own chair. How many chairs do we need? <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> If you have one cookie and mommy gives you another one, how many cookies will you have? Teacher has two counters in one hand and no counters in the other hand. How many counters does she have altogether? Cay has 2 balls and 1 ball hops away. How many balls does Cay have left? If you have 2 blocks and you give 1 block to a friend, how many blocks will each of you have? 	<p>Number songs and rhymes</p> <p>Counters Balls Blocks</p>	

<p>Compare two given collections of objects:</p> <ul style="list-style-type: none"> less than 	<p>Order and compare collections of objects using <u>less than</u></p> <p>Oral: Count everyday objects up to the number 2</p> <p>Reinforce concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. The teacher claps up to 2</p>	<p>Number songs and rhymes</p>	
	<p>Kinesthetic (Integrate with Performing Arts in Life Skills dance)</p> <ul style="list-style-type: none"> Sing the song: “Heads and shoulders, knees and toes” singing every word the first round The next round sing one word less e.g. “Heads and shoulders, knees and ... knees and” Sing song with another word less e.g. “Heads and shoulders ... and ... and ...” Teacher points out that every time they sing one word less until no words are sung <p>Concrete use of 3D objects Teacher makes four strings of beads</p> <p>Place 3 beads on the first string, 2 beads on the second string, one bead on the third string and 3 beads on the fourth string. Let learners identify:</p> <ul style="list-style-type: none"> Which string has the least beads? Which string of beads has 1 more than the string with 2 beads? Which string of beads has one less than the string with 3 beads? <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> Let learners compare picture and dot flash cards. Identify the cards that are <u>more than</u> and <u>less than</u> a number given by the teacher e.g. which card has more than 2 dots? Which card has less than 4 pictures? <div style="display: flex; justify-content: space-around; align-items: center;">   </div>	<p>Song: “Heads and shoulders, knees and toes”</p> <p>Four strings with a different number of beads</p> <p>Picture and dot card sets</p>	

<p>Compare which of two given collections of objects are:</p> <ul style="list-style-type: none"> • more than, • less than (fewer) 	<p>Reinforce the comparison of two given collections of objects using:</p> <ul style="list-style-type: none"> • more than, • less than (fewer) <p>Oral: Count everyday objects up to the number 2 Rote counting 1 – 7</p> <p>Reinforce concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. The teacher claps up to the number 2</p>	<p>Number songs and rhymes</p>	<p>1 day</p>
<p>Describe, sort and compare 3D objects and 2D shapes</p>	<p>Describe, sort and compare 3D objects and 2D shapes</p> <p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none"> • Sort a variety of objects according to size • Sort and compare the different building blocks according to size (big and small) • Sort the blocks according to the same shapes 	<p>Two strings with a different number of beads.</p> <p>Objects</p> <p>Variety of big and small objects in the class e.g. ball, doll, toy car, Lego block, etc.</p>	

	<p>Semi-concrete use of 2D shapes or pictures</p> <p>Divide learners into five groups. Give each group a variety of different shapes.</p> <ul style="list-style-type: none"> Sort the shapes into groups according to: <ul style="list-style-type: none"> Colour, size Shapes (even if the learners do not know the shapes). Use card games that promote colours,size and shape 	<p>Building blocks and balls of different sizes</p> <p>Logi shapes or any other colourful shapes available</p>	
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Week 13	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Describe and identify whole numbers	<p>Introduce the meaning of the number 3</p> <p>Oral: Count everyday objects up to number 3 Count forwards and backwards up to 3 Rote counting 1 – 7</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u>. Clap hands many times ... stop. Clap hands fewer times. The teacher claps up to 3 times.</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> The teacher plays a drum or music. When the music stops, the learners form groups of three Ask learners whose family consists of only 3 members Learners stand in a row; teacher asks "who's third in the row?" <p>Divide learners into ± 5 groups</p> <p>Learners:</p> <ul style="list-style-type: none"> Tear three pages from an old telephone directory Crumple the three pages into three balls as tight as possible. (To enhance laterality only use the dominant hand. Learner can sit on the non-dominant hand) Open the balls and crumple them again Count the balls after all three have been crumpled While counting throw the three balls in a basket placed in the middle of the group <p>This activity could be integrated with Physical Education in Life Skills</p> <p>Concrete use of 3D objects: Learners:</p> <ul style="list-style-type: none"> Identify 3 objects in the classroom Hold up 3 fingers Place 3 objects on the table. Individual learners come to 	<p>Number songs and rhymes</p> <p>Counters</p> <p>Old telephone directories Basket</p>	1 day

Semi-concrete use of 2D shapes or pictures

Learners:

- Identify flash cards with different numbers of pictures on them
- Identify flash cards with the number symbol 3
- Link the number symbol 3 with the number of objects and the number of dots
- Link the number name with the number symbol card and the number of dots cards
- Give each learner a number card that involves numbers 1 to 3
- The teacher holds up a dot or picture card, while the learners hold up the matching number card.

Different flash cards with a different number of pictures on each

Flash card with the number symbol 3

Flash card marked with 3 dots



Picture
of 3
objects



3

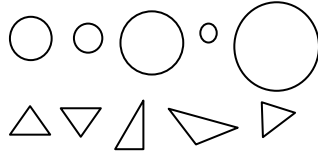
three

<p>Solve orally stated addition and subtraction problems</p> <p>Addition</p> <p>Subtraction</p>	<p>Solve orally stated addition and subtraction problems with solutions up to 3</p> <p>Oral: Count everyday objects up to number 3. Count forwards and backwards up to 3.</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Teacher calls 2 learners to the front. Learners count them. Teacher calls another 1 and asks how many learners altogether? 2 and 1→3. (The teacher says: 2 and 1 gives you 3) Teacher packs out 3 chairs. She doesn't add any more. How many chairs are there now? 3 and 0→3 Teacher packs out 3 chairs. She takes away 1. How many chairs are there now? 3 and 1→2.(3 and 1 gives you 3) Teacher calls 3 learners to the front. Count them. She sends 2 learners back. How many learners are left? 3 take away 2→1 <p>Concrete use of 3D objects Give each learner 3 counters. As the teacher tells a story the learners pack the counters</p> <ul style="list-style-type: none"> Anne has 2 oranges and Peter gives her another 1. How many oranges does Anne have now? 2 and 1→3 (The teacher says: 2 and 1 gives you 3). There is 1 branch on the tree and another 2 branches grow. How many branches are on the tree now? 1 and 2→3. A monkey has 3 bananas and eats 1. How many bananas does he have left? 3 take away 1→2. There are 2 juicy apples on an apple tree. 1 apple falls off. How many apples are left on the tree? 2 take away 1 is →1. 	<p>Number songs and rhymes.</p> <p>Chairs</p> <p>3 counters for each learner</p>	<p>1 day</p>
<p>Number symbols and number names</p>	<p>Know the number symbols and recognise the number names involving the number 3</p> <p>Oral: Count everyday objects up to number 3 Count forwards and backwards up to 3</p>		<p>1 day</p>

	<p>Reinforce concepts of <u>many</u> and <u>few</u>. Clap hands many times ... stop. Clap hands fewer times. The teacher claps up to 3 times.</p> <p>Concrete use of 3D Objects</p> <ul style="list-style-type: none"> • Give each learner 3 unifix cubes • Teacher shows a dot, picture, symbol or number name card that involves numbers 1 to 3 • Learners count the specified number and place the same number of unifix cubes on their fingers 	<p>Unifix cubes Number card that involves numbers 1 to 3</p> <div> <div>Picture of 3 objects</div> <div></div> <div>3</div> <div>three</div> </div>	
	<p>Semi-concrete use of 2D shapes or pictures</p> <p>Learners:</p> <ul style="list-style-type: none"> • Identify flash cards with different numbers of pictures on them • Identify flash card with the number symbol 3 • Link the number symbol 3 with the number of objects and the number of dots • Link the number name with the number symbol card and the number of dots cards • Give each learner a number card that involves numbers 1 to 3. • The teacher holds up a dot or a picture card, while the learners hold up the matching number card 	<p>Different flash cards with a different numbers of pictures on each Flash card with the number symbol 3 Flash card marked with 3 dots</p> <div> <div>Picture of 3 objects</div> <div></div> <div>3</div> <div>three</div> </div>	

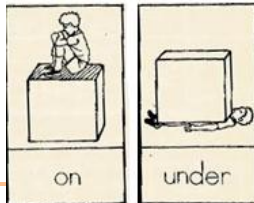
<p>Solve orally stated addition and subtraction problems</p> <p>Addition</p> <p>Subtraction</p>	<p>Solve orally stated addition and subtraction problems with solutions up to 3</p> <p>Oral: Count everyday objects up to number 3 Count forwards and backwards up to 3</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Teacher calls 2 learners to the front. Learners count them. Teacher calls another 1 and asks: How many learners altogether? 2 and 1→3. (The teacher says: 2 and 1 makes 3) Teacher packs out 3 chairs. She doesn't add any more. How many chairs are there now? 3 and 0→3 Teacher packs out 3 chairs. She takes away 1. How many chairs are there now? 3 take away 1→2 (3 take away 1 gives you 2) Teacher calls 3 learners to the front. Count them .She sends 2 learners back. How many learners are left? 3 take away 2→1 	<p>Number songs and rhymes</p>	<p>1 day</p>
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	<p>Concrete use of 3D objects Give each learner 3 counters. As the teacher tells a story, the learners pack the counters.</p> <ul style="list-style-type: none"> Anne has 2 oranges and Peter gives her another 1. How many oranges does Anne have now? 2 and 1→3 (The teacher says: 2 and 1 gives you 3) There is 1 branch on the tree and another 2 branches grow. How many branches are on the tree now? 1 and 2→3. A monkey has 3 bananas and eats 1. How many bananas does he have left? 3 take away 2→1 There are 2 juicy apples on an apple tree. 1 apple falls off. How many apples are left on the tree? 2 take away 1 is →1. 	3 counters for each learner	
Create own repeating patterns	<p>Create own repeating patterns using 2 objects</p> <p>Kinesthetic Learners sit in a circle. Chant word patterns Example: <i>Sun, sky, sun, sky</i> <i>Banana, apple, pear, banana, apple, pear</i> <i>Susan, John, Abby, Susan, John, Abby</i> <i>Red, blue, blue, red, blue. Blue, etc.</i> <i>Waka, waka, eh, eh, waka, waka, eh, eh</i></p> <p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none"> Collect 3 of the same objects in the classroom e.g. 3 crayons Collect another 3 objects that are the same in the classroom e.g. 3 Lego blocks Learners create their own patterns using two objects e.g. One crayon, one Lego block, one crayon ... Two crayons, one Lego block, two crayons, one Lego block ... Allow learners to create patterns in different ways Swop their objects with a friend and repeat exercise 	Crayons Lego blocks	1 day
Recognise, identify and name 2D shapes in the classroom including	Reinforce the knowledge gained in Week 4 to recognise, identify and name the triangle		1 day

<p>pictures</p> <ul style="list-style-type: none"> triangle 	<p>Kinesthetic</p> <p>Draw, or use a rope to create the outline of a large triangle</p> <p>Learners:</p> <ul style="list-style-type: none"> Walk around the shape observing the features of the triangle. While walking let the learners say: “I am walking along the triangle. One, two, three sides or one, two, three corners (angles)” The teacher points out that the triangle has 3 corners and three sides Draw a triangle in the air and/or sand Form a triangle with clay <p>Concrete use of 3D objects</p> <p>Learners:</p> <ul style="list-style-type: none"> Recognise and identify objects in the classroom that have a triangular shape Recognise and identify objects in nature that have a triangular shape Place a variety of different sized circles and triangles in a “feely bag”. Identify the triangle amongst other shapes 	<p>Rope/string</p> <p>Clay or play-dough</p> <p>Triangular objects in the classroom and environment</p> <p>Cards with 5 different circles, triangles and squares</p>
<p>Describe, sort and compare 3D objects and 2D shapes</p>	<p>Sort 3D objects and 2D shapes</p> <ul style="list-style-type: none"> Sort a variety of objects according to shape and colour <p>Semi-concrete use of 2D shapes or pictures</p> <p>Learners:</p> <ul style="list-style-type: none"> Identify the triangle shape in pictures Draw a triangle on a piece of paper Copy the triangle from a given card Draw a ring around all the circles on a worksheet Make pictures using triangles during Visual Art Play card games that enhance the reinforcement of shapes. 	<p>Pictures in which a triangle can be identified.</p> <p>Card games that develop recognition of shapes Logi shapes, etc.</p>

Week 14	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Describe and identify whole numbers	Reinforce the knowledge gained involving the numbers 3 Oral: <ul style="list-style-type: none"> Count everyday objects up to number 3 Count forwards and backwards up to 3 Rote counting 1 – 7 Reinforce concepts of <u>many</u> and <u>few</u>. Clap hands many times ... stop. Clap hands fewer times. The teacher claps up to 3 times	Number songs and rhymes	1 day
	Concrete use of 3D objects Learners: <ul style="list-style-type: none"> Find 3 objects in the class that are red Make a number 3 with clay Roll 3 big balls with clay Roll 3 small balls with clay Find 3 learners in the class wearing the same colour. 	Red objects Clay	

<p>Orally solve word problems (story sums) and explain own solution to problems (Number bonds)</p> <p>Addition</p> <p>Subtraction</p>	<p>Orally solve and explain solutions to word problems (story sums) involving the number 3</p> <p>Oral:</p> <ul style="list-style-type: none"> Count everyday objects up to number 3. Count forwards and backwards up to 3. <p>Kinesthetic</p> <ul style="list-style-type: none"> The teacher calls 2 learners to the carpet, then calls one more learner. How many learners did the teacher call to the carpet? Teacher says: 2 and 1 gives you 3 There are three children. Each child wants his/her own crayon. How many crayons do we need? Three children stand together. One leaves the room. How many are left? <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> The teacher puts 3 counters on the table. She takes away 2 counters. How many counters are left on the table? Teacher says 3 take away 1 gives you 2. Pat has 2 cats and gets another 1 cat from Busi. How many cats does Pat have altogether? 1 and 2→3. Teacher says 1 and 2 gives you 3. If 1 cat has 1 tail, how many tails will three cats have altogether? 1 and 1 and 1→3 	<p>Counters</p>	<p>1 day</p>
<p>Complete a given pattern</p>	<p>Complete a given pattern with 2 objects</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Learners copy an action pattern e.g. skip, skip, jump, jump, skip, skip, jump ... Learners complete patterns using their bodies e.g. standing next to each other alternating hands on the head, hands on the hips, hands on the head ... <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> Learners copy an object pattern e.g. bead, bead, stick, bead, bead, stick. 	<p>Objects</p>	<p>1 day</p>

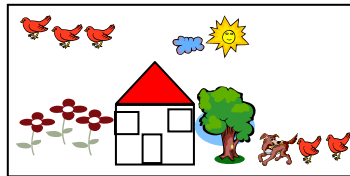
	<p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> The teacher provides learners with a variety of already cut out pictures of the same objects. (Cut pictures out during a Visual Arts activity) The teacher starts a pattern and learners copy the given pattern e.g. picture of coffee, tea, sugar... Learners complete a pattern by drawing a: flower, leaf, flower ... Blue circle, red circle, blue circle ... etc. 	<p>Pictures from advertisements from Spar/Pick and Pay, etc.</p> <p>A4 paper and crayons</p>	
Describe, sort and compare 3D objects and 2D shapes according to a certain attribute	<p>Sorts and compares 3D objects and 2D shapes according to a certain attribute</p> <p>Concrete use of 3D objects Divide learners into 5 groups.</p> <ul style="list-style-type: none"> The teacher collects enough objects so that each group can sort them according to at least two attributes (It could be more). Give each group objects of two attributes to sort. <p>Learners:</p> <ul style="list-style-type: none"> Sort the objects according to things that are the same and different. <p>Semi-concrete use of 2D shapes or pictures Keep learners in the same groups.</p> <ul style="list-style-type: none"> Compare and sort different pictures collected by the teacher e.g. pictures of a variety of clothing, food, furniture, transport, etc. Let learners complete a work sheet matching two pictures e.g. toothpaste and toothbrush, face cloth and soap, etc. 	<p>Objects such as: Clothing items Fruit Plastic farm animals Geometric shapes Building blocks Lego blocks Objects from nature such as leaves, sticks, stones, etc. Buttons etc. Coloured bottle tops Crayons</p> <p>Pictures from magazines and flyers, cut out and pasted on cards</p>	1 day
Describe one 3D object in relation to another	<p>The position of two or more objects in relation to the learner</p> <ul style="list-style-type: none"> Reinforce the concepts <u>on/under</u> and <u>on top of</u> <p>Kinesthetic Each learner sits on a box.</p> <ul style="list-style-type: none"> Learners demonstrate on top and under by following the commands of the teacher e.g. sit on the box, lie under the box or table 	<p>Boxes</p> 	

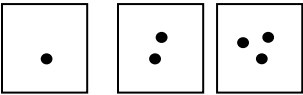
- Sit under a table. Make yourself as small as you can under the table
- Stand on your chair and stretch as high as you can
- Get onto a table and swing your arms in big/small circles, extend using bigger/smaller
- Put a block on your head and climb on the table
- Choose five learners using a number rhyme
- Whisper an instruction to each learner
 - Sit with your hands under your legs
 - Stand with your hands on your hips
 - Stand with your hands behind your back
 - Sit with your hands on your shoulders
 - Stand with your hands crossed in front of you

The learners stand in the front while the rest of the group is sitting on the carpet.

Ask the learners:


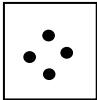
- What is the first learner doing? (*He/she is sitting*)
- Where are his hands? (*His/her hands are under his/her legs*)
- Repeat with the other learners using second, third fourth and last.
- Select a new group to perform the same instructions
- Take the learners outside and let them demonstrate the concepts of on, under, and on top by showing their own initiative.

Week 15	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Reinforce the knowledge gained involving the numbers 1, 2 and 3</p> <p>Oral: Count everyday objects up to 3 Count forwards and backwards up to 3 Rote counting 1 – 7</p> <p>Reinforce concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 3 times</p> <p>Kinesthetic Encourage learners to discover:</p> <ul style="list-style-type: none"> 1 body part that can move up or down, to one side or the other side on its own e.g. the tongue 2 body parts that are used for jumping e.g. legs 	<p>Number songs and rhymes</p> <p>Singing and acting out a song e.g. 'There were three in the bed and' Counting rhyme e.g. 'One two, buckle my shoe....'</p>	1 day
	<p>Concrete use of 3D objects Learners develop number sense by:</p> <ul style="list-style-type: none"> Using 3 blocks to build a tower Finding 3 objects in the classroom that are red. <p>Semi-concrete use of 2D shapes or pictures Teacher draws a simple picture</p> <ul style="list-style-type: none"> The teacher poses questions related to the number of objects in the picture e.g. How many windows do you see, etc. 	<p>Blocks Red objects</p> 	
Numbers in familiar context	<p>Use numbers 1, 2 and 3 in familiar contexts</p> <p>Oral: Count everyday objects up to 3 Count forwards and backwards up to 3</p> <p>Reinforce concepts of <u>many</u> and <u>few</u>. Clap hands many times ... stop.</p>	<p>Number songs and rhymes</p>	1 day

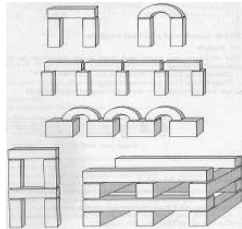


	<p>Clap hands fewer times. Teacher claps up to 3 times</p> <ul style="list-style-type: none"> Encourage learners to memorize their house number and street address <p>Semi-concrete use of 2D shapes or pictures</p> <p>Learners:</p> <ul style="list-style-type: none"> Look for pictures of the number 1, 2 and 3 from magazines and flyers and paste them on paper (Integrate with Visual Arts) Match the number of objects to the number of dots on a flash card Show a dot card, while learners throw the same number of bean bags into a box Play the board game “Snakes and Ladders” and dominoes. 	<p>Magazines, advertisements</p> <p>Flash cards with dots</p>  <p>Bean bags</p> <p>“Snakes and Ladders” board game</p> <p>Dominoes</p>	
<p>Notes:</p> <p>Numbers are all around us:</p> <ul style="list-style-type: none"> Each house has a number We all have different telephone numbers We see numbers in shop windows We see numbers on different products when shopping We see numbers on motor cars 			

<p>Compare which of two given collections of objects are:</p> <ul style="list-style-type: none"> • more than, • less than (fewer) • equal to (the same) 	<p>Order and compare collections of objects using <u>more than</u>, <u>less than</u> and <u>equal to</u> up to number 3</p> <p>Kinesthetic Call three learners to the front. Let them sit in a circle.</p> <ul style="list-style-type: none"> • Let two learners stand. How many are sitting? Count them. How many are standing? Count them. Which number is more/most, which number is less/least? • Let three learners stand. Count them. Which number is most/least? Let one more stand. Count them. Are the learners sitting more than the learners standing? • Repeat with numbers 1 to 3. • Count the girls. Count the boys. Are there more boys than girls? <p>Concrete use of 3D objects Divide learners into 5 groups Provide each group with a piece of string/wool and ± 5 objects Learners form a nest with the wool</p> <ul style="list-style-type: none"> • Teacher whispers to each group asking them to make a group of 3 or 2 or 1 object(s) in their “nests” • Learners must identify which group has more than 1 object • Which group has less than 3 objects? • Which group has the same number of objects? 	<p>String 5 objects per group</p>	<p>1 day</p>
<p>Copy and complete a given pattern</p>	<p>Copy and complete a given pattern according to the colours red, blue, yellow</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Teacher acts out a pattern, repeats it and keeps the rhythm e.g. <ul style="list-style-type: none"> ▪ Clap, snap (fingers), clap, snap... ▪ Snap, clap, stamp, snap, clap, stamp... ▪ Clap, snap, snap, clap, snap, snap... <p>Concrete use of 3D objects The teacher provides each learner with three red, three blue and three yellow counters or bottle tops</p> <p>Learners:</p> <ul style="list-style-type: none"> • Copy a given pattern from the teacher’s pattern e.g. red, 	<p>3 red, 3 blue and 3 yellow counters or bottle tops per learner</p>	<p>1 day</p>

