

LESSON PLAN: HALVING

Subject	Mathematics
Content Area	Numbers, operations and relationships
Topic	Problem Solving Techniques in and out of context
Concept	Doubling and Halving
Educator	Antoinette Boel
School	Lynnwood Ridge Primary
Grade	2

Dear Teacher

I hope that the following lesson description will help to improve your teaching strategy in your classroom. It was particularly designed with you the teacher in mind. The methods used are fun, easy and cost effective. I hope you will find it useful and apply the methodology with a positive and enthusiastic approach.

Before we can begin any lesson we must understand the following:

WHAT IS MATHEMATICS?

Mathematics is a language that makes use of symbols and notations for describing 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. (quoted from the CAPS document)

Every Mathematics lesson should be **hour 24 minutes per day for Grades 1 to 3.**

SPECIFIC SKILLS

To develop essential mathematical skills the learner should:

- develop the correct use of the language of Mathematics;
- develop number vocabulary, number concept and 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 (quoted from the CAPS document)

WEIGHTING OF CONTENT AREAS IN FOUNDATION PHASE

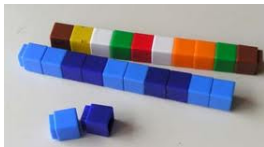

Weighting of Content Area				Time
	Grade 1	Grade 2	Grade 3	Time per week
Numbers, Operations and Relationships*	65%	60%	58%	120 minutes
Patterns, Functions and Algebra	10%	10%	10%	80 minutes
Space and Shape (Geometry)	11%	13%	13%	80 minutes
Measurement	9%	12%	14%	80 minutes
Data Handling (Statistics)	5%	5%	5%	60 minutes

Note: This lesson plan is only part of an entire daily Mathematics lesson.

You should include as part of this lesson plan:

- Counting
- Mental Mathematics
- Consolidation of concepts
- Problem Solving
- Group work
- Independent Activities

Content Area	Topic	Concept and skills for the year Grade 1	Concept and skills for the year Grade 2	Concept and skills for the year Grade 3
Numbers, Operations and Relationships	Problem solving techniques (in context and context free)			
	Solves problems in context	Use the following techniques when solving problems and explain solutions to problems:		
		concrete apparatus e.g. counters <ul style="list-style-type: none"> • pictures to draw the story sum • building up and breaking down numbers • <u>doubling and</u> 	drawings or concrete apparatus e.g. counters <ul style="list-style-type: none"> • building up and breaking down of numbers • <u>doubling</u> 	building up and breaking down numbers <ul style="list-style-type: none"> • <u>doubling and halving</u> • number lines • rounding off in tens

		<p>halving</p> <ul style="list-style-type: none"> number lines supported by concrete apparatus 	<p>and halving</p> <ul style="list-style-type: none"> number lines 	
	Context Free Calculations	Use the following techniques when performing calculations:		
		<p>drawings or concrete apparatus e.g. counters</p> <ul style="list-style-type: none"> building up and breaking down numbers doubling and halving number lines supported by concrete apparatus 	<p>drawings or concrete apparatus e.g. counters</p> <ul style="list-style-type: none"> building up and breaking down numbers doubling and halving number lines 	<p>building up and breaking down numbers</p> <ul style="list-style-type: none"> doubling and halving number lines rounding off in tens
Apparatus	<ol style="list-style-type: none"> Fruit bowls DBE workbooks Unifix blocks 			
Definition	<p>Sharing: Splitting into equal parts or groups</p> <p>Beads on a string</p> 			

Baskets should look the same when you are sharing



Teaching Methods

Step 1:

Introduce halving in practical way. Use actual objects.