- | | | |
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| | <ul style="list-style-type: none">• each other's feet• their own ankles• their own wrists• compare the different lengths by seeing which piece of string is longer or shorter e.g. string measure around my head is longer than the string measure around my wrist.• determine whether their estimations were correct. | |
|--|--|--|

Week 16	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Introduce the meaning of the number 4</p> <p>Oral: Count everyday objects up to 4 Counts forwards and backwards up to 4 Rote counting 1 – 7</p> <p>Reinforce concepts of <u>many</u> and <u>few</u>. Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 4 times.</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> • Nod their heads 4 times • Make the number 4 using their bodies. Learners determine how many children they would need • Learners close their eyes, teacher taps on the table 4 times, they open their eyes and say how many taps they heard. Repeat with numbers 1 to 4 <p>• Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Learners: • Make a number 4 with play-dough • Find 4 friends who are wearing shoes • Find 4 objects that are round • Blindfold learners and let them identify the numbers 1 to 4 by feeling/tracing the tactile number cards. <p>• Develop an awareness of number conservation by letting learners pack four counters or any objects in different ways, e.g.</p> 	<p>Counting rhymes and songs</p> <p>Play-dough Round objects A set of tactile number cards in which cut-out numbers are made from sand paper and pasted on separate pieces of cardboard. Laminate these cards so that learners can also use them to form a clay number on the card 4 counters or 4 objects per learner</p> <p>Magazines, flyers, advertisements A4 paper and glue</p> <div> <div>Picture of 4 objects</div>  </div>	1 day

	<ul style="list-style-type: none"> When counting, the number of objects is not affected by their size, or position, or whether they are of the same type. Arrange 4 buttons, 4 pencils, 4 hoops, 4 learners, etc. Count them in a different order, e.g. count them spread out, close together, in a line or stacked up <ul style="list-style-type: none"> Semi-concrete use of 2D shapes or pictures Learners: Look for 4 pictures and paste the pictures on paper Match the number of objects to the number of dots on a flash card Identify the flash card with four dots. 		
Numbers in familiar context	<p>Use the number 4 in familiar context</p> <ul style="list-style-type: none"> What does the number four make you think of? Car four wheels Chair four legs Dog four paws Table four legs To develop memory, encourage learners to memorise their house number and address <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> Give opportunity to play number card games available in your class <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> Show the number symbol 4 card <p>Play games such as:</p> <ul style="list-style-type: none"> If your house number has a 4 in it, clap 4 times Find a friend in the class who has the same house number as you (learners ask friends their house number) Show learners a flash card with four dots Identify the flash card with four pictures on it. 	<p>Learners' home addresses</p> <p>Learners</p> <div> </div> <p>Any available number card games</p> <div> </div> <div> </div> <p>flash cards with 4 pictures and 4 dots</p>	1 day

<p>Build 3D objects using concrete material</p>	<p>Explore the possibilities of building blocks</p> <p>Learners:</p> <ul style="list-style-type: none"> • Use any four blocks to build a construction • Build a structure that is 3 blocks high and 5 blocks across • Use as many blocks as they need to build a train • Identify who built the longest train • Build a high tower (vertical) • Build a flat construction e.g. a road or a house (horizontal) • Identify who built the highest tower • Provide building blocks during free play indoors for learners to continue exploring building blocks 	<p>Building blocks e.g.</p> 	<p>1 day</p>
<p>Recognise, identify and name 2D shapes in the classroom including pictures</p> <ul style="list-style-type: none"> • shape conservation (form constancy) 	<p>Develop the ability to distinguish between shapes in our environment, regardless of their size or angle sizes</p> <p>Kinesthetic (In groups of 3) learners:</p> <ul style="list-style-type: none"> • Lie on the floor and form a triangle with their bodies. Point out that although each group's triangle shape looks different, the shape still remains a triangle • The teacher draws different triangles on the floor/ground e.g.  <ul style="list-style-type: none"> • Learners walk along the sides of the shapes and experience the different angles with their bodies <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Use 7 twigs/sticks and place them in a straight line 	<p>7 twigs/sticks per learner</p>	<p>1 day</p> <p>Only only one Kinesthetic, concrete and semi-concrete activity</p>

- Use twigs to form a curved line



- Use twigs to form a zigzag line.



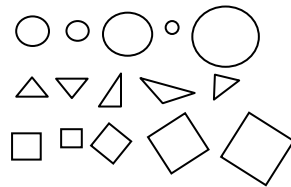
- Use the twigs to form a triangle.



- Point out that no two learners' triangles are identical but the shapes are all still triangles

Semi-concrete use of 2D shapes or pictures

The teacher draws 5 different circles, triangles and squares on a flash card e.g.



The teacher divides the learners in groups.

Learners:

- Recognise the triangle flash cards from amongst other shapes

Cards with 5 different sized circles, triangles and squares

Concretely compare and order objects using appropriate vocabulary to describe length

- long, short
- longer, shorter
- longest, shortest
- short, shorter, shortest
- tall, taller, tallest

Reinforce the concept of length

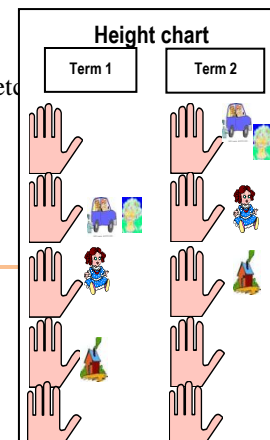
Kinesthetic

Learners:

- Explore length by comparing objects with one another.
- Identify which object is the longest and which object is the shortest
- Compare the height of two learners and identify which learner is short and which one is tall

Pencils, rope, string, pegs, etc
Hands-span
height chart

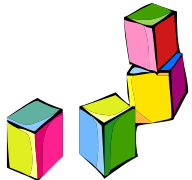
Abby 6 hands



1 day



	<ul style="list-style-type: none"> • Compare the height of more than two learners and ask questions such as “Which learner is shortest, and which learner is tallest?” • Teacher measures learners again using the height chart from the first term • The teacher leaves last term’s recordings (hands with learners symbol/photo) so that they can compare the two measurements • Learners discover whether they have grown since the last term • Who did not grow at all? • Who grew the most since the first term? e.g. <ul style="list-style-type: none"> ▪ Siphos grew one hand taller ▪ Abby’s height remained the same 	Siphos 6 hands	
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Week 17	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	Reinforce the knowledge gained about the number 4 Oral: Count everyday objects up to 4 Count forwards and backwards up to 4 Reinforce concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 4 times	Number songs and rhymes	1 day
	Kinesthetic Learners: <ul style="list-style-type: none"> Trace the number 4 in the air using the index finger Sing song e.g. 'Four green bottles hanging on the wall....' Turn around 4 times Concrete use of 3D objects Learners develop number sense by: <ul style="list-style-type: none"> Drawing the number 4 in sand Finding 4 3D objects that can roll Building puzzles with 4 pieces Semi-concrete use of 2D shapes or pictures <ul style="list-style-type: none"> The teacher selects 4 name flash cards. The teacher flashes a name and then a picture of a toy or an animal The learner whose name was flashed reacts by making the noise the toy made Repeat until all four names were flashed Ask how many learners' names did I flash? How many toy/animal pictures did you see? 	Flat baking tray/box with sand 3D objects that can roll 4-piece puzzle Cards with a pictures of a toy Cards with a pictures of an animal	
Number symbols and number names	Recognise the number symbol and number name of the number 4 Oral: Count everyday objects up to 4 Count forwards and backwards up to 4	Number songs and rhymes	1 day

	<p>Reinforce concepts of <u>many</u> and <u>few</u>. Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 4 times.</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Write the number four in the air, on the floor, on your friend's back • Hold up 4 fingers • Teacher plays a drum; when drum stops, learners form groups of four <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • Show learners the flash card with the number symbol 4 • Identify the number name on number flash cards • Link the number name to the same number of objects 	<p>Flash card with number symbol Flash card with number name 3D objects</p> <div> <div>4</div> <div>four</div> </div>	
<p>Orally solve word problems (story sums) and explain own solution to problems Number bonds</p> <p>Addition</p> <p>Subtraction</p>	<p>Orally solve and explain solutions to word problems (story sums) involving the number 4</p> <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Teacher gives you 2 blocks and you already have 2 blocks. How many do you have? • If you have 2 blue circles and 2 red circles, how many circles do you have? • Sipho has 4 crayons and Joy has 1 crayon. Who has more crayons? • If Jody has 4 dolls and she lost 1, how many dolls will she have left? <p>Divide learners into groups.</p> <ul style="list-style-type: none"> • Give each group a heap of objects e.g. pencils, crayons, cups, shapes. Let the learners share the objects (one-to-one correspondence) • Ask questions such as: "Are there any objects left?" • The teacher should ensure there are more objects than the number of learners in a group. Remove objects to demonstrate equal sharing as well 	 <p>Blocks Crayons Blue and red circles Dolls</p> <p>Enough objects such as pencils, crayons, cups, shapes</p>	1 day

<p>Compare which of two given collections of objects are:</p> <ul style="list-style-type: none"> • more than, • less than (fewer) • equal to (the same) 	<p>Order and compare collections of objects using ‘<u>more than</u>, <u>less than</u> and <u>equal to</u> up to number 4</p> <p>Divide learners into groups</p> <ul style="list-style-type: none"> • The teacher provides each group with 4 counters and two pieces of wool <p>Groups:</p> <ul style="list-style-type: none"> • Form two circles (sets) with the wool • On the teachers instruction, place counters in each set • Group members identify which set has more counters than the other? (<u>more than</u>) • Which circle has fewer counters than the other? (<u>less than</u>) • Which circle has the same number of counters as the other? (<u>equal</u>) <p>Semi-concrete use of 2D shapes or pictures Arrange a set of picture cards in the correct order</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">Picture of 1 object</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Picture of 2 objects</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Picture of 3 objects</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Picture of 4 objects</div> </div> <p>Arrange a set of dot cards in the correct order</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 10px; text-align: center;">•</div> <div style="border: 1px solid black; padding: 10px; text-align: center;">• •</div> <div style="border: 1px solid black; padding: 10px; text-align: center;">• • •</div> <div style="border: 1px solid black; padding: 10px; text-align: center;">• • • •</div> </div> <ul style="list-style-type: none"> • Ask questions such as "Which card has more objects/dots?" • Which number is more than 2, etc. 	<p>Wool /string 4 counters</p>	<p>1 day</p>
<p>Collect and sort objects in the environment according to stated features</p> <p>Draw graphs to display data</p> <p>Read and interpret graphs</p>	<p>Develop the process of data handling</p> <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Learners collect 9 twigs/sticks • Sort twigs according to small and large size, long and short <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • Make a pictograph using the twigs/sticks • The learners pack the twigs on the pictograph according 	<p>Learners form own collection of twigs/stick</p>	<p>1 day</p>

to size i.e. small and large.

Small twigs	Large twigs
	
5	3

Discuss the results by asking questions e.g. "How many small twigs are there? How many large twigs? Which are most/least?"

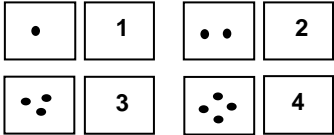
Worksheet pictograph. The teacher designs A4 paper with columns for each learner

Week 18	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	Reinforce the knowledge gained involving the numbers 1, 2, 3 and 4 Oral: Count everyday objects up to 4 Count forwards and backwards up to 4 Rote counting 1 – 7	Number songs and rhymes	1 day
	Reinforce concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 4 times. Kinesthetic Learners: <ul style="list-style-type: none"> Trace the number 1 in the air using their index finger Learners touch their head twice Shake hands with 4 different learners. Blindfold learners and let them identify the numbers 1 to 4 by feeling/tracing the tactile number cards Concrete use of 3D objects Learners: <ul style="list-style-type: none"> Draw the number 1 in sand Find 3 of the same objects Jump on the spot 2 times (twice) Build puzzles with 4 pieces and more 	Tray/box with sand A set of tactile number cards Objects 4-piece puzzles	
Numbers in familiar contexts	Recognize and identify South African coins Concrete use of 3D objects <ul style="list-style-type: none"> Point out the different animal and plant images on each coin The application of money can be applied in the Life Skills corner where learners can play shop. Through play learners are exposed to the different coins. 	5c, 10c, 20c, 50c, R1,00, R2,00 and R5,00 coins (play money or real money)	1 day



Addition and subtraction problems	Solves orally stated addition and subtraction problems with solutions up to 4 Oral: Count everyday objects up to 4. Count forwards and backwards up to 4. Rote counting 1 – 7 Reinforce concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 4 times.	Number songs and rhymes	1 day
Addition Subtraction	Kinesthetic Examples: <ul style="list-style-type: none"> Teacher calls 1 learner to the front of the classroom. She then calls another 3 learners. How many learners has she called altogether? Teacher packs out 3 counters. She adds another one. How many counters are on the table? Learners stand in the front of the classroom. Teacher asks one learner to sit down. How many learners are in the front of the classroom now? Busi has 4 pencils. He gives Justin 2 pencils. How many pencils does Busi have left? 	Counters Pencils	
Compare two given collections of objects are: <ul style="list-style-type: none"> more than less than (fewer) equal to (the same) 	Order and compare collections of objects using <u>more than</u>, <u>less than</u> and <u>equal to</u> up to number 4 Concrete use of 3D objects <ul style="list-style-type: none"> The teacher provides each member of the group with a certain number of crayons Group members must identify which learner has more crayons than the other learners Which learner has fewer crayons than the other learners? Which learners have the same number of crayons? Semi-concrete use of 2D shapes <ul style="list-style-type: none"> Arrange a set of number cards that involve the numbers 1 to 5 in the correct order. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">•</div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">••</div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">•••</div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">••••</div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">•••••</div> </div>	Crayons Dot and number symbol cards	1 day

	<div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> </div> <ul style="list-style-type: none"> • Ask questions such as “Which card has more objects/dots?” • Which number is more than 2? etc. 		
Copy and complete a given pattern	Copy and complete a given pattern with coins Copy a given pattern <ul style="list-style-type: none"> • Teacher sets up a pattern using “ play money” e.g. 5c, 5c, 5c, 10c, 10c,10c, 20c, 20c, 20c ... Complete a given pattern Learners: <ul style="list-style-type: none"> • Complete several patterns created by the teacher e.g. 5c, 5c, 10c, 10c ... • 10c, 20c ..., etc. 	Play money or real money (5c,10c,20c)	1 day

Week 19	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Reinforce the knowledge gained involving the numbers 1, 2, 3 and 4</p> <p>Oral: Count everyday objects up to 4 Count forwards and backwards up to 4 Rote counting 1 – 7</p> <p>Reinforce concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 4 times</p> <p>Kinesthetic The teacher holds up a number card with the number symbol 3 and says to learners:</p> <ul style="list-style-type: none"> • I need so many boys • Holding up the number 2 saying, I need so many girls • Form groups of (holding up a number 2) • Repeat activity with cards that involve numbers 1 4 <p>Mental Mathematics The teacher holds up the number card 3 and asks learners:</p> <ul style="list-style-type: none"> • Which number is this? • Which number comes before the number 3? • Which number comes after the number 3? • Repeat by using numbers 1 to 4 • Can you show me a picture card that has the same number as the number of dots on this card? 	<p>Number songs and rhymes</p> <p>Number symbol cards that involve numbers 1 to 4</p> <p>e.g.</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;">3</div> <p>Set of picture and dot cards that involve numbers 1 to 4</p>	1 day

	<p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> Teacher claps rhythmically and slowly to represent a number. The learners have to take out so many beads and show them, e.g. 4 beads Let the learners put 1, 2, 3 or 4 beads in front of them Ask learners to show how many beads they have by matching their number of beads with the same number flashcard e.g. 4 beads with number symbol 4 Let them find a learner who has the same number of beads <p>Semi-concrete use of 2D shapes or pictures The teacher holds up the dot number card of the number 2 and asks learners:</p> <ul style="list-style-type: none"> How many dots are on this card? Which number do these dots represent? Which number comes after this number? Draw the same number of dots on their papers 	<p>4 beads per learner</p> <p>Flash card of numbers 1,2,3 and 4 Flash cards with dots</p> 	
<p>Solve orally stated addition and subtraction problems</p> <p>Addition and subtraction</p>	<p>Solve orally stated addition and subtraction problems with solutions up to 4</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Call 3 learners to the front, count them Call 1 more learner.. How many altogether? 3 and 1→4 (3 and 1 makes 4) Send 3 learners back to the carpet. How many learners are there now? 4 take away 3→1 <p>Divide learners into groups Ask questions like:</p> <ul style="list-style-type: none"> How many noses do you see in your group? How many mouths? How many bodies? How many eyes do 2 learners have? How many legs do 2 learners have? <p>Concrete use of 3D shapes</p> <ul style="list-style-type: none"> Lindiwe's dad has a car. How many wheels does his car have? If 1 wheel is flat and taken off the car, how many wheels are left? A hen has 4 chicks. Two of the chicks get lost. How 	<p>Counters</p> <p>Counters</p>	1 day

	<p>many chicks are still with the hen?</p> <ul style="list-style-type: none">• The mother hen finds her two lost chicks. How many chicks does she have now?		
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<p>Compare which of two given collections of objects are:</p> <ul style="list-style-type: none"> • more than • less than (fewer) • equal to (the same) 	<p>Order and compare collections of objects using <u>more than</u>, <u>less than</u> and <u>equal to</u> up to number 4</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Teacher places various objects on a table e.g. 2 crayons, 4 of the same blocks, 3 tins, 2 books <p>Learners:</p> <ul style="list-style-type: none"> • Count the number of crayons and the tins. Are there more crayons or more tins? • Count the number of blocks and the books. Are there fewer blocks than books? Are there more blocks than books? • Count the books and the crayons. Are there an equal number of objects or not? <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Learners sit on the carpet and each learner has a number of counters • Learners should each have a different number of counters • Learners put the counters in front of them. The teacher asks the learners: <ul style="list-style-type: none"> ▪ Who has the most counters? ▪ Who has the least counters? ▪ Which learners have the same number of counters? 	<p>Crayons, blocks, tins, books</p> <p>Counters</p>	<p>1 day</p>
<p>Recognise, identify and name 2D shapes in the classroom and in pictures</p>	<p>Make and complete own 4 piece puzzle (integrate with Visual Arts)</p> <p>Learners:</p> <ul style="list-style-type: none"> • Draw a picture on A4 paper • The teacher draws the lines on the back of the learner's drawing • The learner cuts his/her picture on the given lines • The learner completes/builds his/her own puzzle 	<p>Learners' own drawing</p> 	<p>1 day</p>
<p>Sequence of recurring events in own daily life</p>	<p>Develop an awareness of what happens between supptime and bedtime Integrate with Beginning Knowledge</p> <p>Learners:</p> <ul style="list-style-type: none"> • Discuss what they do after they have had supper. 	<p>Pictures that show what happens from supptime to bedtime.</p> 	<p>1 day</p>



	<ul style="list-style-type: none"> • Discuss what happens at home after suppertime. <p>The teacher asks:</p> <ul style="list-style-type: none"> • Do you come to school in the morning or evening? • If Peter gets to school after the bell has rung, is Peter late or early for school? • Where is the sun at night? 		
	<p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • Learners draw a picture to show any event after supper • Provide puzzles that reflect the sequencing of events and/or activities. 	Paper and crayons	

Week 20 Use Week 20 to attend to conceptual weaknesses and/or identified barriers to learning.		
Content Area	Topic	Assessment Criteria
Numbers, Operations and Relationships	Counting	Estimate and rote count up to 7 (number songs and rhymes included to develop number concepts)
		Count backwards and forwards (1 – 4)
		Understand the concepts <u>many</u> and <u>few</u> (clapping)
	Number recognition	Recognise numbers in familiar context e.g. house number, address, register
	Identify and describe whole numbers	Identify number pictures and dot cards
		Know the number symbols 1, 2, 3 ,4
		Recognise the number names two, three and four
	Number sense	Understand one-to-one correspondence (helpers' chart during refreshment time)
		Distinguish between more, less and equal, many and few up to 4
		Recognise the different South African coins
	Solving problems	Use concrete apparatus
		Explain own thinking in words and through drawings or concrete objects
		Orally solve addition and subtraction problems up to number 4
Patterns and Functions	Copy, extend and create own patterns	Copy, extend and create own patterns (objects, shapes and coins)
Space and Shape	Recognise, identify and name 2D shapes	Build at least a 12 piece puzzle
		Show the ability to distinguish between objects in the <u>foreground</u> and <u>background</u> (assess again)
	Geometric shapes	Recognise, identify and name the triangle
		Understand form constancy of triangle (shape conservation)
	Describe , sort and compare 3D objects :	Compare which of two given collections of objects are long, longer; short/shortest
		Sort objects in:
		Size – big and small
		Colours (red, yellow, blue and green)
	Build 3D objects using concrete materials	Shapes
		Explore with building blocks
	Recognise line of symmetry:	Recognise line of symmetry in self and own environment
		Able to cross the mid-line
	Spatial relations	Understand the position of two or more objects in relation to the learner
		• on, under
Measurement	Time	Understand the days of the week, seasons and weather chart (songs and rhymes assess again)
		Know own birthday (assess again)

	Length	Distinguish between longest, shortest, longer, shorter (height chart)
Data Handling	Collect, sort, draw, read and represent data	Collect, sort, draw, read and represent (analyse) objects according to one attribute


TERM 3 MATHEMATICS GRADE R			
Week 21	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Introduce the meaning of the number 5</p> <p>Oral: Count everyday objects up to 5 Count forwards and backwards up to 5 Rote counting 1 – 10</p> <p>Reinforce ordinal counting: Teacher packs 3 objects in a row. Point at each object while counting <i>first, second, third</i>.</p> <p>Reinforce the concept of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 5 times Ask which number of claps was most/least</p> <p>Kinesthetic Encourage learners to discover the number 5 by:</p> <ul style="list-style-type: none"> • Clapping their hands 5 times • Finding out how many learners in the class are already 5 years old 	<p>Number songs and rhymes Counting rhymes and songs e.g. "Five little monkeys jumping on the bed".</p> <p>3 objects</p>	1 day

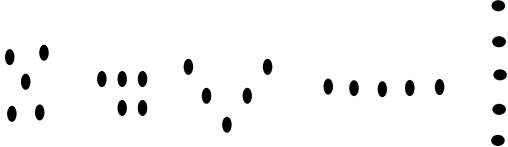


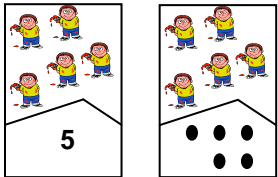
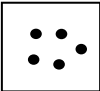
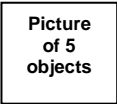
Mental Mathematics

- The teacher claps her hands rhythmically and slowly to represent a number 5. The learners have to take out the same number of counters (5) and show them
- Learners pack 5 counters out in a row and count them
- Teacher asks:
- What number comes before the number 5?
- What comes after 4? etc.
- If you have 5 apples and you give 2 apples away, how many apples will you have left?
- Show me 5 fingers
- How many toes do you have on 1 foot?

Counters in a container

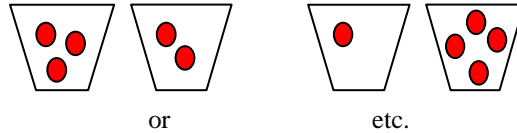


	<p>Concrete use of 3D objects</p> <p>Learners:</p> <ul style="list-style-type: none"> • Make a number 5 with play-dough • Pick up 5 leaves • Count objects and link them with counters • Develop an awareness of number conservation by letting learners pack five counters or any objects in different ways. e.g.  <p>When counting, the number of objects is not affected by their size, or position, or whether they are of the same type</p> <ul style="list-style-type: none"> • Arrange 5 buttons, 5 pencils, 5 hoops, 5 learners etc. • Count them in a different order e.g. count them spread out, close together, in a line or stacked up 	<p>Clay or play-dough</p> <p>Leaves</p>	
Numbers in familiar context	<p>Develop memory and encourage learners to memorise their house number, address and telephone number</p> <p>Play games such as:</p> <ul style="list-style-type: none"> • The teacher says a house number, address or telephone number of a learner. The learner whose number or address it is should respond. • When completing the attendance register the teacher may ask questions such as: “Is the learner with the telephone number 435 – 6256 here today?” “Is the learner that lives at 123 Mandela Drive here today?” • Learners use number symbol flash cards to pack the house number or telephone number in sequence, even if not successful • Role play conversations on a play telephone. Learners phone someone special. <p>Integrate with Performing Arts (drama) in Life Skills.</p> <p>Semi-concrete use 2D shapes or pictures</p> <p>The teacher shows learners:</p> <ul style="list-style-type: none"> • Different types of media where she can find a number 5 	<p>The telephone number should be the contact number of the parent or guardian and could be a cell phone number</p> <p>Number symbol flash cards or large number symbols made from cardboard</p> <p>Play telephone</p> <p>Birthday cards</p>	1 day

	<p>e.g. birthday cards, newspapers, magazines, flyers, etc.</p> <ul style="list-style-type: none"> The flash card with 5 dots and the flash card with 5 pictures Let the learners link the picture flash cards with the dot cards and with the same number of counters or objects Make number puzzles that involve the number 5, e.g. 	<p>Newspapers , magazines Flash card with 5 dots Flash card with 5 pictures Objects Counters</p>	
		 	
Number symbol and number name	<p>Know the number symbol and recognise the number name involving the number 5</p> <p>Oral: Count everyday objects up to 5 Count forwards and backwards up to 5 Rote counting 1 – 10</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Let the whole class sit in a circle Number the learners according to a pattern. 1, 2, 3, 4, 5 1, 2, 3, 4, 5 1, 2, 3, 4, 5 Ask questions such as; “Who will be the next number 5? “Who will be the next number 4? How did you solve the problem? Learners solve the problem in a practical way predicting the next number by counting on 	<p>Number songs and rhymes</p>	1 day

Concrete use of 3D objects

- Use the tactile number cards that involve numbers 1 to 5
- With closed eyes learners and feel the number five (amongst other number symbols)
- Give learners 5 counters each and two plastic cups or two egg containers.
- Ask the learners: “How many different ways can you arrange the five counters into two baskets?”



Semi-concrete use of 2D shapes or pictures

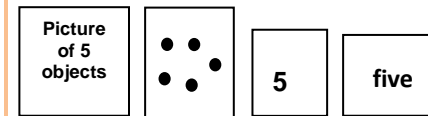
Learners:

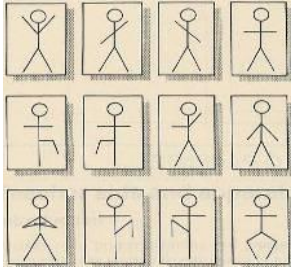
- Identify the flash card with 5 pictures on it
- Identify the flash card with 5 dots on it
- Identify the number symbol 5 anywhere displayed in the classroom
- Identify the number symbol on the flash card
- Recognise the number name on a flash card
- Link the number of counters with the number name and number symbol by packing a counter on each picture and dot card.

Tactile number cards with number 5

Counters
Plastic cups
Egg containers

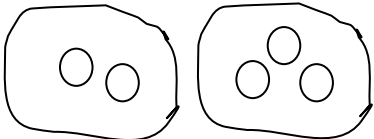
Flash cards with pictures, dots , number symbol and number name
5 counters

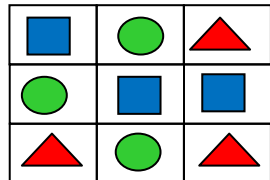


<p>Line of symmetry in self</p>	<p>Reinforce the line of symmetry in self by performing actions that encourage the crossing of the mid-line</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> • Play follow-the-leader where learners copy positions from the chart • Play follow the leader where the teacher demonstrates a position and the learners copy him/her. Include actions where learners cross the mid-line e.g. touch right knee with left hand • Play follow-the-leader where a learner demonstrates a position and the rest copy him/her • The teacher demonstrates “star jumps” and the learners are encouraged to perform the same actions <p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none"> • Place a beanbag on the left, right, in front and behind his/her body • Use the left hand and place a bean bag on the right side of the body • Stretch to cross the mid-line • Repeat action with right hand • Integrate this activity with Physical Education in Life Skills. 		<p>1 day</p> <p>Thereafter on a continuous basis during free play and physical development activities</p>
<p>Compare and order objects using appropriate vocabulary to describe:</p> <ul style="list-style-type: none"> • length • long, short • longer, shorter • longest, shortest • estimation 	<p>Estimate and measure the length of different objects using feet, hands, a piece of string, a stick etc.</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> • Compare the length of their feet and hands • Learners estimate which object is long and which one is short by measuring them with their feet or hands e.g. the table or the broken piece of hose from home • Estimate which object is the longest or shortest e.g. a footpath or a row of bricks • Learners guess which would be longer e.g. the classroom or the teachers’ staff room? • Which is longer/longest, the pencil or the piece of string?, etc. 	<p>Objects of different lengths which can be measured with a hand or a foot e.g. ruler, table, door, a row of bricks, one pole of the soccer goal post, classroom, library, etc.</p>	<p>1 day</p>

Week 22	Suggested Contact Time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Reinforce the knowledge gained involving the number 5</p> <p>Oral: Count everyday objects up to 5 Count forwards and backwards up to 5 Rote counting 1 – 10</p> <p>Reinforce the concepts <u>many</u> and <u>few</u>. Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 5 times Which number of claps was most/least?</p> <p>Kinesthetic Encourage learners to discover the number 5 by:</p> <ul style="list-style-type: none"> Showing 5 fingers in the air Finding 5 objects that are red, blue yellow, green Finding 5 objects that look like a circle, square, triangle. <p>Concrete use of 3D objects Learners develop number sense by:</p> <ul style="list-style-type: none"> Fetching 5 books in the book corner Building a tower with 5 unifix cubes or building blocks. 	<p>Number songs and rhymes</p> <p>Counting rhymes and songs e.g. “1,2,3,4,5 once I caught a fish alive”</p> <p>Counters</p> <p>Books Building blocks or unifix cubes</p>	1 day
<p>Orally solve word problems (story sums) and explain own solutions to problems</p> <p>Number bonds</p> <p>Addition</p> <p>Subtraction</p>	<p>Orally solve word problems (story sums) and explain solutions to problems involving the number 5</p> <p>Kinesthetic:</p> <ul style="list-style-type: none"> Call 5 learners to the front. Share 5 chairs equally between the five. Take one chair away. Now share the chairs between the five. One learner remains without a chair. Start at 5, count backwards, start at 3, count to 5, start at 1, count to 4 etc. <p>➤ Concrete use of 3D objects</p> <ul style="list-style-type: none"> Show 1 finger on your one hand and 4 fingers on your other hand. How many fingers altogether? 	<p>Counters Marbles</p>	1 day

	<ul style="list-style-type: none"> Sam has 4 biscuits. Mpho gives him 1. How many biscuits does Sam now have? Tiny has 5 stones and gives all 5 stones to Mia. How many stones does Mia have? Jan has 5 marbles and loses 2. How many marbles does he have left? One cat has two ears. How many ears do two cats have? Song, “Five green bottles hanging on a wall, ending with zero” (Point out that the bottles become less) 	Song	
<p>Compare which of two given collections of objects are:</p> <ul style="list-style-type: none"> more than less than (fewer) equal to (the same) 	<p>Compare which of two given collections of objects are <u>more than</u>, <u>less than</u>, <u>equal to</u>, up to number 5</p> <p>Oral: Count everyday objects up to 5 Count forwards and backwards up to 5 Rote counting 1 – 10</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap your hands many times ... stop. Clap your hands fewer times. The teacher claps up to 5 times. Which number of claps was most/least</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Teacher places various objects on a table e.g. 2 mugs, 5 of the same blocks, 4 tins, 2 books. <p>Learners:</p> <ul style="list-style-type: none"> Count the number of mugs and tins. Are there more mugs or more tins? Count the number of blocks and books. Are there fewer blocks than books? Are there more blocks than books? Count the books and the mugs. Are there an equal number of objects or not? 	<p>Number songs and rhymes</p> <p>Mugs, blocks, tins, books</p>	1 day

	<p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> Learners sit on the carpet and make two “nests” with the wool The teacher gives an instruction e.g. place 2 counters in one nest and 3 in the other nest. Which nest has more? Which nest has fewer? The teacher calls 5 learners to the front. She puts a different number of beads in each of the learner’s hands Which hand has more in it? Which hand has less in it? <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> The teacher shows two cards with different numbers of dots and pictures on them Learners compare cards with pictures and dots on them and identify the <u>more than</u>, <u>less/fewer than</u> and <u>equal to</u> concepts 	<p>Two lengths of wool for each learner 6 counters for each learner</p>  <p>Beads</p> <p>Picture cards and dot cards involving numbers 1 to 5</p>	
Copy a given pattern	<p>Reinforce the copying of a given pattern</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Work in groups and copy a given pattern e.g. learner, chair, learner, chair..... Two learners, one chair, two learners, one chair..... Stamp one foot, stamp other foot, hop forwards, hop backwards..... <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> The teacher creates a pattern using counters and bottle tops e.g. counter, counter, bottle top, counter, counter, bottle top. Learners copy the pattern. Move slow, slow, quick, quick. Teacher talks while moving Learners copy the pattern. <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> Divide learners into five groups. Give each group pictures with which to make patterns. The learners create own picture patterns using the provided pictures e.g. <ul style="list-style-type: none"> orange, apple, apple, orange..... butterfly, butterfly, bee, bee..... <p>This activity could be integrated with Visual Arts in Life Skills</p>	<p>Counters Bottle tops</p> <p>Any available pictures e.g. advertisements from Spar/Pick and Pay, etc. Duplicate the pictures to ensure you have enough</p>	1 day

<p>Recognise, identify and name 2D shapes in the classroom and in pictures</p> <ul style="list-style-type: none"> • square <p>Sort 3D objects and 2D shapes according to shapes and colours</p>	<p>Reinforce the knowledge gained in Week 6 involving a square Integrate with Physical Education in Life Skills</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Draw a square on the playground and let the learners skip all along the square. Let learners say: “I am skipping along the square – one side, two sides, three sides, four sides – all the sides the same” • Let learners lay head-to-toe on the grass/floor/carpet to form one big square • Let groups of learners lie down on the carpet and form smaller squares <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • The teacher draws a grid on the playground • Place actual shapes e.g. Logi shapes, or shape pictures into each block • The teacher calls a shape <p>The learners throw a beanbag into the block that correlates with the called-out shape.</p>	<p>Square on the floor/ground</p> 	<p>1 day</p>
	<p>Semi concrete use of 2D shapes or pictures Learners differentiate between the different sizes and colours of squares the teacher has prepared</p> <p>Learners:</p> <ul style="list-style-type: none"> • Identify the squares according to the different sizes by saying which squares are the biggest, which are the smallest and which squares are medium sized • Identify the colours of the different squares <p>Sort objects according to shape, size and colour</p> <ul style="list-style-type: none"> • Sort a variety of objects according to colour and shapes 	<p>Beanbag</p> <p>2 large 2 medium 2 small cardboard squares that are painted blue and green</p>	

Week 23	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)								
Topic	Clarification Notes	Recommended Resources	Approximate Duration						
Identify and describe whole numbers	<p>Reinforce the knowledge gained involving the numbers 1 to 5</p> <p>Oral: Count everyday objects up to 5 Count forwards and backwards up to 5 Rote counting 1 – 10</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 5 times. Ask question which number of claps was most/least</p> <p>Kinesthetic</p> <ul style="list-style-type: none">• The teacher plays an instrument e.g. a drum• The learners move around• When the drum stops beating, the teacher calls out a number between 1 and 5• The learners arrange themselves into small groups e.g. the teacher calls out 3, learners arrange themselves into groups of <p>Concrete use of 3D objects</p> <ul style="list-style-type: none">• The teacher places objects in a pile on the table. Let learners estimate how many objects are in the pile• Count the items afterwards <p>The teacher creates a number ladder on the floor or ground. The number on the number ladder represents the number of the house the learner lives in</p> <p>The teacher selects learners using a counting rhyme and gives instructions:</p> <ul style="list-style-type: none">• Always stand on the zero or start at the zero. Point out that zero means “nothing” and that counting actually starts at 1• Always count while moving	<p>Number songs and rhymes</p> <p>A drum</p> <p>Objects</p> <table border="1"><tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr></table> <p>Counting rhyme: ‘1, 2, 3, 4, 5, Once I caught a fish alive 6, 7, 8, 9, 10</p>	0	1	2	3	4	5	<p>1 day</p> <p>Select only a few activities</p>
0	1	2	3	4	5				

	<ul style="list-style-type: none"> The teacher says to the learner: “You are at house number 2, which house comes after number 2?” Further instructions could be: “Move to house number 3. Move back to house number 2. Move forward to house number 4.” The teacher says: “I am at number 3, which house comes after mine?” Move to house number 4. Move 1 number forward. Move 2 numbers backward Stand between house number 3 and 5 	Then I let it go again’	
Use numbers in familiar context	<p>Use the number 5 in familiar context</p> <p>In order to develop memory, encourage learners to:</p> <ul style="list-style-type: none"> Memorise their mother’s or father’s telephone number Memorise home address The telephone/cell phone numbers should be repeated during the control of the daily attendance register 	Mother’s or father’s telephone number and home address	1 day
Build 3D objects using concrete materials	<p>Build 3D objects using concrete materials</p> <ul style="list-style-type: none"> Learners build following the teacher’s example. She gives the instructions Build a tower that is the same height as mine Build a tower that is lower (shorter) than mine Build a tower that is higher (taller) than mine Let learners build own construction by copying from a given construction example 	Building blocks/Lego blocks Any other construction equipment	1 day then ongoing
Follow directions	<p>Develop a sense of direction by introducing both the concepts of <u>forwards</u> and <u>backwards</u></p> <p>Kinesthetic</p> <ul style="list-style-type: none"> As introduction, reinforce the knowledge gained in Week 8 <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> Draw a large circle, triangle, or square on a piece of paper and place it on the floor/carpet 	Large drawn shapes on a piece of paper	1 day

<p>Compare and orders object using appropriate vocabulary to describe length</p> <ul style="list-style-type: none"> estimation 	<p>Estimate the length of different objects</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Learners arrange themselves from shortest to tallest; compare their height with the heights of their friends Play follow-the-leader the tallest performs an action while others behind him/her copy the action. Turn the whole row around so that the shortest is the leader now. Let learners compare their hands and feet to see whose are the longest/shortest <p>Estimate and then measure:</p> <ul style="list-style-type: none"> Learners estimate which object is long and which one is short e.g. the length of the table or the piece of string Estimate which object is the longest or shortest e.g. the pencil or the wax crayon Let learners guess which objects would be longer e.g. 2 straws laid end-to-end or three paperclips laid end-to-end Pose questions such as: Which is longer/longest, the pencil or the piece of string? Which chair is the farthest away from the teacher's desk? How many pencils can fit on the long side of the teacher's desk? How many steps do you have to take to get to the door? How many matchboxes, filled with sand, will fill this box? How many egg-cups full of water will fill this glass? Here are four learners and three chairs. How many more chairs do we need? 	<p>Objects with different lengths such as: Pencils, wax crayon, pieces of string (of which one is curled up), table, books, straws, paperclips (folded open and curled up) etc.</p>	<p>2 days</p> <p>or</p> <p>only select a few activities</p>
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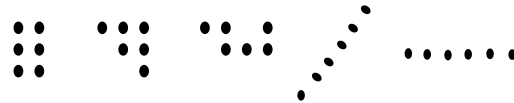
Week 24	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Describe and identify whole numbers	<p>Introduce the meaning of the number 6</p> <p>Oral: Count everyday objects up to 6 Count forwards and backwards up to 6 Rote counting 1 – 10</p> <p>Reinforce ordinal counting: Teachers packs 3 objects in a row. Point at each object while counting <i>first, second, third</i></p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 6 times Ask question which number of claps was most/least</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> • Count up to six while climbing the steps • Draw number 6 in sand and walk/skip/jump with one leg along it • Clap hands 6 times • Recognise numbers 1 to 6 with the set of large number symbols • Pack out his/her house number or telephone number with the large number symbol cards 	<p>Number songs and rhymes</p> <p>Large set of number symbols</p>	1 day

Concrete use of 3D objects

Count objects in the class.

Ask questions such as:

- Which number comes after three, which number comes after 5, etc.?
- The teacher places objects in a pile on the table. Let learners estimate how many objects are in the pile. Count them afterwards.
- Develop an awareness of number conservation by letting learners pack six counters or any objects in different ways e.g. .



When counting, the number of objects is not affected by their size, or position, or whether they are of the same type.

- Arrange 6 buttons, 6 pencils, 6 hoops, 6 learners, etc.
- Count them in a different order e.g. count them spread out, close together, in a line or stacked up

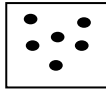

Divide learners into six groups. Give each group 6 building blocks.

Groups:

- Count their blocks
- Build a tower with their 6 building blocks. Encourage learners to count the “bricks” as they build the tower.
- Teacher moves to each group and labels their towers with a number card. Learners count the number of towers. Repeat this several times.
- Choose a learner to throw a dice. Make sure all the learners can see the dice. The learners count the number of dots and point to the matching tower.