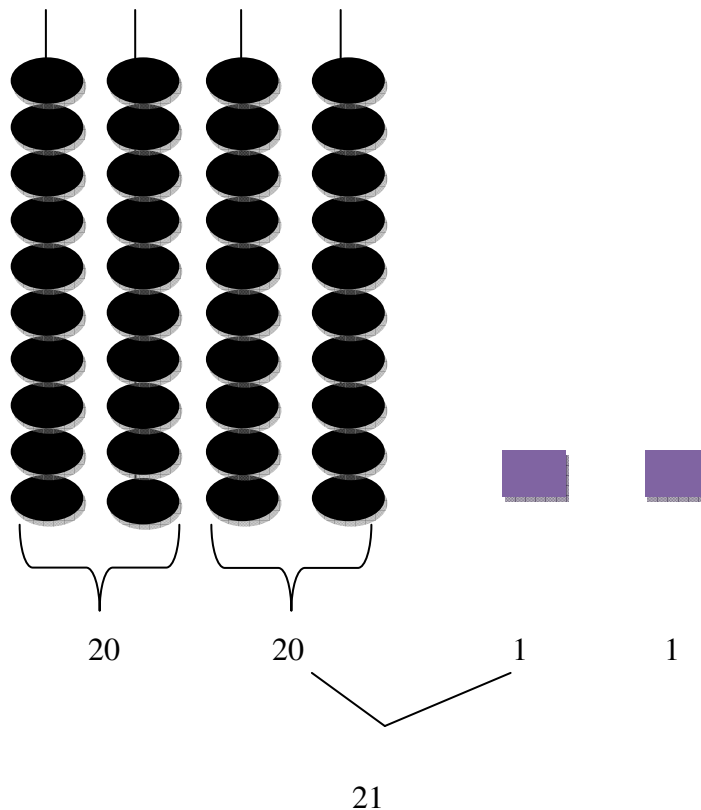
Allow the learners to share items in front of the class . Use bowls and fruit if possible
When you share items using bowls try to use the same colour bowls.

Step 2:

Share equally using blocks (units) and beads on string (tens)

Let the learners stand in front of the class with beads on a string - these represent the tens,

Use unifix blocks to represent the units.

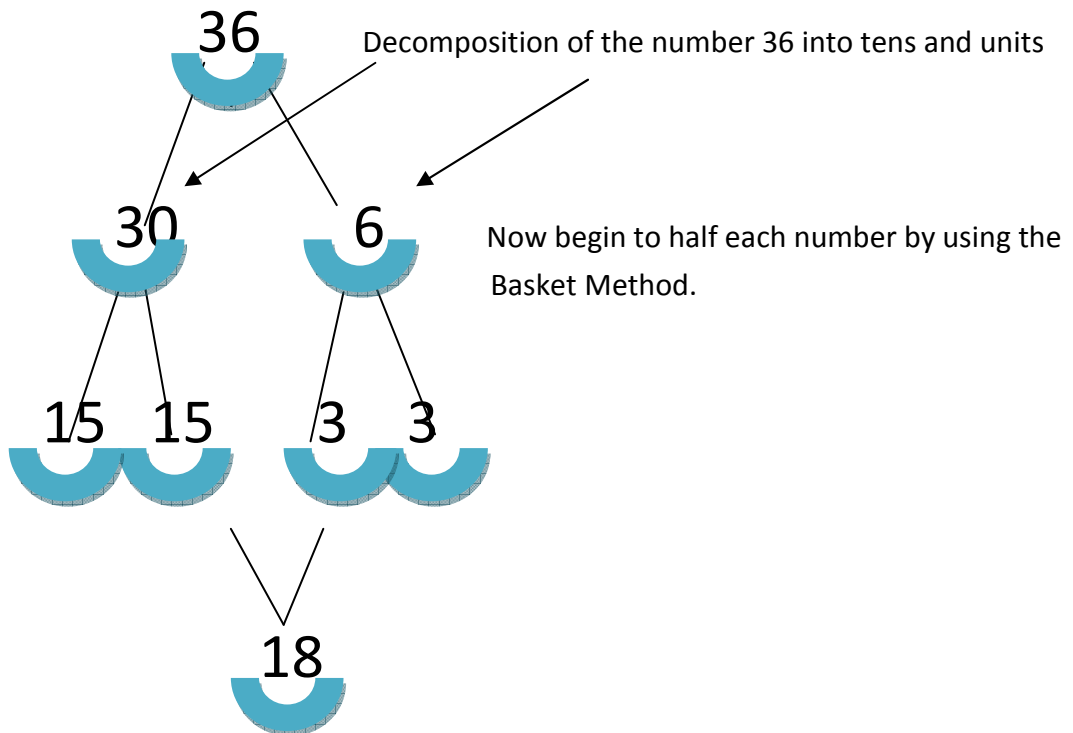


Step 3: The basket Method

This stage shows the written application. We imagine that the numbers are all in baskets and that they can be split up into separate baskets. If the learners have a problem with halving an odd number let them use the following method. Write out your multiples of ten and then write down your multiples of five below. This way they can see what the half is at a glance. It is a good idea to have such a chart in your class for reference.

10	20	30	40	50	60
5	10	15	20	25	30

The following sequence shows how the basket method is written out. The learners should work on quad paper.



Refer to the DBE workbook for additional activities.

REFERENCES:

www.mathsisfun.com

www.superteacherworksheets.com

www.primaryresources.co.uk

www.sparklebox.co.uk/sa