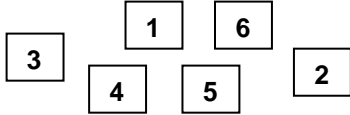
Objects in classroom and environment

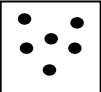
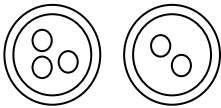
6 building blocks per learner

<p>Number symbols and number names</p>	<p>Know the number symbol and recognise the number name involving the number 6</p> <p>Oral: Count everyday objects up to 6 Count forwards and backwards up to 6</p> <p>Reinforce the concepts of many and few Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 6 times Ask question which number of claps was most/least</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Draw the number 6 on the ground/floor and let the learners walk along the number • Draw the number 6 in the sand, air • Form the number 6 with clay • Let learners predict how many learners will be needed to form the number 6 with their bodies. Form the number 6 with their bodies. <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Place a heap of objects on the table. Play around with numbers 1 to 6 . • Let the learners' estimate how many objects there are • Count the objects. <p>Semi concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • Identify from a mixture of flash cards those with 6 pictures on them and link them with the same number of counters • Show the flash cards with 6 pictures and link them with the same number of dots and counters • Show the flash cards with 6 dots and link them with the same number symbol and the same numbers of counters • Identify from a variety of flash cards those with the number name six on them and link them with the number symbol and the same number of counters. 	<p>Number songs and rhymes</p> <p>6 objects</p> <p>Picture and dot flash cards involving the number</p> <div> <div>Picture of 6 objects</div>  </div> <p>Counters or 3D objects</p> <div> <div>Picture of 6 objects</div>  <div>6</div> <div>six</div> </div>	<p>1 day</p>
<p>Solve orally stated addition and subtraction problems.</p>	<p>Solve orally stated addition and subtraction problems with answers up to 6</p>		

<p>Number bonds</p> <p>Addition</p> <p>Subtraction</p>	<p>Oral: Count everyday objects up to 6 Count forward and backward up to 6 Ask question which number of claps was most/least.</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Teacher calls 3 learners to the front. Other learners count them. Teacher calls another 2 and asks: How many learners altogether? 3 and 2 → 5. (The teacher says: 3 and 2 gives 5) Teacher packs out 2 chairs. Add 2 more. How many chairs are there now? 2 and 2 → 4 Teacher holds up one hand, and says: “Count my fingers. If I hide my thumb, how many fingers can you see? 5 take away 1 → 4 Let the learners count the fingers on one of their hands. Hide the thumb; how many fingers do you see? 5 take away 1 → 4 <p>Concrete use of 3D objects Learners pack out 6 counters and do the following:</p> <ul style="list-style-type: none"> The teacher gives each learner 6 counters The teacher gives instructions and learners respond e.g., pack out 2 counters, add another 3 How many altogether? 2 and 3 → 5 Count 4 counters. Count 2 on from four. How many do you have now? 4 and 2 → 6 Count all the beads you have. If you cover two beads with your hand, how many beads do you see? 6 take away 2 → 4 	<p>Number songs and rhymes.</p> <p>Beads or counters.</p>	
<p>Orally solve word problems (story sums) and explain own solutions to problems</p> <p>Number bonds</p>	<p>Orally solve word problems involving the number 6</p> <p>Oral: Count everyday objects up to 6 Count forwards and backwards up to 6</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 6 times Ask question which number of claps was most/least</p>	<p>Number songs and rhymes</p>	<p>1 day</p>

Addition Subtraction	Concrete use of 3D objects <ul style="list-style-type: none"> • Mpho has 4 cookies. Peter gives him 2 more. How many cookies does Mpho have altogether? • Beauty has 3 dolls and Martha has 2 dolls. Who has the most dolls? How many more dolls does Beauty have than Martha? • There are 5 birds on the fence. 2 fly away. How many birds are left? • Patrick has 6 toy cars. Tiny has 4. How many toy cars does Tiny have less than Patrick? • One child has one nose. Three children have • One child has two feet. Three children have..... • One child has two arms. Two children have..... • One child has one mouth. Three children have..... 	Counters A variety of resources Cookies, dolls, toy cars, etc.	
Build 3D objects using concrete material	Build a 3D construction from a design or picture card Learners: <ul style="list-style-type: none"> • Build a construction from a design or picture • Learners thread beads according to the sequence in a given picture. 	Logi blocks Any construction equipment Beads, shoestring A variety of drawn cards illustrating the sequence of the beads	

Week 25	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Reinforce the knowledge gained in week 24 involving the number 6</p> <p>Oral: Count everyday objects up to 6 Count forwards and backwards up to 6 Rote counting 1 – 10</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap your hands fewer times. The teacher claps her hands up to 6 times Ask question which number of claps was most/least</p>	Number songs and rhymes	1 day
	<p>Kinesthetic Play a game: The teacher places the large cardboard number shapes or cards that involve numbers 1 to 6 in sequential order on the floor</p> <p>The teacher gives the children instructions such as:</p> <ul style="list-style-type: none"> • Sit on number 6 • Put your toe on number 3 • Run around number 2 three times • Hop over number 1 • The teacher can later scatter the number symbol cards and give the same instructions as above. <p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none"> • Count objects in the classroom involving numbers 1 to 6 • The teacher places objects in a pile on the table. Learners estimate how many objects are in the pile. Count them afterwards 	<p>A set of large cardboard/plastic number symbol cards</p> 	

<p>Number symbols and number names</p>	<p>Recognise and identify the number symbol and the number name involving the number 6</p> <p>Oral: Count everyday objects up to 6 Count forwards and backwards up to 6</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap your hands many times ... stop. Clap your hands fewer times. The teacher claps her hands up to 6 times Ask question which number of claps was most/least</p> <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • Show learners the flash card with six dots and link it to the same number of counters • Play games identifying a specific number symbol amongst others and link it with the same number of counters • Play games identifying a specific number name amongst others and link it with the same number of counters • Play games by linking the number of counters with the number name, the number symbol and the picture cards ○ Trace the number 6 with a crayon 	<p>Number songs and rhymes</p> <p>Objects or counters Flash card with number symbol and number name e.g.</p> <div> <div>Picture of 6 objects</div>  <div>6</div> <div>six</div> </div>	<p>1 day</p>
<p>Compare which of two given collections of objects are:</p> <ul style="list-style-type: none"> • more than, • less than (fewer) • equal to (the same) 	<p>Order and compare collections of objects using <u>more than/less than</u> and <u>equal to</u> up to number 6</p> <p>Oral: Count everyday objects up to 6 Count forwards and backwards up to 6</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap your hands many times ... stop. Clap your hands fewer times. The teacher claps her hands up to 6 times Ask question which number of claps was most/least</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • The teacher places two hoops on the floor • She calls 3 learners to stand in the one “nest” and 2 learners to stand in the other “nest” 	<p>Number songs and rhymes</p> <p>2 hoops</p> <div>  </div>	<p>1 day</p> <p>Select only a few activities</p>

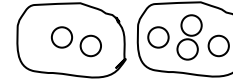
- Which “nest” has more learners in it?

Concrete use of 3D objects

- Learners sit on the carpet and make two “nests” with the wool
- The teacher gives instruction e.g. the learners place 2 counters in one “nest” and 4 in the other “nest”. Which “nest” has more counters? Which “nest” has less (fewer)? Which nest has more/most?
- Repeat using numbers up to 6
- The teacher uses the lid of an ice-cream container. She pegs 3 clothes pegs on the top side of the lid and 3 clothes pegs on the right side of the lid. Which number of pegs are more than the other, or are they equal?

The learners can perform this activity in groups each with their own lid and clothes pegs

2 lengths of wool for each learner
Counters

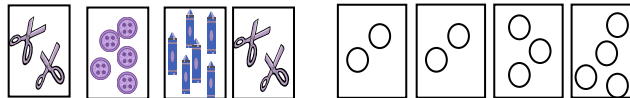


Clothes pegs
Square lids of any container

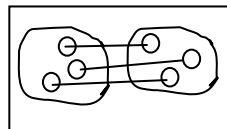


Semi-concrete use of 2D shapes or pictures

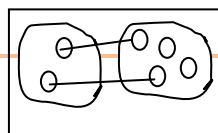
- The teacher shows cards with different number of dots and pictures on them.



- Learners compare cards with pictures and dots on them and identify the more than, less than and equal to concepts
- The learners draw two nests on a piece of paper. On instruction they pack counters and link the counters in each nest with a crayon. Develop concepts such as equal sharing e.g.




- Do grouping of whole numbers with answers that include remainders as well e.g.



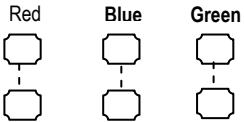
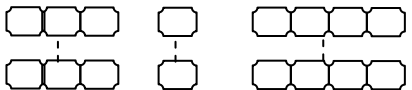
Picture and dot cards

A4 paper and wax crayons
Counters


<p>Recognise, identify and name two-dimensional shapes in the classroom and in pictures</p>	<p>Make and complete own 5 puzzle</p> <p>Learners:</p> <ul style="list-style-type: none"> • Draw a picture on an A4 paper • The teacher draws the lines on the back of the learner's drawing • The learner cuts his/her picture on the given lines • The learner completes his/her own puzzle 	<p>A4 paper Crayons Scissors Envelope or self-made to place puzzle in (fold A4 paper and glue sides)</p> 	<p>1 day</p>												
<p>Collect, sort objects in the environment according to stated features</p> <p>Draw graphs to display data</p> <p>Read and interpret graphs</p>	<p>Number of letters in learners' names</p> <p>Problem-solving: pose a problem to the learners: Are names with six letters most popular? How can we find out? What information should we collect?</p> <p>Collect data</p> <ul style="list-style-type: none"> • Learners count the number of letters in their names from a name label • Teacher holds up a number card corresponding to the number of letters in a learner's name and asks: Who has 4 letters in his/her name holding up the number 4 symbol card? Repeat with all the numbers. <p>Draw a graph</p> <ul style="list-style-type: none"> • The teacher draws the following graph as she holds up the numbers: <table border="1"> <thead> <tr> <th>3 letters</th><th>4 letters</th><th>5 letters</th><th>6 letters</th></tr> </thead> <tbody> <tr> <td>Ann Sam</td><td>Kady Mark Maja</td><td>David Aidon Sarah Caleb Naila</td><td>Sophie Jessie</td></tr> <tr> <td>2</td><td>3</td><td>5</td><td>2</td></tr> </tbody> </table> <p>Read and interpret the graph</p> <ul style="list-style-type: none"> • What is the most common number of letters in a name? 	3 letters	4 letters	5 letters	6 letters	Ann Sam	Kady Mark Maja	David Aidon Sarah Caleb Naila	Sophie Jessie	2	3	5	2		
3 letters	4 letters	5 letters	6 letters												
Ann Sam	Kady Mark Maja	David Aidon Sarah Caleb Naila	Sophie Jessie												
2	3	5	2												

	<ul style="list-style-type: none"> • How many names have more than 5 letters? Two names with six letters • How many names have fewer than 5 letters? Three names 		
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Week 26	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Reinforce the knowledge gained involving the numbers 1 to 6</p> <p>Oral: Count everyday objects up to 6 Count forwards and backwards up to 6</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 6 times Ask question which number of claps was most/least</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> • Form number symbols with their bodies • Hold up the number of fingers on teacher's instruction • Form number symbols with pieces of string or play dough • Feel cardboard number shapes in a bag and identify each number • Write the number symbols 1 to 6 on the ground or in the air, etc. 	<p>Number rhymes and songs</p> <p>Two sets of cardboard number shapes in a "feely bag"</p>	1 day


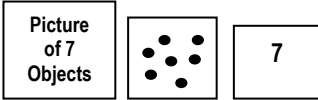
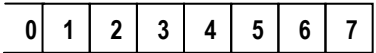
	<p>Concrete use of 3D objects</p> <p>Learners:</p> <ul style="list-style-type: none"> Count objects in the classroom involving numbers 1 to 6 Count counters up to number 6. Place a few unifix cubes or coloured counters in a row on the table The learners match the cubes by colour using other unifix cubes or counters. <div style="text-align: center;"> <p>Red Blue Green</p>  </div> <ul style="list-style-type: none"> Make groups of different lengths. The learners match according to quantity <div style="text-align: center;">  </div>	<p>Objects in the classroom</p> <p>Coloured counters or unifix cubes</p>	
Number symbols and number names	<p>Know the number symbols and recognise number names involving the numbers 1 to 6</p> <p>Oral: Count everyday objects up to 6 Count forwards and backwards up to 6</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 6 times.</p> <p>Semi-concrete use of 2D shapes or pictures Play a game:</p> <ul style="list-style-type: none"> The teacher writes the number name on one side of a card and writes the number symbol on the other side of the same card involving numbers 1 to 6 (make a few sets) Learners “read” the number name and guess the number symbol They turn the card over and correct themselves 	<p>Sets of cards, e.g.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">Front of card</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Back of card</div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 10px; text-align: center;">Six</div> <div style="border: 1px solid black; padding: 10px; text-align: center;">6</div> </div>	1 day
Orally solve word problems (story sums) and	Orally solve word problems (story sums) in context and explain own solutions to problems involving the number 6		1 day

<p>explain own solutions to problems</p> <p>Number bonds</p> <p>Addition</p> <p>Subtraction</p>	<p>Oral: Count everyday objects up to 6. Count forwards and backwards up to 6</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 6 times Ask question which number of claps was most/least</p> <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> Give each learner a piece of A4 paper (with a line drawn vertically on it) and 6 counters <div> </div> Learners throw the counters carefully on the piece of paper and explain how they have fallen <div> </div> <p>4 and 2 → 6 (4 and 2 gives you 6)</p> <div> </div> <p>3 and 3 → 6</p> Repeat with numbers 1 to 5 <div> </div> <p>5 and 1 → 6</p> Problem-solving: Explain own solutions to problems Do the same with subtraction problems 	<p>Number songs and rhymes</p> <p>6 counters for each learner A4 paper with vertical line in middle</p>	
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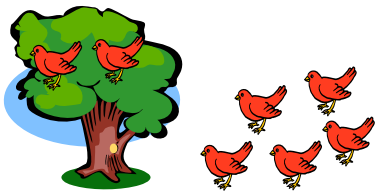
<p>Concretely compare and order objects using appropriate vocabulary to describe:</p> <ul style="list-style-type: none"> • capacity • empty, full, less than, more than, a lot, a little 	<p>Introduce the measuring concept of capacity by comparing how much various containers hold e.g.</p> <ul style="list-style-type: none"> • empty/full • more than/less than • a lot, a little <p>Introduce capacity to the learners by asking which container holds more. Learners often make the comparison on height rather than on capacity, e.g. when asked which holds more, a tall container or a short container, most learners will choose the tall container even if the short container actually holds more liquid.</p> <p>Kinesthetic More than/less than</p> <ul style="list-style-type: none"> • Use one container as a standard measure e.g. a yoghurt cup. Provide the learners with a variety of containers. <p>Learners:</p> <ul style="list-style-type: none"> • Find out which containers hold more and which hold less than the standard measure i.e. the yoghurt cup. Which container holds a lot? Which container holds only a little bit? <p>Give the learners a tablespoon and bucket with sand to spoon the sand into a mug Learners:</p> <ul style="list-style-type: none"> • Count how many spoons of sand is needed to fill the mug. The experiment can be made more difficult by giving more than one container e.g. a cup, a plastic glass and a small jar • Repeat the activity using cups, jars, etc. 	<p>Containers Water (during water play) and sand (during sand play in the sandpit).</p> <p>A variety of containers in different shapes and sizes</p> <p>Yoghurt cups</p> <p>Buckets with sand Mug/jar/cup, etc. Tablespoons</p>	<p>1 day</p> <p>Only select one or two activities</p>
<p>Describe one or more three-dimensional objects in relation to another</p>	<p>The position of two or more objects in relation to each other</p> <p>Concrete use of 3D objects Pegboard: Learner first uses right and then left hand, then both hands to place the pegs on the board.</p> <ul style="list-style-type: none"> • Teacher tells the learners where to place the pegs e.g. • In the top row • In the bottom row 	<p>A pegboard for each learner or group Cards which have a pattern drawn on them</p>  <p>A pegboard for each learner or group</p>	<p>1 day</p>

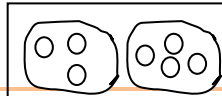
	<p>On the left side On the right side In the middle</p> <p>Learners:</p> <ul style="list-style-type: none"> • Make shapes on the pegboard with the coloured pegs • The teacher composes a simple pattern with the pegs on her pegboard and learners copy her pattern on their own pegboards • Learners copy the pattern from a card which has a pattern drawn on it. 	Card which has a pattern drawn on it	
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Week 27	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Introduce the meaning of the number 7</p> <p>Oral: Count everyday objects up to 7 Count forwards and backwards up to 7 Rote counting 1 – 10</p> <p>Reinforce ordinal counting: Teacher packs 3 objects in a row. Point at each object while counting <i>first, second, third, fourth</i></p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 7 times Ask question which number of claps was most/least</p> <p>Kinaesthetic</p> <ul style="list-style-type: none"> Teacher divides learners into groups. Give each group 7 balls made of newspaper. Learners throw the balls into a basket. Learners should count aloud while throwing the balls Count the number of times the teacher taps on the table and copy her Count in time to a regular beat while learners walk down steps, hop in and out of hoops Stamp feet in time to a regular beat. <p>Concrete use of 3D objects The teacher places a pile of building blocks in the middle of the floor. She gives instruction such as:</p> <ul style="list-style-type: none"> Take 3 blocks from the pile Take 4 blocks from the pile and put two back, etc. The teacher places objects in a pile on the table. Learners estimate how many objects are in the pile. Count them afterwards. Develop an awareness of number conservation by letting 	<p>Number rhymes and songs</p> <p>Newspaper Baskets Hoops</p> <p>Building blocks or lego blocks</p>	1 day

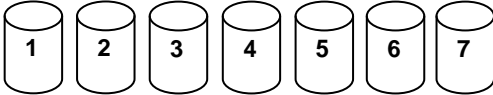
	<p>learners pack seven counters or any objects in different ways e.g.</p>  <p>When counting, the number of objects is not affected by their size, or position, or whether they are of the same type.</p> <ul style="list-style-type: none"> • Arrange 7 buttons, 7 pencils, 7 hoops, 7 learners, etc. • Count them in a different order e.g. count them spread out, close together, in a line or stacked up. <p>Semi-concrete use of 2D shapes or pictures</p> <p>Play a game:</p> <ul style="list-style-type: none"> • The teacher draws or pastes pictures on one side of a card and draws the same number of dots on the other side of the card involving numbers 1 to 7 (make a few sets) • She hands out one card of the set to each learner • Learners count the number of pictures on a card • Turn the card around and count the number of dots • The teacher holds up one of her cards with dots on it • Learners match their card with her number of dots • The teacher holds up her set of cards with the number symbol • Learners match their card with her number symbol • The learner with the correct card may stand up and count the number of pictures out aloud 	<p>A few sets of picture, dot and number symbol flash cards that involve numbers 1 to 7</p> 	
<p>Solve orally stated addition and subtraction problems</p> <p>Number bonds</p> <p>Addition</p> <p>Subtraction</p>	<p>Solve orally stated addition and subtraction problems involving the number 7</p> <p>Oral: Count everyday objects up to 7 Count forwards and backwards up to 7</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 7 times Ask question which number of claps was most/leas.</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Use the number ladder lying flat (horizontally) 	<p>Number songs and rhymes</p> 	1 day

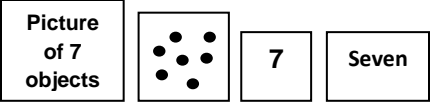
	<ul style="list-style-type: none"> Always start at 0, counting while moving. <p>The teacher asks:</p> <ul style="list-style-type: none"> Which number lies between 4 and 6? Learners experience using the number ladder Which numbers lie between 2 and 5? Make use of your own ideas to let learners experience the meaning of the number 7 Kinesthetically with their bodies 		
	<p>Concrete use of 3D objects Give each learner 7 beads or counters Ask questions such as:</p> <ul style="list-style-type: none"> Move 1 counter to the one side (left). If we add another counter to the counter on the left, how many do we have now? 1 and 1 → 2 (The teacher says: 1 and 1 is 2) Move 4 counters to the left. If we add another 2 counters to the counters on the left, how many do we have? 4 and 2 → 6 You have 5 counters and you take away 2, how many are left? 	<p>Beads or counters</p> <p>Counters</p>	
Use numbers in familiar context	<p>Recognise and identify South African banknotes</p> <ul style="list-style-type: none"> Use banknotes e.g. R10, R20, R50, R100, R200 Make the learners aware of the different animal pictures on the banknotes Role-play with money in the house corner. 	<p>Real examples of a R10, R20 and R50 banknotes (or use play money)</p>	1 day

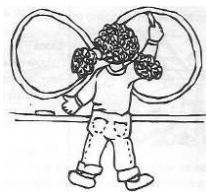
<p>Orally solve and explain solutions to word problems (story sums) that involve equal sharing, grouping with whole numbers and solutions with remainders up to 7</p> <p>Number bonds</p>	<p>Orally solve and explain solutions to word problems in context (story sums) involving:</p> <ul style="list-style-type: none"> • equal sharing • grouping with whole numbers and • solutions with remainders up to 7 <p>Oral: Count everyday objects up to 7 Count forwards and backwards up to 7</p> <p>Reinforce the concepts of many and few Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 6 times Ask question which number of claps was most/least</p> <p>Kinesthetic Form sets using the learners:</p> <ul style="list-style-type: none"> • Learners form groups of 2, 3, 4, 5 and 6. Count how many are in each group • Draw large shapes on the concrete or in the sand. Learners make a group of 4 learners inside the shape • During the refreshment routine the teacher says: You can go in a group of four to wash your hands, instead of saying: Four learners can go to wash their hands • Choose 7 learners using a counting rhyme. • Let the 7 learners pretend to be birds and make a “pretend tree” using the climbing apparatus outside or chairs and tables inside. • The teacher sends 2 birds to the “pretend tree” (2 learners climb on the apparatus). One more bird goes to the tree each time. How many ‘birds’ in the tree now, and how many birds on the ground? • Repeat grouping learners using numbers 1 to 7 	<p>Number songs and rhymes</p> <p>Climbing apparatus or tables and chairs.</p> 	<p>1 day</p> <p>Select only one or two of the Kinesthetic concrete and semi-concrete activities</p>
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	<p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> The teacher gives the learners counters. Learners make a set of 4 counters. Make another set of 3. How many counters do you have in the new set? Learners draw two circles on a piece of paper. On instructions from the teacher, the learners pack counters in the two sets so that there are more counters in the one set than in the other. Ask questions such as Which set has most/least counters? 	<p>Counters</p> <p>Piece of paper and a crayon for each learner</p> <p>counters</p> 	
<p>Concretely compare and orders objects using appropriate vocabulary to describe:</p> <ul style="list-style-type: none"> capacity empty, full, less than, more than, a lot, a little 	<p>Reinforce the knowledge gained in Week 26 involving capacity</p> <p>Oral:</p> <p>Count everyday objects up to 7 Count forwards and backwards up to 7 Rote counting 1 – 10</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u></p> <p>Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 6 times. Ask question which number of claps was most/least.</p> <p>Kinesthetic</p> <p>Learners:</p> <ul style="list-style-type: none"> Arrange two to three different empty containers in order of capacity. In other words, which container will take the most or least? The learners can test their guesses by pouring cups of water into the empty containers and counting which one takes the most cups. Increase the number of empty containers to make it more difficult. The learners can use the same cup as a measure and determine how many cups of rice or beans or sand it would take to fill the same containers used above. Order the similar kinds of containers (e.g. buckets in the sandpit) from small to big. Give learners a variety of containers (different sizes and shapes) and ask questions such as: <ul style="list-style-type: none"> Which of these containers do you think holds the most sand/water? If you pour water from one container to another, 	<p>Water (during water play) and sand (during sand play in the sandpit) are ideal areas to develop capacity</p> <p>Number song and rhymes</p> <p>A variety of containers in different shapes and sizes</p> <p>Cups</p> <p>Cups Rice Beans Different sized buckets used in the sandpit</p>	<p>2 days</p> <p>Select two or three activities</p>





	<p>guess whether you will fill it?</p> <ul style="list-style-type: none"> Learners discover what happens to a partially filled container of water when small items are added e.g. add clean pebbles, Lego blocks, plastic blocks e.g. learners enjoy guessing games in which they guess which container holds more and then check the results to see who wins. (Teacher points out that items that float will not influence the height of the water). 	<p>A variety of containers in different shapes and sizes</p> <p>Water</p> <p>Sand</p> <p>Items such as clean pebbles, Lego blocks, plastic blocks</p>	
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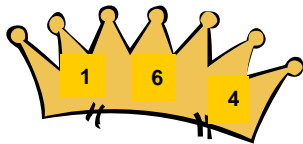
Week 28	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Reinforce the knowledge gained involving the number 7</p> <p>Oral: Count everyday objects up to 7 Count forwards and backwards up to 7</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. The teacher claps her hands up to 7 times. Ask question, “Which number of claps was most/least?”</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Two learners are called to the front. The other learners count them. The two learners in front hold up the corresponding number symbol. Call one more learner to the front. The other learners count them. One learner in front holds up the corresponding number symbol namely 3. Continue until there are 7 learners in front. 	<p>Number rhymes and songs</p> <p>Number symbol cards that involve numbers 1 to 7</p>	1 day
	<p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> Put 7 tins in a row e.g.  <ul style="list-style-type: none"> Learners put one seed/stone in the first tin, two seeds/stones in the second tin, three seeds in the third tin, and continue until the 7 tins have the number of seeds/stones in it as shown on the outside of the tin. 	<p>7 tins with the number symbol pasted on them Seeds or stones</p>	

	<ul style="list-style-type: none"> Take a handful of crayons (between 10 and 15) and place them in a mug. Ask the learners to guess how many are in the mug. Discuss their answer. Demonstrate how to count them by taking one out at a time and laying them in a row. 	Crayons and a mug	
Number symbols and recognise number names	<p>Recognise the number symbol and the number name involving the number 7</p> <p>Semi-concrete use of 2D shapes or pictures Play a game:</p> <ul style="list-style-type: none"> The learners sit in a circle. Place a number card face down in front of each learner. (It could be a number symbol, number name, dot card or a picture card that involve the numbers 1 to 7) Teach the learners to pass the card to the next learner by sliding them face down on the floor/carpet. Learners chant: Secret number, secret number, what could it be? Let me peep Learners peep at their cards The teacher holds up her number card The learners with the card that matches the teacher's card, hold his/her card up high and say: I will hold my card up high, so everyone can see 		1 day
Build 3D objects using concrete material	<p>Copy a construction from a designed or picture card</p> <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> The learner builds a construction from a design or picture Copy the same design from a picture using the pegboard. <p>Semi-concrete use of 2D shapes or pictures Extend this activity to Visual Art.</p> <ul style="list-style-type: none"> Give each learner a sheet with a variety of big and small circles, triangles and squares 	<p>Logi shapes skill blocks, Brainy blocks Any construction equipment. Pegboard</p> <p>A variety of big and small circles, triangles and squares on a sheet of paper</p>	1 day and Ongoing

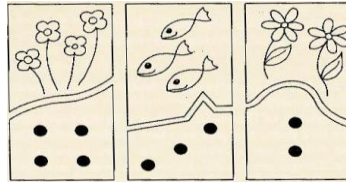
	<p>Learners:</p> <ul style="list-style-type: none"> • Cut out the shapes and create a 2D construction on paper by pasting pictures/shapes • Decorate the picture with drawings 	Scissors, glue	
<p>Recognise line of symmetry in self and own environment</p> <ul style="list-style-type: none"> • crossing the midline 	<p>Develop the ability to cross the midline</p> <p>Kinesthetic</p> <p>Learners:</p> <ul style="list-style-type: none"> • Review previous knowledge gained; touch the different body parts on instruction. Play “Simple Simon says: Touch your ...” • Give further instructions where learners need to cross their mid-line such as: “Touch your knee with your nose. Touch your shoulder with your ear. Touch your left knee with your right foot. Touch your elbow with your one hand, etc. <p>Concrete use of 3D objects</p> <p>Learners:</p> <ul style="list-style-type: none"> • Draw big circles on the chalkboard. • Draw straight lines on the chalkboard. Ensure that the learner crosses his/her midline. • On the chalkboard draw a line from one dot to the other dot that is far apart. • Draw a horizontal figure eight on the chalkboard. Use big movements to ensure that the learner crosses his/her midline. • (The learner uses both left and right hands). <p>Semi-concrete use of 2D shapes or pictures</p> <p>Integrate with Visual Arts</p> <p>Learners:</p> <ul style="list-style-type: none"> • Paint on a double sheet of newspaper from left to right. 	<p>Game: “Simple Simon says, touch your.....”</p> <p>The chalkboard</p>  <p>A double sheet of newspaper for each learner Paint and brush</p>	

<p>Concretely compare and order objects using appropriate vocabulary to describe:</p> <ul style="list-style-type: none"> • mass • light, heavy, lighter, heavier 	<p>Introduce the concept of mass by comparing the masses of different objects</p> <ul style="list-style-type: none"> • light/heavy • lighter/heavier <p>Measuring mass means finding out how much something weighs</p> <p>Kinesthetic Learners guess the masses of objects:</p> <ul style="list-style-type: none"> • Hold the following objects, one in each hand to be able to guess which is heavier or lighter e.g. <ul style="list-style-type: none"> ▪ A stone and a building block ▪ A plastic toy car and a metal toy car ▪ A coffee tin and a toilet roll ▪ A large rubber ball and a cricket ball <p>Learners usually judge the larger object to be heavier when asked to guess the mass of two objects</p> <ul style="list-style-type: none"> • Introduce the balancing scale e.g. weigh the objects to see which learners were correct • Ask questions such as: Which object is heavier/lighter? Let learners find an object in the classroom that they think is heavier/lighter than the objects that they weighed • Make the balancing scale available during free play so that learners can continue the weighing activity • Provide a balancing scale in the “house corner” so that the learners can see how many Lego blocks weigh the same as, for example, an apple 	<p>3D objects of different weights and sizes e.g. Lego blocks, toys, building blocks, tins, containers etc.</p> <p>Balancing Scale You can devise a simple scale:</p> <ul style="list-style-type: none"> • A plastic coat hanger • Two small round margarine tubs or coke bottles and some string • Punch two holes opposite each other in the margarine tubs/coke bottles • Attach the tubs/bottles to the two ends of the hanger you will have a scale • Hang the hanger on a nail or a hook and the learners can start weighing • Show the learners that the hanger should first be in balance each time they start weighing. 	<p>1 day</p> <p>Only select two or three activities</p>
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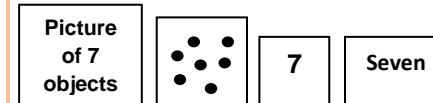
Week 29	Suggested contact time : One teacher guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Reinforce the knowledge gained involving the numbers 1 to 7</p> <p>Oral: Count everyday objects up to 7 Count forwards and backwards up to 7 Rote counting 1 – 10</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap your hands many times ... stop. Clap your hands fewer times. The teacher claps her hands up to 7 times Ask question which number of claps was most/least</p>	Number rhymes and songs	1 day
	<p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none"> Collect twig sand keep them in the class to use again Use twigs/sticks e.g. to write the number 5 symbol <p style="text-align: center;">  or  or  etc. </p> <p>Learners:</p> <ul style="list-style-type: none"> Make use of flash cards involving numbers 1 to 7 Draw the number of objects on the teacher's instruction e.g. draw 2 circles Count on from a given number e.g. the teacher says the number three. The learner would count on... four, five, six During refreshment time the teacher would ask: How many learners have brown bread sandwiches? How many have white bread sandwiches? Do more children have white bread sandwiches? Which is more/less? The teacher places objects in a pile on the table. Let 	<p>Twigs/sticks</p> <p>Picture and dot flash cards that involve number 1 to 7 Number symbol and number name flash cards that involve numbers 1 to 7 e.g.</p> <div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">Picture of 7 objects</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">  </div> <div style="border: 1px solid black; padding: 5px; text-align: center;">7</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Seven</div> </div> <p>Paper and crayon</p>	


	learners estimate how many objects in the pile. Count them afterwards	
Recognise number symbols and number names	<p>Recognise the number symbol/name that involves the numbers 1 to 7</p> <p>Oral: Count everyday objects up to 7 Count forwards and backwards up to 7</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap your hands many times ... stop. Clap your hands fewer times. The teacher claps her hands up to 7 times Ask question which number of claps was most/least</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Place large number symbol cards around the room or outdoor play area. Call the area “Number Land’ and the learners are “The Numberl King and/or Queen” Place a crown on each learner’s head made from cardboard, with numbers clearly written around it Give the learners instructions such as: <ul style="list-style-type: none"> All children wearing red skip to 2 All children with long hair, tip-toe to 6 	<p>1 day</p> <p>Number songs and rhymes</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 5px;">3</div> <div style="border: 1px solid black; padding: 5px; margin: 5px;">5</div> <div style="border: 1px solid black; padding: 5px; margin: 5px;">2</div> </div> <p>.</p> <p>Large number symbols cards</p> <p>Enough number crowns of different colours for each learner made of cardboard with numbers written around them</p> 
	<p>Semi-concrete use of 2D shapes or pictures Learners:</p> <ul style="list-style-type: none"> Draw the number of dots on the teacher’s instruction e.g. draw 2 dots. Repeat with numbers 1 to 7 	<p>Paper and crayon</p> <p>More than one set of number cards that</p>

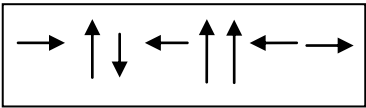
- Have many sets of number symbol and number name cards available. Give each learner one card. The teacher holds up a card and those learners with the matching card hold theirs up
- *Suggestion:* Involve learners in making their own cards.
- Play matching games with the number symbol and number name flash cards



involve numbers 1 to 7 e.g.



<p>Solve orally stated addition and subtraction problems</p>	<p>Solve orally stated addition and subtraction problems with answers up to 7</p> <p>Oral: Count everyday objects up to 7 Count forwards and backwards up to 7</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap your hands many times ... stop. Clap your hands fewer times. The teacher claps her hands up to 7 times Ask question which number of claps was most/least</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Refer to Weeks 24 and 27 for ideas • Make use of your own ideas to let learners experience the meaning of the number 7 Kinesthetically with their bodies. <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Refer to Week 24 and 27 • Make use of your own ideas to let learners experience the meaning of number 7 concretely using 3D objects. 	<p>Number songs and rhymes</p> <p>Counters</p>	<p>1 day</p>
<p>Follow directions to move or place self within a specific space (directionality)</p>	<p>Develop a sense of direction by using the arrow flash cards and the arrow chart</p> <p>Kinesthetic Learners walk in different directions:</p> <ul style="list-style-type: none"> • To the door • To the window • To the book corner, etc. <p>Concrete use of 3D objects Learners</p> <ul style="list-style-type: none"> • Draw a horizontal figure eight on the chalkboard. Ensure that learners cross the midline e.g. 	<p>Chalkboard</p>	<p>1 day</p>

	<p>Semi-concrete use of 2D shapes or pictures</p> <p>Learners individually or in small groups:</p> <ul style="list-style-type: none"> Keep eyes on the flash card and move arms in the direction indicated by the arrow and speak while doing, it e.g. if learner puts his/her arm out, he/she must say “right” For up and down movements, the learner may use either arm Indicate directions on the arrow chart Paste footprints in the direction of the door <p>Terminology: up/down; in/out; top/bottom ; front/back ; in front of/behind; on top or above/under or below; the one side/the other side; next to ; left and right</p>	<p>Flash card with only one arrow. Turn flash card in different directions</p> <p>Arrow chart (poster with arrows in different directions)</p> 	
<p>Concretely compare and order objects using appropriate vocabulary to describe:</p> <ul style="list-style-type: none"> mass light, heavy, lighter, heavier 	<p>Reinforce the knowledge gained in Week 28 involving mass</p> <ul style="list-style-type: none"> lightest/heaviest <p>Kinesthetic</p> <p>Learners:</p> <ul style="list-style-type: none"> Compare the masses of three to five identical containers (e.g. 400g empty tins) containing different amounts of sand, so that their masses differ Put them in order from lightest to heaviest by feeling the masses. Afterwards a balancing scale may be used to determine whether or not the learners were correct <i>Suggestion:</i> Experiment to see how many metal washers or nails can be balanced to have the same mass. Any other objects can be used 	<p>Empty tins which are the same size</p> <p>A balancing scale</p> <p>Objects such as Lego blocks</p>	1 day
	<p>Teacher puts articles of different masses into identical closed containers e.g., two cottage cheese containers; one containing a block and one a tennis ball</p> <p>Learners:</p> <ul style="list-style-type: none"> Feel the difference between the masses of the two objects and guess which one is the lightest or the heaviest Use a balancing scale to get to the actual answer 	<p>Objects with different masses such as metal washers or nails</p> <p>Two cottage cheese containers; one containing a block and one a tennis ball</p>	


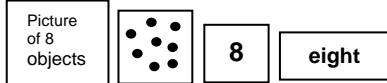
	<ul style="list-style-type: none"> Challenge learners to find objects in the classroom that have the same mass <p>The sandpit and water play area are valuable areas which should be used to reinforce concepts such as light/heavy/heavier using different sized containers a balancing scale, damp and dry sand</p> <p>NB: Sit with the learners while talking, discussing and explaining.</p>	<p>Balancing scale Sandpit Water play basin, container or trough</p>	
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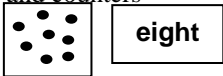
Week 30 Use Week 30 to attend to conceptual weaknesses and/or identified barriers to learning.		
Content Area	Topic	Assessment Criteria
Numbers, Operations and Relationships	Counting	Estimate and rote count up to 7 (number songs and rhymes included to develop number concept)
		Count backwards and forwards (1 – 7)
		Know which number of claps are more/less
	Number recognition	Recognise numbers in familiar context e.g. age, register (assess again)
	Identify and describe whole numbers	Identify number pictures and dot cards up to number 7
		Know the number symbols 5, 6, 7
		Recognise the number names five, six, seven
	Number sense	Distinguish between <u>more</u> , <u>less</u> and <u>equal</u> , <u>many</u> and <u>few</u> up to 7
Patterns and Functions	Solving problems	Recognise the colour as well as the different animals on South African banknotes
		Use concrete apparatus
		Explain own thinking in words and through drawings or concrete objects
Space and Shape	Copy, extend and create owns patterns	Orally solve addition and subtraction problems up to 7
	Recognise, identify and name 2D shapes/pictures	Copy, extend and create own patterns using pictures
		Build at least an 18 piece puzzle
	Geometric shapes	Recognise, identify and name the square
	Build 3D objects using concrete materials	Understand form constancy of shapes learnt up to date (shape conservation)
		Build from a given construction example
		Copy a construction from a design or picture card

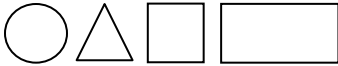
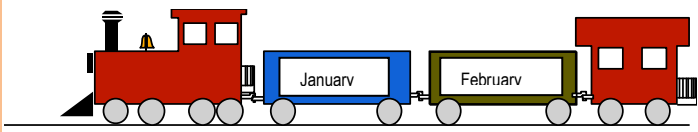
	Spatial relations	Know the position of two or more objects in relation to each other <u>In front of, behind, on top of, on, under, bottom, below, next to, middle, left and right</u> Execute instructions on pegboard
	Directionality	Know directions on the arrow chart
	Length	Estimate and measure the length of different objects
	Mass	Understand the concepts <u>light, heavy; lighter, heavier; lightest, heaviest</u>
	Capacity	Understand the concepts <u>empty, full, more than, less than</u>
Data Handling	Collect, sort, draw, read and represent data	Collect, sort, draw, read and represent (analyse) objects according to one attribute

TERM 4 MATHEMATICS GRADE R

Week 31	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)										
Topic	Clarification Notes	Recommended Resources	Approximate Duration								
Identify and describe whole numbers	<p>Introduce the meaning of the number 8</p> <p>Oral: Count everyday objects up to 8 Count forwards and backwards up to 8 Rote counting 1 – 10</p> <p>Introduce counting in 2s using a number rhyme</p> <p>Reinforce ordinal counting: Teachers packs 4 objects in a row. Point at each object while counting <i>first, second, third fourth</i></p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 8 times Ask question which number of claps was most/least</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none">Count eight steps while moving around in the classroomShow eight fingers <p>Learners:</p> <ul style="list-style-type: none">Use the number ladder lying flat (horizontally)Ensure that learners always start on 0 (zero)Identify the number symbols as they walk on the number lineWalk on each segment while counting rhythmically	<p>Number songs and rhymes.</p> <p><i>Two, four, six, eight, One man at the gate. He says he is too late; Two, four, six, eight.</i></p> <table border="1"><tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr></table> <p>A set of number symbol flash cards 1 to 8</p>	0	1	2	3	4	5	6	7	1 day
0	1	2	3	4	5	6	7				
Number symbols and number names	<p>Recognise the number symbols and the number names up to 8</p> <p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none">Count objects in the classroom involving the numbers 1 to 8Count counters up to the number 8	<p>A set of 8 objects in the classroom Objects or counters</p>	1 day								

	<ul style="list-style-type: none"> Develop an awareness of number conservation by letting learners pack eight counters or any objects in different ways, e.g.  <p>When counting, the number of objects is not affected by their size, or position, or whether they are of the same type.</p> <ul style="list-style-type: none"> Arrange 8 buttons, 8 pencils, 8 hoops, 8 learners, etc. Count them in a different order e.g. count them spread out, close together, in a line or stacked up. <p>Semi-concrete use of 2D shapes or pictures</p> <p>Learners:</p> <ul style="list-style-type: none"> Play games by linking the number of counters with the number name, the number symbol, the dots and the picture cards that involves the number 8 Trace the number 8 with a crayon. 	<p>8 counters or 8 objects per learner</p> <p>Flash card with number symbol and number name, dots and pictures e.g.</p>  <p>Crayons Counters</p>	
Use numbers in familiar context	<p>Use the number 8 in familiar context</p> <p>Oral: Count everyday objects up to 8 Count forwards and backwards up to 8</p> <p>Reinforce counting in 2s using number rhymes</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps 8 times Ask question which number of claps was most/least</p>	<p>Number songs and rhymes</p>	1 day

	<p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> • Make the number 8 with their fingers • Form the number with pieces of string or play-dough • Write the number symbols in a tray with sand • Place the large number symbol cards in consecutive order on the floor up to 8 <p>Concrete using 3D objects The teacher gives each learner 8 beans and a flash card with 8 dots on it Learners:</p> <ul style="list-style-type: none"> • Pack a bean on each dot of the flash card • Count the beans • Link the dot flash card to the number name flash card and the counters. 	<p>String/wool or play-dough Tray with sand</p> <p>Set of large number symbol cards</p> <p>8 beans per learner The dot flash card, the name flash card and counters</p> 	
<p>Recognise, identify and name 2D shapes in the classroom and in pictures</p> <ul style="list-style-type: none"> • a rectangle 	<p>Introduce a rectangle (a rectangle consists of four straight lines)</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> • Form shapes with their bodies e.g. learners form a rectangle with their bodies (6 learners) • Form a rectangle using their fingers • Make/form a rectangle with pieces of wool or play-dough • Walk on the outline of a rectangular shape. While walking learners say: I am walking along the rectangle – one long side, one short side, another long side, another short side • Feel the shapes, use giant sized shapes or place different shapes in a “feely bag” • A matching set of cards with shapes drawn on them. The learner feels the shape in the bag and matches it with the cards. • Draw the rectangle shape in the air, on the ground/floor (chalk) and eventually on paper. 	<p>Card games that develop the recognition of shapes</p> <p>Wool or play-dough</p> <p>“Feely bag” with different geometric shapes Matching set of cards with shapes drawn on them</p> <p>A4 paper and crayon</p>	1 day

<p>Sort 3D objects and 2D shapes according to size, colour and shapes</p>	<p>Concrete use of 3D objects Let learners look for rectangular objects in the classroom</p> <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> Identify rectangular shapes in pictures Identify all the shapes introduced up to date, in pictures <p>Sort 3D objects and 2D shapes according to size, colour and shapes</p> <ul style="list-style-type: none"> Sort the collected objects according to size, colour and shapes 	<p>Rectangular objects in the classroom All the shapes learnt up to date:</p> 
<p>Collect and sort objects in the environment according to stated features</p> <p>Draw a graph</p> <p>Read and interpret the graph</p>	<p>Reinforce the concept of data handling by collecting objects in the class or environment according to stated features for example the learners' birthdays</p> <p>Collect and sort data</p> <ul style="list-style-type: none"> Using the birthday chart, determine whose birthdays are in which month The learners assist to make a graph to see in which month 	<p>The birthday chart</p> 

of the year the most birthdays appear

- The teacher draws a graph of the 12 months of the year
- With the assistance of the teacher the learners plot the graph according to each learner's birthday month.

Jan	Feb	March	April	May	Jun	Jul
Sipho Martha Helen Dolly	David Bongi Claire		Nelson Jacob Tim	Kabelo Pat Thandi	Selina Liz Titus	Thabo Jane
4	3	0	3	3	3	2

- The learners count the names and write the total number of birthdays under each month.
- The learners compare the number of birthdays in the different months.

The teacher asks questions such as:

- Which month has the most birthdays?
- Which month has the least birthdays?
- Which months have the same number of birthdays? They are equal.
- Which months have the most boys celebrating their birthdays?
- Which months have the most girls celebrating their birthdays?

Learners discuss the following conclusions:

- January has the most birthdays four learners celebrate their birthdays in January
- There are zero (none) birthdays during March only 1 month when no learners have a birthday
- Some months have equal numbers of birthdays, etc. Which months are they?

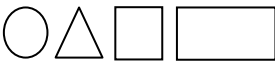
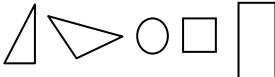
A card with learner's names on it

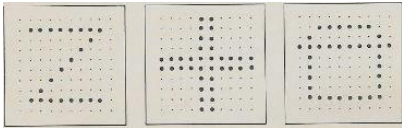
Draw 12 columns on a large strip of paper
Indicate with a name card in which months the learners have their birthdays
3 sheets of A2 paper with 12 columns

Week 32	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Reinforce the knowledge gained in Week 31 involving the number 8</p> <p>Oral: Count everyday objects up to 8 Count forwards and backwards up to 8 Rote counting 1 – 10</p> <p>Reinforce counting in 2s using number rhymes</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 8 times Ask question which number of claps was most/least</p> <p>Kinesthetic Play a game:</p> <ul style="list-style-type: none"> • The teacher plays an instrument e.g. a drum • The learners move around • When the drum stops, the teacher calls out a number between 1 and 8, learners arrange themselves in small groups e.g. the teacher calls out 8 and learners arrange themselves in groups of 8 • Show 8 fingers on your two hands • Form sets with the learners. Draw large circles in the sand. Let learners form groups of 8 inside the circles. The groups of eight learners can perform certain tasks together during the day, e.g. play in block corner; go to the art area, etc. 	<p>Number songs and rhymes</p> <p>Drum</p>	1 day
Use numbers in familiar context	<p>Concrete use of 3D objects Learners:</p> <ul style="list-style-type: none"> • Use counters to recognise which number comes before 8 and after 5? Which number is between 6 and 8? • Count objects in pairs (2s): <ul style="list-style-type: none"> ▪ A pair of shoes 	<p>Counters</p> <p>A pair of shoes, socks, earrings, etc.</p>	

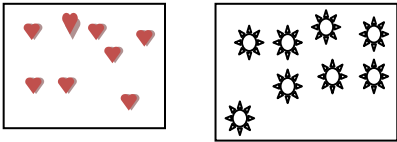
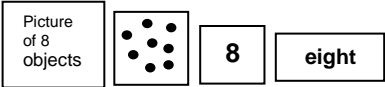
	<ul style="list-style-type: none"> ▪ A pair of socks ▪ A pair of eyes ▪ A pair of earrings ▪ A pair of ears ▪ A pair of legs 		
	<p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • When taking the attendance register the teacher asks: Is the learner with the house number or address here? The learner should respond by indicating that he /she is present • Repeat the next day with telephone or cell phone numbers. 	Cards with each learner's telephone numbers and addresses	
<p>Orally solve word problems (story sums) and explain own solutions to problems</p> <p>Addition</p> <p>Subtraction</p>	<p>Orally solve word problems (story sums) involving the number 8</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • The teacher assists the learners to make a group of 6 learners and another group of 2 learners • Combine the two groups to make one group • Ask the learners how many learners are in the combined group? 6 and 2→8.(The teacher says: 6 and 2 gives 8) • From the group of 8 learners, take 3 learners away in a smaller group. How many learners remain in the large group? 8 take away 3→5 <p>Select two learners using a counting rhyme</p> <ul style="list-style-type: none"> • Place 4 twigs in the one learner's hands and 4 twigs in the other learner's hands. How many twigs altogether now? 4 and 4 →8 <p>Concrete use of 3 D objects</p> <p>Give each learner 8 twigs</p> <ul style="list-style-type: none"> • Tshidi has 6 twigs and her friend has 2 twigs. How many twigs do they have altogether? 6 and 2→8 • Monica has 8 twigs. She lost 2 twigs. How many twigs does Monica have left? 8 take away 2→6 <p>Semi-concrete use of 2D objects or pictures</p> <ul style="list-style-type: none"> • The teacher puts 2 pictures on the flannel board. She adds another 5 pictures. How many pictures are there now? 2 and 5→7 • Place 8 shapes on the flannel board. Take away 5. How many are left? 8 take away 5→3 	<p>Twigs</p> <p>Counting rhyme</p> <p>Twigs</p> <p>Rhyme: 1, 2, 3, 4, 5</p> <p><i>Once I caught a fish alive</i></p> <p><i>6, 7, 8, 9, 10</i></p> <p><i>Then I let it go again</i></p> <p>Twigs</p> <p>Flannel board with pictures/shapes</p>	1 day

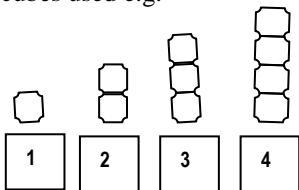

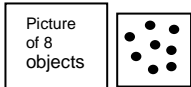
<p>Copy and extend a pattern</p>	<p>Copy and extend an auditory pattern</p> <p>Kinesthetic The learners move to the beat of the music with their whole body e.g.</p> <ul style="list-style-type: none"> • Step, step, hop, hop ... • Jump one leg, jump one leg, jump two legs, jump two legs ... 	<p>CD player</p>	<p>1 day</p>
	<p>Concrete use of 3D objects Integrate with Performing Arts (music) in Life Skills</p> <p>The learners move to the beat of the music with their hands and touching their thighs e.g.</p> <ul style="list-style-type: none"> • Clap, clap, tap, tap (clap hands and tap hands on thighs) • The teacher creates rhythm cards and learners repeat them by clapping the rhythm (using hands to clap and feet to stamp), e.g. <div> </div> <ul style="list-style-type: none"> • clap, clap, stamp, stamp ... • clap, shout, clap, shout ... 		
<p>Recognise, identify and describe 2D shapes in the classroom</p>	<p>Reinforce the knowledge of a rectangle</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> • Make/form shapes with their bodies e.g. 4 learners form a rectangle with their bodies • Form a rectangle using their fingers • Form a rectangle using 6 matchsticks <div> </div>	<p>Card games that develop the recognition of shapes</p> <p>Matchsticks</p>	<p>1 day</p>

	<ul style="list-style-type: none"> • Make/form a rectangle with pieces of wool or play-dough • Walk on the outline of a rectangular shape • Feel the shapes. Place different shapes in a “feely bag” The learner “feels” the shape in the bag and matches it with the cards • Draw the rectangle shape in the air, sand, on the floor/ground and eventually on paper 	<p>Wool or play-dough “Feely bag” with different geometric shapes</p>  <p>Include big and small shapes and triangles of different angles in the “feely bag” e.g.</p>  <p>Matching set of cards with shapes drawn on them A4 paper and crayon</p>	
	<p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Learners look for rectangular objects in the classroom. <p>Play a game: “Which one is missing?”</p> <ul style="list-style-type: none"> • Put a number of 2D shapes (not more than 5 shapes) on a piece of paper in the middle of the carpet e.g. the shapes from the “Logi-Shapes” game • Discuss each shape with the learners • Give the learners opportunity to memorise the type of shapes on the piece of paper • The learners close their eyes • The teacher removes one of the shapes • The learners open their eyes and identify which shape is missing • Repeat the process • Promote the development of geometric shapes by providing a variety of card games such as “What’s in a square?” or any other available games 	<p>Rectangular objects in the classroom</p> <p>Variety of shapes e.g. Logi-shapes</p>	
Describe one 3D objects in relation to another	<p>The position of two or more objects in relation to one another</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none"> • Stand between two objects or two learners • Stand next to the girl with the blue dress 	Chairs	1 day

	<ul style="list-style-type: none"> • Stand next to the boy with the brown sandals • Walk between the boxes • Crawl round the table • Crawl under the chair • Put the chair in front of you • Put the chair behind you • Stand on your chair • Sit on the floor • Put the chair on top of you • Put the chair next to you • Put the chair on your left side/right side 		
	<p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Learners complete puzzles with pictures of people or animals • Thread beads according to instructions of the teacher e.g. thread a red bead, put a green bead next to the red bead, etc. • Thread beads according to a given picture sequence <p>Work in small groups. The teacher gives each learner a pegboard and a handful of pegs Give the following instructions:</p> <ul style="list-style-type: none"> • Put two red pegs in the top left corner • Put one green peg to the right of the red peg • Put one blue peg below the green peg, etc. <p>Semi-concrete with 2D shapes or pictures</p> <ul style="list-style-type: none"> • Draw people or animals without arms or legs and ask the learners to complete the drawing 	<p>Puzzles</p> <p>Beads to thread</p> <p>Pegboards and pegs</p>  <p>Worksheets with drawings</p>	

Week 33	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Reinforce the knowledge gained in Weeks 31 and 32 involving the numbers 1 to 8</p> <p>Oral: Count everyday objects up to 8 Count forwards and backwards up to 8 Rote counting 1 – 10</p> <p>Reinforce counting in 2s using number rhymes</p> <p>Reinforce ordinal counting: Teachers packs 8 objects in a row. Point at each object while counting <i>first, second, third, fourth, fifth</i>, etc.</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 8 times Ask question which number of claps was most/least</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> The learners use their bodies to form number symbols The teacher makes numbers from different materials that learners can feel e.g. sandpaper/clay/string Repeat number rhymes/songs 	<p>Number songs and rhymes</p> <p>Large number symbols made of sandpaper</p>	1 day
	<p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> Use concrete objects such as blocks and plastic animals. Count them, sort them, place eight in a row, etc. <p>Divide learners into groups Place a heap of plastic farm animals in the middle of each group Learners:</p> <ul style="list-style-type: none"> Work in pairs within the groups and guess how many animals in the heap 	<p>Blocks and plastic animals</p> <p>9 plastic farm animals per group A few sets of number symbol cards</p>	

<p>Recognise and identify number symbols and number names involving numbers 1 to 8</p>	<ul style="list-style-type: none"> Each pair takes a number card to match their guess Count the actual number of animals The pairs may each receive a star on the forehead Repeat by placing a different number of animals in the middle of the carpet <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> Match the number symbols to the correct pictures. The learner should understand that a group of objects can contain the same number of objects <div>  </div> <ul style="list-style-type: none"> The learners should point to each object as they count Learners should be able to match each object to each other e.g. one heart to one sun Match the picture flash cards, the number symbol and the number name flash cards with the same number of counters 	<p>Reward stars</p> <p>Picture and number symbol flash cards</p> <p>Counters</p> <div>  </div> <p>A set of number cards with numbers 1 to 8</p>	
<p>Compare which of two given collections are:</p> <ul style="list-style-type: none"> more than less than (fewer) equal to (the same) 	<p>Order and compare collections of objects using <u>more than/less than</u> and <u>equal to</u> up to number 8</p> <p>Oral: Count everyday objects up to 8 Count forwards and backwards up to 8</p> <p>Reinforce counting in 2s using number rhymes</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 8 times</p>	<p>Number songs and rhymes</p>	<p>1 day</p>
	<p>Kinesthetic</p> <ul style="list-style-type: none"> The teacher places 8 blocks on a table. Without counting, the learners estimate (guess) the number of blocks The teacher asks: 	<p>Blocks</p>	

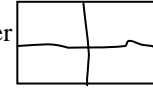
	<ul style="list-style-type: none"> • Are there more than 3 blocks? • The learners check their answer by counting the blocks • How close was your guess? <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Form a group of four learners. Give each group 8 counters and a page with two large circles drawn on it call the circles nests • On the teacher's instructions the learners put counters in each nest and say how many there are • The learners compare the nests and determine which nest has more than, less than, and the same or an equal number of counters <p>Divide learners into groups</p> <ul style="list-style-type: none"> • Give each group many unifix cubes and a set of number symbol cards involving numbers 1 to 8 • Let the groups build towers and label each tower with the numbers of cubes used e.g.  <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • The teacher shows two cards with a different number of dots and pictures on them. • Let the learners compare cards with pictures and dots on them to identify the more than, less than and equal to 	<p>Counters A4 page with two "nests" drawn on it</p>  <p>Unifix cubes Number symbol cards 1-8</p> <p>Dot and picture flash cards.</p> 	
<p>Solve orally stated addition and subtraction problems</p> <p>Number bonds</p>	<p>Solves orally stated addition and subtraction problems up to number 8</p> <p>Oral: Count everyday objects up to 8 Count forwards and backwards up to 8</p> <p>Reinforce counting in 2s using number rhymes</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u></p>	<p>Number songs and rhymes</p>	<p>1 day</p>

	<p>Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 8 times Ask question which number of claps was most/least</p>											
<p>Addition</p> <p>Subtraction</p>	<p>Kinesthetic</p> <ul style="list-style-type: none">Teacher calls 3 learners to the front. Other learners count them. Teacher calls another 2 and asks: How many learners altogether? 3 and 2 → 5. (The teacher says: 3 and 2 makes 5)Teacher packs out 2 chairs. Add 2 more. How many chairs are there now? 2 and 2 → 4Teacher holds up one hand and says: Count my fingers. If I hide my thumb, how many fingers can you see? 5 take away 1 → 4.Let the learners count the fingers on one of their hands. Hide thumb; how many fingers do you see? 5 take away 1 → 4. <p>Concrete use of 3D objects Learners pack out 6 counters:</p> <ul style="list-style-type: none">The teacher gives instructions and learners respond e.g., pack out 2 counters, add another 3. How many altogether? 2 and 3 → 5Count 4 counters. Count 2 on from four. How many do you have now? 4 and 2 → 6Count all the beads you have. If you cover two beads with your hand, how many beads do you see? 6 take away 2 → 4 <p>Semi-concrete use of 2D shapes or pictures Make number puzzles and allow the learners to explore with the puzzles.</p> <div><table><tr><td>6</td><td>></td><td>3</td><td>9</td><td></td></tr></table><table><tr><td>7</td><td>\</td><td>2</td><td>9</td><td></td></tr></table></div>	6	>	3	9		7	\	2	9		<p>Objects and /or counters</p> <p>Number puzzles</p>
6	>	3	9									
7	\	2	9									


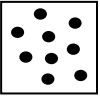
Semi-concrete use of 2D shapes or pictures

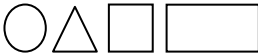
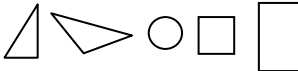

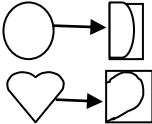
- Each learner receives a sheet of paper and a crayon
- Learners draw a line in the middle of the paper from the top to the bottom and another line in the middle from left to right
- Teacher give instructions:
 - Put your finger in the middle of the cross
 - Draw a circle in the top left block
 - Draw a triangle in the right bottom block
 - Draw a square in the right top block
 - Draw a rectangle in the left bottom block
- Discuss a picture poster. Learners respond to questions that enables them to explain (without showing) the position of items in the picture

Sheet of paper

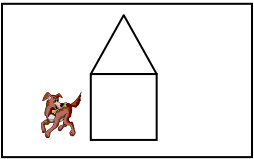



Week 34	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)										
Topic	Clarification Notes	Recommended Resources	Approximate Duration								
Identify and describe whole numbers	<p>Introduce the meaning of the number 9</p> <p>Oral: Count everyday objects up to 9 Count forwards and backwards up to 9 Reinforce counting in 2s using number rhymes</p> <p>Reinforce ordinal counting: Teachers packs 6 objects in a row. Point at each object while counting <i>first, second, third, fourth, fifth, sixth</i></p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 9 times Ask question which number of claps was most/least</p> <p>Kinesthetic Learners:</p> <ul style="list-style-type: none">• Count up to 9 while climbing the steps• Draw number 9 in the sand/floor/ground and walk on it• Clap hands 9 times• Recognise numbers 1 to 9 with the set of large number symbols• Make use of own ideas to let learners experience the meaning of number 9 with their bodies	<p>Number songs and rhymes</p> <p>Set of large number symbols</p>	2 days								
	<p>Concrete use of 3D objects The teacher creates a number line or ladder on the floor or ground and gives instructions such as:</p> <ul style="list-style-type: none">• Always stand on the zero or start at the zero• Always count while moving• Move to number 5; move back to number 2; move forward to number 8• Move to number 8; move 1 number forward; move 2	<p>Number ladder</p> <table border="1"><tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr></table>		0	1	2	3	4	5	6	7
0	1	2	3	4	5	6	7	8	9		

	<p>numbers backward</p> <ul style="list-style-type: none"> • What comes after 3? • What comes before 7? • Develop an awareness of number conservation by letting learners pack nine counters or any objects in different ways, e.g.  <p>When counting, the number of objects is not affected by their size, or position, or whether they are of the same type.</p> <ul style="list-style-type: none"> • Arrange 9 buttons, 9 pencils, 9 hoops, 9 learners, etc. • Count them in a different order e.g. count them spread out, close together, in a line or stacked up. <p>Semi-concrete use of 2D shapes or pictures Use the number 9 in familiar context. Learners:</p> <ul style="list-style-type: none"> • Match the picture flash card with the same number of dots, pack the same number of counters. 		
Recognise number symbols and number names	<p>Recognise number symbols and number names</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • Put 5 objects in a row • Learners have a good look at them. • Learners look away and the teacher removes one object • The learners have to say which object has been removed • Replace the object and repeat several times and progress to removing 2 and more objects <p>Learners:</p> <ul style="list-style-type: none"> • Select the number 9 symbol and number name amongst other flash cards • Place the number symbol flash cards on the floor in the correct number order • Place the number symbol flash cards in a scattered order 	<p>5 objects (visual memory)</p> <p>Counters</p> <div> <div>Picture of 9 Objects</div>  </div>	

<p>Recognise, identify and name 2D shapes in the classroom and in pictures and sort them</p>	<p>Reinforce the knowledge about the circle, triangle, square and rectangle</p> <p>Kinesthetic Learners form pairs</p> <ul style="list-style-type: none"> • Draw a shape on the friend's back with his/her finger • The other learner must identify the shape <p>Concrete use of 3D objects Provide geometric shapes of different sizes and thickness. Learners:</p> <ul style="list-style-type: none"> • Sort geometric shapes according to circles, triangles, squares and rectangles • Sort geometric shapes according to size • Sort geometric shapes according to colour <p>Semi-concrete use of 2D shapes or pictures Learners:</p> <ul style="list-style-type: none"> • Cut out shapes from a sheet of paper. Include big and small shapes and triangles of different angles. • Sort the different shapes in groups • Plan a picture with the cut-out shapes and use them during art activity 	<p>A variety of shapes</p> <p>A sheet of paper with circles, triangles and squares and rectangles on it</p>  <p>Include big and small shapes and triangles of different angles</p> 	<p>1 day</p>
<p>Recognise the line of symmetry in self and own environment</p>	<p>Develop the awareness that there is symmetry in objects</p> <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Look for real objects that will illustrate symmetry (the one side looks the same as the other side) e.g. butterfly, flower, leaf, etc. • The teacher and learners collect pictures of designs that are symmetrical e.g. the designs painted on houses, tiles, vases, parachutes, etc. 		<p>1 day</p>
	<p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • The learners cut out the shape of a heart or vase from a paper folded in half and decorate it during Visual Art time 	 <p>A piece of paper folded in half</p>	

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<p>Describe two objects in relation to one another</p>	<p>The position of two objects in relation to one another</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • A learner asks a friend to stand between two objects/learners • A learner asks a friend to stand next to the girl with the blue dress. • A learner asks a friend to stand next to the boy with the brown sandals. 		<p>1 day</p>
	<p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Hang a line between two poles. • Learners hang actual clothes according to a specific command • Hang the shirt on the left side of the clothes line • Hang the dress on the right side of the shirt • Hang the handkerchief next to ... etc. • Hang the pants between the ... etc. <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • Draw a picture of a house according to instructions e.g. <ul style="list-style-type: none"> ▪ Draw the roof at the top of the page ▪ Draw the walls of the house in the middle of the page, etc. ▪ Draw a dog on the left hand side of the house <p>The sheet of paper should not be too large to ensure that the different shapes touch one another to form a picture of a house</p> 	 <p>Pegs Clothes</p> <p>Sheet of paper Crayons</p>	
<p>Recognise, identify and name 2D shapes in the classroom and in pictures:</p> <ul style="list-style-type: none"> • shape conservation 	<p>Reinforce the knowledge gained about the rectangle</p> <p>Shape conservation is the ability to distinguish between shapes in our environment, regardless of their size or angle sizes</p> <p>Concrete use of 3D objects</p>	<p>9 rectangular shaped building blocks of different sizes per group</p>	<p>1 day</p> <p>Select only some of the activities</p>

Divide learners into groups.

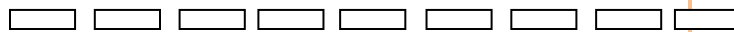
- Give each group 9 rectangular shaped building blocks of different sizes.

Learners:

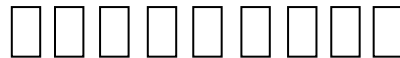
- Sort the different rectangular-shaped building blocks into groups of the same sized blocks
- Count the number of building blocks

The teacher gives the following instructions:

- Place the rectangular-shaped building blocks in a straight line.



- Place the rectangular-shaped building blocks in an upright position:



- Place the rectangular-shaped building blocks in a zigzag line:



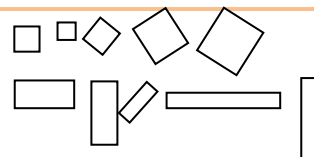
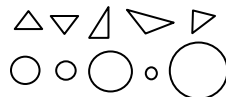
- The teacher gives each learner a length of wool. The learners form a rectangular shape with the wool:



The teacher points out that each learner's rectangle is not identical but the shape is still a rectangle.

Semi-concrete use of 2D shapes or pictures

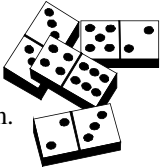
- The teacher draws 20 different flash cards, each with one of five different triangles, circles, squares and rectangles e.g.



Lengths of wool

20 different flash cards, each with one of five different triangles, circles, squares and rectangles on it.

	<p>The teacher divides the learners into groups. Learners:</p> <ul style="list-style-type: none"> Select the rectangle flash cards from among the other shapes. Select all the pictures with flowers among pictures of trees and leaves, etc. 	Flash cards	
		Pictures of trees, flowers, leaves	

Week 36	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Reinforce the knowledge gained involving numbers 1 to 9</p> <p>Oral: Count everyday objects up to 9 Count forwards and backwards up to 9 Reinforce counting in two's using number rhymes</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 9 times</p> <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> Place objects into groups that involve numbers 1 to 9 and count the objects aloud <ul style="list-style-type: none"> Play number dominoes <p>Semi-concrete use of 2D shapes or pictures</p> <p>Give each learner a picture, dot, number symbol or number name card. Learners respond to teachers instructions:</p> <ul style="list-style-type: none"> Learners sit in a circle The teacher calls a number e.g. 9. The learners with the picture, dot, number symbols and number name cards 	<p>Number songs and rhymes</p> <p>Objects in the classroom. Number dominoes</p>  <p>Enough sets of number cards that involve numbers 1 to 9 for each learner in your class to receive a flash card</p>	1 day

	<p>representing 9, walks around the circle, saying “I have a nine”</p> <ul style="list-style-type: none"> • Repeat with the other numbers • When everyone has had a turn to be a number, call the numbers in order • The learners stand up and hold their cards in the air if their number is called • Challenge learners to arrange themselves in order from 1 to 9 • Challenge learners to arrange all the cards representing the number 1, 2, and 3 up to number 9 		
<p>Compare which of two given collections are:</p> <ul style="list-style-type: none"> • more than • less than (fewer) • equal to (the same) 	<p>Compare which of two given collections are:</p> <ul style="list-style-type: none"> • more than • less than (fewer) • equal to (the same) <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • The teacher provides a variety of objects <p>Learners:</p> <ul style="list-style-type: none"> • Sort objects into groups e.g. all the stones together in a group • Count the number of objects in each group • Indicate which group is more than, less than and equal to. <p>Sets that involve numbers up to 9:</p> <ul style="list-style-type: none"> • Learners sit on the carpet and make two “nests” with the wool • Teacher gives instruction to the learners to place 2 counters in one nest and 4 in the other nest • Ask questions such as: Which nest has more than, less than and the same number of counters?” e.g. the “nest” with 2 counters is less than the “nest” with 4 counters 	<p>Leaves, stones, bottle caps, cayons, sticks, blocks, etc.</p> <p>Two lengths of wool for each learner 9 counters for each learner</p>	<p>1 day</p>



	<ul style="list-style-type: none"> Let the learners form <u>more than</u>, <u>less than</u> and <u>equal/same</u> sets with numbers up to 9 		
<p>Solve orally stated addition and subtraction problems</p> <p>Number bonds</p>	<p>Solve orally stated addition and subtraction problems involving the numbers 1 to 9</p> <p>Oral: Count everyday objects up to 9 Count forwards and backwards up to 9</p> <p>Reinforce counting in 2s using number rhymes</p> <p>Reinforce ordinal counting: Teacher packs 6 objects in a row. Point at each object while counting <i>first, second, third, fourth, fifth, sixth</i></p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 9 times Ask question which number of claps was most/least</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> The teacher calls 1 learner to the front The teacher puts a different number of beads (up to 9) in each of the learner's hands e.g. 4 in the one hand and 5 in the other <p>The teacher arranges the learners in groups of nine</p> <ul style="list-style-type: none"> The learners sit on the floor The teacher asks 2 learners to stand up The teacher asks: "How many learners are sitting on the floor?" <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> The learners sit on the carpet Each learner receives 8 beads placed in a cup with a saucer Take 6 beads from the cup and put them into the saucer; take another 3 beads and add to the beads in the saucer. How many beads are in the saucer? 6 and 3→9 Take 4 beads from the plastic cup and put them into the 	<p>Number song and rhymes</p> <p>Beads or counters</p> <p>Improvise if you don't have cups and saucers</p>	1 day

	<p>saucer. Take another 4 beads and add to the beads in the saucer. How many beads are in the cup? 8 take away 4 take away 4 \rightarrow 0</p> <ul style="list-style-type: none"> • Move 4 beads from the saucer to the cup. How many are left in the saucer? 8 take away 4 \rightarrow 4 • Move 5 beads from the saucer to the cup. How many are left in the saucer? 8 take away 5 \rightarrow 3 <p>Semi-concrete use of 2D shapes or pictures Divide learners into groups. Give each group a set of picture flash cards</p> <ul style="list-style-type: none"> • Count the 6 pictures on the flash card. If you add a flash card with 2 pictures to the first flash card., How many pictures will you have now? 6 and 2 \rightarrow 8 • Count the 8 objects on the picture card. If you cover 3 of the pictures, how many can you see? 8 take away 3 \rightarrow 5 • Pack the same number of counters 	A few sets of picture flash cards	
Copy a pattern	<p>Copy a sound pattern</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • The teacher divides the learners into three groups. Whisper and demonstrate to each group which vehicle's sound they will represent • Each group makes their sound allocated to them as the teacher points to them e.g .woosh, brrm, zonk/woosh, brrm, zonk 	Pictures of three different vehicles or machines	1 day
Collect and sort objects in the environment according to stated features	<p>Reinforce the concept of data handling</p> <p>Concrete use of 3D objects</p> <p>Classify and group the choice of the colour of the play-dough to be used during the following week.</p> <ul style="list-style-type: none"> • The problem to be solved is to determine which colour the play dough should be for the following week <p>Collect data and sort</p> <ul style="list-style-type: none"> • Make use of real objects to make a graph such as blocks, stacking cubes, Lego or Duplo blocks representing the colours of dough you plan to make e.g. blue, yellow, and 	Blue, yellow and green Lego, Duplo or unifix blocks (only one kind to be used)	1 day

Draw a graph

Read and interpret graph

- green
- Each child selects one block representing the colour of his/her choice of play dough for the week

Draw a graph

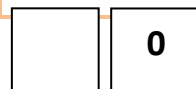
- The blocks are stacked according to colours on a poster

Read and interpret graph

- According to the choice of the learners, the colour of the play dough for the week will be yellow.

Blue	Yellow	Green
	<input type="checkbox"/>	
	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	4	2

Week 37	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Introduce the meaning of the number 0 (zero)</p> <p>Oral: Count everyday objects up to 10 starting at zero Count forwards and backwards up to 10 starting at zero</p> <p>Reinforce counting in 2s using number rhymes</p> <p>Reinforce ordinal counting: Teacher packs 6 objects in a row. Point at each object while counting <i>first, second, third, fourth, fifth, sixth</i></p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 10 times Ask question which number of claps was most/least</p> <p>The teacher points out that zero means <u>nothing</u> and that counting actually starts at 1.</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> The teacher shows the learners the number name zero. Let the learners identify which body part can form a zero e.g. <ul style="list-style-type: none"> The learner's mouth The learner's fingers <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> The teacher puts one counter in her one hand and no counters in her other hand She opens her one hand and shows the learners the one counter, then she opens her other hand and shows the learners there is nothing This activity can be conducted using the learners as well <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> The teacher shows the learners the flash cards with no pictures and the number symbol 0 	<p>Number songs and rhymes</p> <p>Counters</p>	1 day



Introduce the meaning of the number 10

Oral:

Count everyday objects up to 10
Count forwards and backwards up to 10
Rote counting 0 – 10

Reinforce counting in 2s using number rhymes

Reinforce ordinal counting:

Teacher packs 6 objects in a row. Point at each object while counting *first, second, third, fourth, fifth, sixth*.....

Reinforce the concepts of many and few

Clap hands many times ... Stop
Clap hands fewer times. Teacher claps up to 10 times
Ask question which number of claps was most/least

Kinesthetic

Learners:

- In pairs form the number 10 with their bodies (4 learners)
- Count up to 10 while moving to the beat of a drum
- Hold up 10 fingers
- Draw the number 10 in the sand/floor/ground and walk on it
- Jump 10 times
- Place cut-out cardboard numbers in a "feely bag"
- Have a set of flash cards with pictures representing the number e.g. two balls on a card with number 2. The learner "feels" the numbers in the bag and matches them with the cards

Concrete use of 3D objects

Learners:

- Pack out the learners' telephone numbers using the large number symbol cards. Make them aware of the zero which will form part of the number 10
- Develop an awareness of number conservation by letting learners pack ten counters or any objects in different

Number songs and rhymes

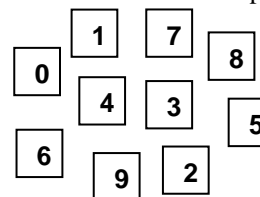
1 day

Select only a few activities

Cut-out cardboard numbers

Large number symbol flash cards

Cards with learners' telephone numbers



**Recognise and identify
number symbols and
number names**

ways, e.g.



When counting, the number of objects is not affected by their size, or position, or whether they are of the same type

- Arrange 10 buttons, 10 pencils, 10 hoops, 10 learners, etc.
- Count them in a different order e.g. count them spread out, close together, in a line or stacked up

Semi-concrete use of 2D shapes or pictures

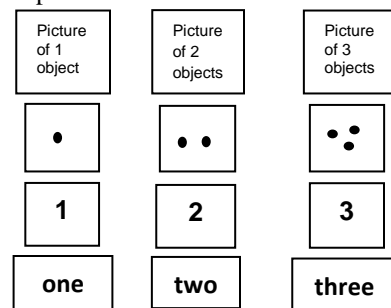
Learners :

- Place objects into groups involving numbers 1 to 10 and count the objects aloud

The teacher divides the learners into 5 groups

Learners:

- Order and link the picture cards, the dot flash cards, the number symbols and the number names in the correct sequence up to the number 10.







etc.

- Pack the number of counters on each dot card

Objects in the classroom

A set of picture cards up to the number 10

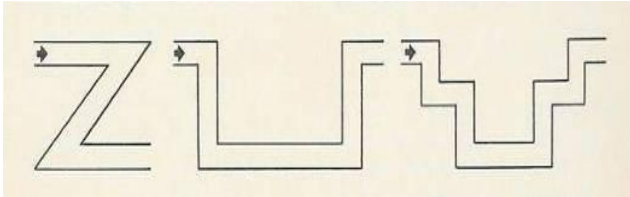
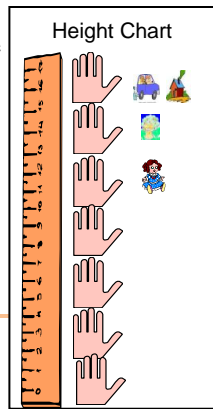
Counters

or to place self within a specific space	<p>including left and right</p> <p>Kinesthetic Learners follow instruction of the teacher:</p> <ul style="list-style-type: none"> • Look up /look down/look upwards • Bend down/bend downwards • Lift left leg/lift right leg • Crawl around the table • Walk forward/walk backward • Put your hand in/out • Stand on the right/left side of the chair/ • Stand between two chairs • Look to the right/look to the left • Turn on your left foot • Turn on your right foot • Stand in front of/behind your chair 	.	
	<p>Concrete use of 3D objects Learners do the following on the chalkboard:</p> <ul style="list-style-type: none"> • Draw circles and continue going around and around  <ul style="list-style-type: none"> • Draw straight lines from left to right  <ul style="list-style-type: none"> • Draw lines up and down.  <ul style="list-style-type: none"> • The teacher draws two dots and the learners draw a line to join them. 	Chalkboard	
Collect and sort objects according to stated features	<p>Reinforce the concept of data handling</p> <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • The teacher discusses and finds out how each learner comes to school. • The teacher compiles a pictograph representing the learners walking, coming by taxi, by a parent's car or 		1 day

<p>Recognise and identify number symbols and number names</p>	<p>Clap hands fewer times. Teacher claps up to 10 times Ask question which number of claps was most/least</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> The teacher draws 11 (0 to 10) circles on the playground or use hoops. Write numbers 0 to 10 inside each circle. The teacher calls a number and a learner throws his bean bag into the circle called out. Remind learners that 0 means nothing. If a learner throws a bean bag in the “zero circle” he/she will be out of the game. The learner throws his/her bean bag into the circle corresponding with the dot and/or picture card shown by the teacher. The learner throws his/her bean bag into the circle shown on the number symbol card shown by the teacher. Proceed by using the number name cards the same way. <p>Semi-concrete use of 2D shapes or pictures Play a game:</p> <ul style="list-style-type: none"> The teacher writes the number name on one side of a card and writes the number symbol on the other side of the card 0 to 10 (use a few sets) Learners “read” the number name and guess the number symbol They turn the card over and correct themselves 	<p>10 beanbags Drawn circles in the sand/ground or on the floor or use hoops</p> <p>A set of number cards that involve number 0 – 10</p> <p>Cards involving numbers 1 – 10 with the number name on one side and the number symbol on the other side (make a few sets so that each learner has his/her own card)</p>	
<p>Identify and describe whole numbers</p> <ul style="list-style-type: none"> Ordinal numbers 	<p>Introduce ordinal numbers first, second, third, up to the sixth ... last</p> <p>This concept is best developed over time and through the use and labelling of natural situations as they occur in the classroom e.g. lining up to go outside Siya is first, Helen is second ...</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Learners run a race. Who came first, who came second, and who came last? 		<p>1 day</p>

	<p>Play a game – “Which one is it”?</p> <ul style="list-style-type: none"> • Ask five learners to sit in a row on five chairs. • The teacher says: I’m thinking of one of these learners. The learner is wearing a red jersey. • Starting with the learner sitting in front, she moves along the row, touches each learner and asks: Is it the first, the second, the third..... learner? <p>5 learners stand on the steps outside. The teacher places the correct number symbol card under each child on the steps. Show me which learner is standing on the:</p> <ul style="list-style-type: none"> • First step • Second step • Third step, etc. <p>The learner on the first step holds up the number symbol card only after the answer has come from his/her classmates. Proceed up to the number 6.</p>	<p>Five chairs A set of number symbol cards that involve the numbers 1 to 10</p> <p>Improvise if there are no steps</p>	
Orally solve word problems (story sums) and explain own solutions to problems	<p>Orally solve word problems (story sums) involving the number 10</p> <p>Oral: Count everyday objects up to 10 Count forwards and backwards up to 10</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 10 times Ask question which number of claps was most/least</p> <ul style="list-style-type: none"> • There are 5 girls in the room when 5 more girls enter. How many are there now? 5 and 5 → 10 • Count 7 counters. Count two on. Count one on. How many altogether? 7 and 2 and 1 → 10 • There were 10 counters on the table. There are only 4 left. How many have been removed? 10 take away 6 → 4 You have 10 marbles. Take away 3. How many do you have left? 10 take away 3→7 • You made 10 cakes. You sold 2 cakes. How many do you 	<p>Counters</p>	1 day

	<p>have left?</p> <ul style="list-style-type: none"> There were 10 counters on the table. There are only six counters left. How many are gone? 		
<p>Follow directions (individually and/or as a member of a group/team) to move or place self within the classroom</p>	<p>Follow directions to move or place self within the classroom</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> The teacher asks the learners to stand at the back of the classroom (the door opening indicates the front of the class) The teacher asks the learners to stand at the one or/other side of the classroom The teacher asks the learner to stand in the front of the classroom <p>Concrete use of 3D objects</p> <p>Sound has meaning Learners listen to:</p> <ul style="list-style-type: none"> A bell A whistle A musical instrument Bang two blocks against each other <p>The learners close their eyes and identify the sound of the bell, or the whistle or the musical instrument.</p> <ul style="list-style-type: none"> The learners close their eyes and identify where the sound comes from. They can first throw a bean bag in the direction of the noise and later communicate where the noise is e.g. in the front of the classroom, close to the book corner, etc. The teacher instructs 4 learners to stand against the side walls of the classroom, each with a different instrument (bell, whistle, musical instrument and two blocks) The teacher indicates with her hand to individual learners to make a noise with their instrument e.g. only the bell or only the whistleThe rest of the class indicates where the sounds come from by pointing in the direction of the sound To reinforce the left and right concept, send the two 	<p>A bell A whistle Any musical instrument Two wooden blocks</p>	<p>1 day</p>

	<p>learners standing in the front and at the back of the classroom back to the rest of the group</p> <p>The rest of the class indicates where the sounds come from by pointing in the direction of the sound</p> <ul style="list-style-type: none"> To reinforce the left and right concept, send the two learners standing in the front and at the back of the classroom back to the rest of the group Repeat the same activity focusing on sounds coming from the left and the right side of the classroom The learners say “left” when the sound comes from the left hand side and “right “when the sound comes from the right hand side <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> The learners use a block, e.g. move the block in relation to the chair <ul style="list-style-type: none"> Move backward/forward Stand on the right/left side of the chairStand between two chairs Sort shoes in left and right shoes <p>Semi-concrete use of 2D shapes or pictures</p> <p>Learners complete a worksheet using a crayon to draw a line between lines e.g.</p> 	<p>Block</p> <p>Shoes</p> <p>Worksheet and crayons</p>
<p>Concretely compare and order objects using appropriate vocabulary to describe length</p>	<p>Measure the height of the learners with a tape measure</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> Refer to the first and third terms when the learner’s heights were measured using hands on the height chart. Measure the height of the learners again. The teacher puts a tape measure next to the pictures of hands on the height chart. Learners’ heights are measured once again. 	<p>A height chart</p> <p>A tape measure</p> 

	<ul style="list-style-type: none"> • Make learners aware that we use a standard measuring tool and this is what mommy uses when making dresses. • Now they are not 10 hands tall but one meter 10 cm tall. • Learners can compare their height. Who is the tallest/shortest in the class? <p>Concrete use of 3D shapes</p> <ul style="list-style-type: none"> • A learner lies on the floor, and the others place building blocks (same size) in a line alongside the learner's body • Teacher gives an instruction to build something that is longer/shorter than your friend. 		
Week 39	Suggested contact time : One teacher-guided planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)		
Topic	Clarification Notes	Recommended Resources	Approximate Duration
Identify and describe whole numbers	<p>Reinforce the meaning of number 10</p> <p>Oral: Count everyday objects up to 10 Count forwards and backwards up to 10 Rote counting 0 – 10</p> <p>Reinforce ordinal counting: Teacher packs 6 objects in a row. Point at each object while counting <i>first, second, third, fourth, fifth, sixth ...</i></p> <p>Reinforce the concepts of <u>many</u> and <u>few</u></p>	Number songs and rhymes	1 day

Clap hands many times ... stop.
 Clap hands fewer times. Teacher claps up to 10 times
 Ask question which number of claps was most/least

Kinesthetic

Learners:

- Say a number rhyme using ten fingers
- Count the number of times the teacher taps on the table and copy her
- Clap hands ten times
- Count in time to a regular beat while learners walk down steps, hop in and out of hoops
- Stamp feet in time to a regular beat
- Ten learners each with bean bag, stand in a circle around a basket. Learners throw their beanbags into the basket and continue up to the number 10. Learners count aloud while throwing. Repeat the activity until all the learners have each had a turn

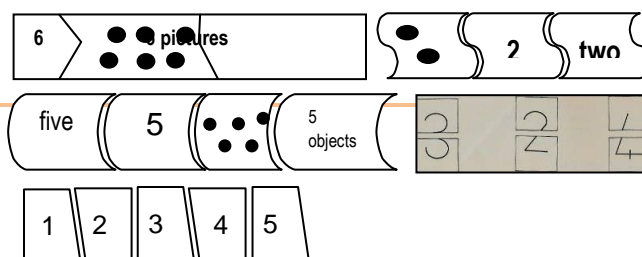
Bean bags and a basket

Symbols and number name
10

Semi-concrete use of 2D shapes or pictures

Divide learners into smaller groups.


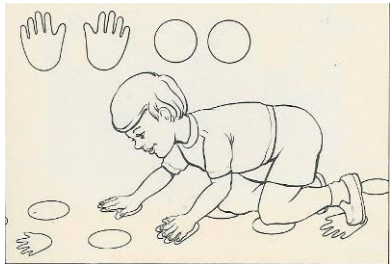
- The teacher provides learners with number puzzles
- The learners discover and investigate all the possibilities
- Learners can throw a dice to determine which number puzzle to build




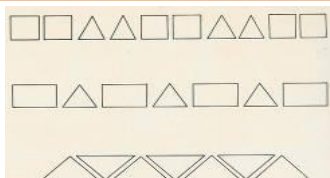
Make number puzzles involving the numbers 1 to 10

<p>Solve orally stated addition and subtraction problems</p> <p>Addition</p> <p>Subtraction</p>	<p>Reinforcing addition and subtraction with answers up to 10</p> <p>Oral: Count everyday objects up to 10 Count forwards and backwards up to 10</p> <p>Reinforce counting in 2s using number rhymes</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 10 times Ask question which number of claps was most/least</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> The teacher calls 5 learners to the front and keeps on adding one more learner up to the number 10. The learners count aloud. 5 and 1→6 (five and one makes six) 6 and 1→7 7 and 1→8 8 and 1 →9 9 and 1→10. The teacher sends the learners back to their seats and the learners count backwards 10 take away 1→9 9 take away 1→8 10 take away 2→8 	<p>Number songs and rhymes</p>	<p>1 day</p>
	<p>Concrete use of 3D objects The learners sit on the carpet. Each learner has 10 counters and a plastic lid. Learners follow instructions:</p> <ul style="list-style-type: none"> Pack 4 counters on the lid. Add 4 more. How many do 	<p>10 counters for each learner</p> <p>Plastic lids e.g. lid of ice-cream containers</p>	

<p>Addition</p> <p>Subtraction</p>	<p>you have altogether? 6 and 4 → 10</p> <ul style="list-style-type: none"> • Pack 10 counters. Take away 5. How many are left? <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • Count the 8 objects on the picture card. If you add the picture card with 2 objects, how many will you have now? <ul style="list-style-type: none"> ▪ 8 and 2 → 10. Pack the same number of counters • Count the 10 objects on the pictures card. If you cover 3 of the objects, how many can you see? 10 take away 3 → 7. Pack the same number of counters 	<p>Picture flash cards that involve the numbers 1 to 10</p> <p>Counters</p>	
<p>Compare which of two given collections are:</p> <ul style="list-style-type: none"> • more than • less than (fewer) • equal to (the same) 	<p>Compare which of two given collections are:</p> <ul style="list-style-type: none"> • more than • less than (fewer) • equal to (the same) <p>Oral: Count everyday objects up to 10 Count forwards and backwards up to 10,</p> <p>Reinforce counting in 2s using number rhymes</p> <p>Reinforce the concepts of <u>many</u> and <u>few</u> Clap hands many times ... stop. Clap hands fewer times. Teacher claps up to 10 times Ask question which number of claps was most/least</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> • The teacher places 6 learners together in a hoop and 4 learners in another hoop • The teacher asks if there are more learners, less learners or the same number of learners in each hoop • The learners identify which hoop has <u>more than</u>, <u>less than</u>, and <u>same</u> number of learners <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Place groups of 10, 6 and 4 counters on a table 	<p>Number songs and rhymes</p> <p>2 hoops</p> <p>Counters/blocks</p>	<p>1 day</p>

	<ul style="list-style-type: none"> Without counting, guess the number of counters/blocks on the table Teacher asks: if there are more than 7 counters. Is it about the same, just more than, just less than, just fewer than, enough, not enough? Teacher says: Check your answer by counting the counters. How close was your guess? <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> The teacher shows two cards with different numbers of dots and pictures on them Learners compare cards with pictures and dots on them and identify the more than, less than and equal to/same concepts 	Two cards with different numbers of dots and pictures on them	
Describe two or more 3D objects in relation to one another	<p>Reinforce left and right</p> <p>Kinesthetic</p> <ul style="list-style-type: none"> The teacher places left and right footprints all around the classroom  <ul style="list-style-type: none"> The learners crawl with the same arm and the same knee moving simultaneously Walk on the prints on their way to the washbasin  <p>The teacher ties a length of red wool around each learner's right wrist. The teacher gives instructions.</p> <ul style="list-style-type: none"> Lift your left leg Put your right foot on the chair 	Paper hand/footprints marked left and right	1 day
		Red wool	

	<ul style="list-style-type: none"> • Touch your left knee with your right elbow • Pull your left ear with your right hand • Put your right hand on your left shoulder and your left hand on your right shoulder at the same time • Hug yourself (crossing the midline) 		
	<p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • The teacher puts 7 tins on the table. • Learners indicate which number is on the left of number 3, which number is on the right of number 6, which number is between 3 and 6 • Which number is first and which number is last  <ul style="list-style-type: none"> • The teacher places 3 dolls/cars with clearly distinguishable clothing or colours on the table • She asks questions such as: <ul style="list-style-type: none"> ▪ Which doll/car one is on the left? ▪ Which doll /car is on the right? ▪ Which doll/car is in middle? ▪ Which doll/car is first/last? <p>Semi-concrete use of 2D shapes or pictures</p> <ul style="list-style-type: none"> • During Visual Arts the learners make paint prints using their left and right hands • Cut out and paste on a sheet indicating the left and right foot 	<p>Numbered tins</p> <p>Three dolls or cars.</p>	
Create own pattern	<p>Create own pattern</p> <p>Concrete use of 3D objects</p> <ul style="list-style-type: none"> • Learners initially copy patterns from given patterns • Learners create and describe their own pattern 	Shapes and pattern cards	1 day



	<p>Pegboard work: Each learner uses first his right and then his left hand, then both hands to place the pegs on the pegboard</p> <ul style="list-style-type: none"> • The teacher tells the learners where to place the pegs e.g. <ul style="list-style-type: none"> ▪ In the <i>top</i> row ▪ In the <i>bottom</i> row ▪ On the <i>left</i> side ▪ On the <i>right</i> side ▪ In the <i>middle</i> <p>Learners:</p> <ul style="list-style-type: none"> • Make shapes on the pegboard with the coloured pegs • The teacher composes a simple pattern with the pegs on her pegboard and learners copy her pattern on their own pegboards 	<p>Pegboards and pegs. Patterns for learners to copy</p>	

Week 40 Use Week 40 to attend to conceptual weaknesses and/or identified barriers to learning.		
Content Area	Topic	Assessment Criteria
Number and Number Operations	Counting	Estimate and rote count up to 10 (number songs and rhymes included to develop number concept)
		Count backwards and forwards (0 – 10)
		Count in 2s (Number songs and rhymes)
		Understand the concepts of <u>many</u> and <u>few</u> (clapping)
		Understand which number of claps are more/less, most/least
	Number recognition	Recognise and identify numbers in familiar context e.g. age, register
	Identify and describe whole numbers	Identify number pictures and dot cards from 0 – 10
		Know the number symbols 8, 9, 10 and 0
		Recognise the number names eight, nine and ten and zero
		Complete simple number sequences from the numbers 1 – 10
	Number sense	Distinguish between <u>more</u> , <u>less</u> , <u>equal</u> , <u>most</u> and <u>least</u> up to the number 10
		Understand ordinal numbers – first, second, third, forth, fifth and sixth
	Solving problems	Use concrete apparatus
		Explain own thinking in words and through drawings or concrete objects
		Orally solve addition and subtraction problems involving numbers up to the number 10
Patterns and Functions	Copy, extend and create owns patterns	Copy, extend and create own auditory patterns
		Understand the game “hop scotch”
Space and Shape	Recognise, identify and name 2D shapes	Able to build at least a 24 piece puzzle
	Geometric shapes	Recognise and identify the circle, triangle, square and rectangle
	Recognise line of symmetry	Recognise the line of symmetry In objects
	Spatial relations	Know the concepts <u>next to</u> , <u>between</u> and <u>middle</u> , <u>left</u> and <u>right</u>
		Do more advanced pegboard work
	Directionality	Understand the concepts: <u>forwards</u> and <u>backwards</u> , <u>up</u> and <u>down</u> , <u>upwards</u> and <u>downwards</u> , <u>left</u> and <u>right</u>
Measurement	Length	Understand that objects are also measured by using a tape measure
Data Handling	Collect, sort, draw, read and represent data	Collect, sort, draw, read and represent (analyse) objects according to one attribute

SECTION 4

CURRICULUM AND ASSESSMENT POLICY STATEMENT (CAPS)

GRADE R ASSESSMENT GUIDELINES

4.1 INTRODUCTION

Assessment is a continuous planned process of identifying, gathering and interpreting information about the performance of learners, using various forms of assessment. It involves four steps:

- generating and collecting evidence of achievement;
- evaluating this evidence;
- recording the findings and
- using this information to understand and thereby assist the learner's development in order to improve the process of learning and teaching.

Assessment should be both informal (Assessment for Learning) and formal (Assessment of Learning). In both cases regular feedback should be provided to learners to enhance the learning experience.

In the Foundation Phase, the main techniques of **formal** and **informal** assessment are observation by the teacher, oral discussions, practical demonstrations and written recording. Grade R assessment should be mainly oral and practical.

4.2 INFORMAL OR DAILY ASSESSMENT

Assessment for learning is the process of continuously collecting information on a learner's achievement. This is also called informal assessment. It is a daily monitoring of learners' progress. This is done through observations, discussions, practical demonstrations, informal classroom interactions, etc. It should not be seen as separate from learning activities taking place in the classroom. Informal assessment enables the teacher to monitor a learner's progress and to make daily instructional decisions. Informal assessment is used:

- to provide feedback to the learners
- to inform planning for teaching.

4.3 RECORDING AND REPORTING

Recording is a process in which the teacher documents the level of a learner's performance in a specific assessment task. It indicates learner progress towards the achievement of the knowledge as prescribed in the Curriculum and Assessment Policy Statements. Records of learner performance should provide evidence of the learner's conceptual progression within a grade and her/his readiness to progress or to the next grade. Records of learner performance should also be used to verify the progress made by teachers and learners in the teaching and learning process.

Reporting is a process of communicating learner performance to learners, parents, schools, and other stakeholders. Learner performance can be reported in a number of ways, including report cards, parents' meetings, school visitation days, parent-teacher conferences, phone calls, letters, class or school newsletters, etc. Teachers in all grades report in percentages against the subject. The various achievement levels and their corresponding percentage bands are as shown in the table below.

CODES AND PERCENTAGES FOR RECORDING AND REPORTING

RATING CODE	DESCRIPTION OF COMPETENCE	PERCENTAGE
7	Outstanding achievement	80 – 100
6	Meritorious achievement	70 – 79
5	Substantial achievement	60 – 69
4	Adequate achievement	50 – 59
3	Moderate achievement	40 – 49
2	Elementary achievement	30 – 39
1	Not achieved	0 – 29

4.4 SCHEDULE OF SUGGESTED FORMAL ASSESSMENT CHECKLISTS

An exemplar assessment checklist is given for Grade R below. The aim is to assist teachers to plan and implement formal assessment in a continuous way.

GRADE R CHECKLIST

TERM 1

Content Area	Content	Criteria	√ or x	Comments
Numbers, Operations and Relationships	Counting	Estimate and rote count up to 5 (number songs & rhymes to develop number concept)		
	Number recognition	Recognise numbers in familiar context e.g. age, register		
		Understand ordinal numbers (e.g. during toilet routine)		
	Number sense	Understand one-to-one correspondence (helpers' chart during refreshment time)		
	Identify and describe whole numbers	Identify number pictures and dot cards involving number one		
		Know the number symbol 1		
		Recognise the number name one		
	Solving problems	Use concrete apparatus Explain own thinking in words and through drawings or concrete objects		
Patterns and Functions	Copy, extend and create own patterns	Identify patterns in the environment		
		Copy, extend and create own patterns		
Space and Shape	Recognise, identify and name 3D objects	Recognise, identify and name balls		
		Recognise, identify and name boxes		
	Recognise, identify and name 2D shapes/pictures	Recognise, identify and name his/her own symbol, his/her peers' symbol and the class name		
		Build at least a 6 piece puzzle		
		Show the ability to distinguish between objects in the <u>foreground</u> and <u>background</u>		
	Geometric shapes	Identify and recognise the circle		
		Identify and recognise the triangle		
		Identify and recognise the square		
	Describe, sort and compare 3D objects according to:	Compare which of two given collections of objects are bigger, smaller, biggest, smallest		
		Sort objects in: Size big and small,		
		Colour – primary colours (red, yellow, blue)		
		Shape – circle, triangle and square		
		Objects that roll		
		Objects that slide		
	Recognise line of symmetry in:	Recognise line of symmetry in self		
	Spatial Relations: The position of two or more objects in relation to the learner	Know <u>in front of/behind</u>		
		Know <u>on top of, on, under, below</u>		
		Know <u>in, out</u>		
		Know <u>up, down</u>		
	Directionality	Understand the concepts: <u>forwards</u> ,		

		<u>backwards, front and back</u>		
Measurement	Time	Use words like day, night, light and dark, morning, afternoon tonight to describe time of the day		
		Order recurring events in own daily life (daily programme)		
		Show an awareness of days of the week, seasons and weather		
		Know own birth date		
	Length	Distinguish between tall, taller, tallest, short, shorter, shortest (height chart)		
Data Handling	Collect, sort, draw, read and represent data	Collect, sort, draw, read and represent (analyse) objects according to one attribute		
FINAL RATING:				

GRADE R CHECKLIST

TERM 2

Content Area	Content	Criteria	√ or x	Comments
Numbers, Operations and Relationships	Counting	Estimate and rote count up to 7 (number songs and rhymes to develop number concepts)		
		Count backwards and forwards (1 – 4)		
		Understand the concepts <u>many</u> and <u>few</u> (clapping)		
	Number recognition	Recognise numbers in familiar context e.g. house number, address, register		
	Identify and describe whole numbers	Identify number pictures and dot cards		
		Know the number symbols 1, 2, 3 ,4		
		Recognise the number names two, three and four		
	Number sense	Understand one-to-one correspondence (helpers' chart during refreshment time)		
		Distinguish between <u>more</u> , <u>less</u> and <u>equal</u> , <u>many</u> and <u>few</u> up to 4		
		Recognise the different South African coins		
Patterns and Functions	Solving problems	Use concrete apparatus Explain own thinking in words and through drawings or concrete objects		
		Orally solve addition and subtraction problems up to number 4		
Patterns and Functions	Copy, extend and create own patterns	Copy, extend and create own patterns (objects, shapes and coins)		
Space and Shape	Recognise, identify and name 2D shapes	Build at least a 12 piece puzzle		
		Show the ability to distinguish between objects in the <u>foreground</u> and <u>background</u> (assess again)		
	Geometric shapes	Recognise, identify and name the triangle		
		Understand form constancy of triangle (shape conservation)		
	Describe , sort and compare 3D objects	Compare which of two given collections of objects are long, longer; short/shortest		
		Sort objects in Size – big and small		
		Colours (red, yellow, blue and green)		
		Shapes		
	Build 3D objects using concrete materials	Explore with building blocks		
	Recognise line of symmetry	Recognise line of symmetry in self and own environment		
		Cross the mid-line		
	Spatial relations	Understand the position of two or more objects in relation to the learner on, under		
Measurement	Time	Understand the days of the week, seasons and weather chart (songs and rhymes assess again)		

		Know own birthday (assess again)		
	Length	Distinguish between longest, shortest, longer, shorter (height chart)		
Data Handling	Collect, sort, draw, read and represent data	Collect, sort, draw, read and represent (analyse) objects according to one attribute		
FINAL RATING:				

GRADE R CHECKLIST

TERM 3

Content Area	Content	Criteria	✓ or x	Comments
Numbers, Operations and Relationships	Counting	Estimate and rote count up to 7 (number songs and rhymes to develop number concept)		
		Count backwards and forwards (1 – 7)		
		Know which number of claps are more/less		
	Number recognition	Recognise numbers in familiar context e.g. age, register (assess again)		
	Identify and describe whole numbers	Identify number pictures and dot cards up to number 7		
		Know the number symbols 5, 6, 7		
		Recognise the number names five, six, seven		
	Number sense	Distinguish between <u>more</u> , <u>less</u> and <u>equal</u> , <u>many</u> and <u>few</u> up to 7		
		Recognise the colour as well as the different animals on South African bank notes		
	Solving problems	Use concrete apparatus Explain own thinking in words and through drawings or concrete objects		
Orally solve addition and subtraction problems up to 7				
Patterns and Functions	Copy, extend and create owns patterns	Copy, extend and create own patterns using pictures		
Space and Shape	Recognise, identify and name 2D shapes/pictures	Build at least an 18 piece puzzle		
	Geometric shapes	Recognise, identify and name the square		
		Understand form constancy of shapes learnt up to date (shape conservation)		
	Build 3D objects using concrete materials	Build from a given construction example		
		Copy a construction from a design or picture card		
	Spatial relations	Know the position of two or more objects in relation to each other: In front of, behind, on top of, on, under, bottom, below, next to, middle, left and right		
		Execute instructions on pegboard		
Directionality	Know directions on the arrow chart			
Measurement	Length	Estimate and measures the length of different objects		
	Mass	Understand the concepts <u>light</u> , <u>heavy</u> ; <u>lighter</u> , <u>heavier</u> ; <u>lightest</u> , <u>heaviest</u>		
	Capacity	Understand the concepts <u>empty</u> , <u>full</u> , <u>more than</u> , <u>less than</u>		
Data	Collect, sort, draw,	Collect, sort, draw, read and represent		

Handling	read and represent data	(analyse) objects according to one attribute		
FINAL RATING:				

GRADE R CHECKLIST

TERM 4

Content Area	Content	Criteria	✓ or x	Comments
Number and Number Operations	Counting	Estimate and rote count up to 10 (number songs and rhymes to develop number concept)		
		Count backwards and forwards 0 – 10		
		Count in 2s (number songs and rhymes)		
		Understand the concepts of many and few (clapping)		
		Understand which number of claps are more/less, most/least		
	Number Recognition	Recognise and identify numbers in familiar context e.g. age, register		
	Identify and describe whole numbers	Identify number pictures and dot cards from 0 – 10		
		Know the number symbols 8, 9, 10 and 0		
		Recognise the number names eight, nine and ten and zero		
		Complete simple number sequences using numbers 1 to 10		
	Number sense	Distinguish between <u>more</u> , <u>less</u> , <u>equal</u> , <u>most</u> and <u>least</u> up to 10		
		Understand ordinal numbers – first, second, third, fourth, fifth and sixth		
	Solving problems	Use concrete apparatus Explain own thinking in words and through drawings or concrete objects		
		Orally solve addition and subtraction problems involving numbers 1 to 10		
Patterns and Functions	Copy, extend and create own patterns	Copy, extend and create own auditory patterns		
		Understand the game “hop scotch”		
Space and Shape	Recognise, identify and name 2D shapes	Build at least a 24 piece puzzle		
	Geometric shapes	Recognise and identify the circle, triangle, square and rectangle		
	Recognise line of symmetry	Recognise the line of symmetry In objects		
	Spatial relations	Know the concepts <u>next to</u> , <u>between</u> and <u>middle</u> , <u>left</u> and <u>right</u>		
		Do more advanced pegboard work		
	Directionality	Understand the concepts: <u>forwards</u> and <u>backwards</u> , <u>up</u> and <u>down</u> , <u>upwards</u> and <u>downwards</u> , <u>left</u> and <u>right</u>		
Measurement	Length	Understand that objects are also measured by using a tape measure		
Data	Collect, sort, draw,	Collect, sort, draw, read and represent		

Handling	read and represent data	(analyse) objects according to one attribute		
FINAL RATING:				