

Assessment in Abacus

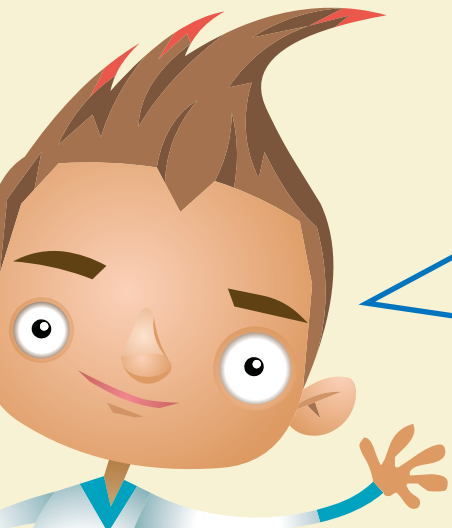
We believe good assessment is integrated into teaching and learning and is constantly used to diagnose future learning needs. Assessment sits at the heart of the Abacus teaching and learning cycle because we know it is integral to ongoing teaching and children's progress.



Remember, because Abacus is a service it will continue to evolve in line with the curriculum and your feedback!



click on any of the buttons to find out about the different types of assessment in Abacus.



Diagnostic assessment

Getting it right from the start with Abacus!



Abacus has been built upon a robust *skills progression* which outlines what skills your children need to acquire and, where feasible, in what order! With National curriculum levels being abolished, these progress maps are a great tool.



Have a closer look

Prerequisites for learning are built into every piece of teaching. So if your children struggle with a specific concept, we give suggestions of the mathematical building blocks which might be impeding their understanding. You can choose to use these suggestions as assessment tools to check children's understanding of the prerequisite concepts.



Have a closer look

Should there be a major problem and the whole class is struggling to access a concept then there is also a bank of prerequisite lessons that you can dip into.



Next



Number and place value has 3 prerequisite objectives:

NPV.18

Yrs 1, 2

Estimate a set of objects (≤ 100) and count in 5s or 10s to check

**NPV.05**

Yr 1

Estimate a set of objects (≤ 12)

[\(Resources\)](#)**NPV.12**

Yr 1

Estimate a set of objects (≤ 20)

[\(Resources\)](#)**MMD.18**

Yrs 1, 2

Count in 5s to 50

[\(Resources\)](#)[Back to Plan](#)

[Select All](#)[Allocate](#)[Add to My Files](#)

Show: 50

3 resources found

Year

 Yr 1 (3)

Abacus Strand

 Number and place value (3)[Clear](#)

Abacus Objectives

 NPV.05 Y1: Estimate a set of objects (≤ 12) (3)[Select Objectives](#)

Type

- Assessment (2)
- Homework (1)
- Interactive game/activity (5)
- Interactive whiteboard (2)
- Lesson plan (1)
- Photocopiable (22)
- Play (3)
- Practice (4)
- Pupil book (1)
- Speaking and listening (4)
- Starter (1)

Ability



Year 1 Lesson 24

**NPV.05**Estimate a set of objects (≤ 12)

Main Focus:

Estimate a set of objects and count to check how many, understanding 0 as the empty set

[+ More info](#)

Excellent Estimating 1.5a (IPG 1.5a)

**1**
allocated[+ More info](#)**NPV.05**Estimate a set of objects (≤ 12)**NPV.07**

Read and write numbers from 1 to 20 in digits and words

NPV.12Estimate a set of objects (≤ 20)**Support:** Choose a sensible estimate for a set of up to 20 objects. This is suggested for use in Year 1 Week 5, and focuses on teaching from Lesson 25.

Estimate and write numbers (Gui 1.5a)

NPV.05Estimate a set of objects (≤ 12)**NPV.08**

Understand 0 as the empty set

Check chn can form figures 0-9 correctly. Note any numbers chn need to practise and use the figure handwriting cards made from [Resource Sheet 243](#). Use the following activity as a context for chn to write estimates. Pass a jar of e.g. 50-60 marbles/shells around the group and chn discuss estimates. *How many do you think are in there? Do you think there are more than ten? ... twenty? ... thirty? ... forty? ... fifty?* Chn write an estimate on paper, forming the figures correctly.

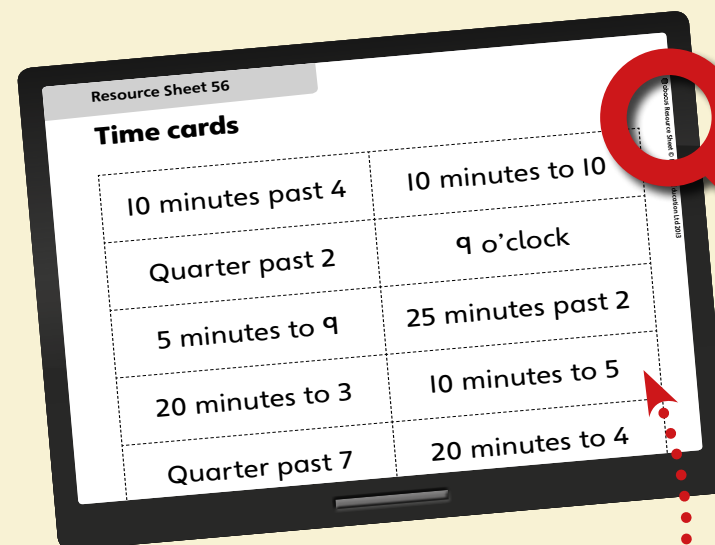
[+ More info](#)[Return to Prerequisites](#)

Diagnostic assessment

Getting it right from the start with Abacus!



Have a closer look



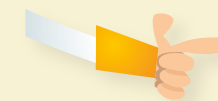
Have a closer look

Guided activities: There is a guided activity every day in Abacus so all children have targeted teaching at an appropriate level for them during the course of a week and there is an opportunity for you to assess their understanding. Each task has assessment criteria and outcomes, helping you to diagnose problems as you go along.

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Core

Gui 2.3.1 Double digits

T

Explain to children that they will be doubling numbers and adding the digits of the answer. Shuffle the number cards 2-15 made from [Resource Sheet 2](#) and spread them out, face down. Each child takes a card and writes its double on their whiteboard. Support any children who need help partitioning, e.g. double 13 is double 10 (20) and double 3 (6), which makes 26. When each child has an answer, go around the group. If their answer is a single-digit number, they do nothing! If it is a 2-digit number, they add the digits, e.g. 26, so $2 + 6 = 8$. If the answer is odd, they are given a counter. Replace the cards face down, move them around a bit and play again. If they take the same card as before, they either put it back or swap with another child. Each child should double at least six numbers. The child with the most counters wins!

Assessment Focus

- Do children know doubles of numbers to 15?
- Can children recognise which numbers are odd and which are even?
- Can children spot patterns?

IP 2.3.1a Double bubbles

Children complete the double bubble images made from [Resource Sheet 294](#), writing two numbers between 20 and 25 in the empty wands and then doubling them.

Support

Y2 WBI p14 Doubling

Extend

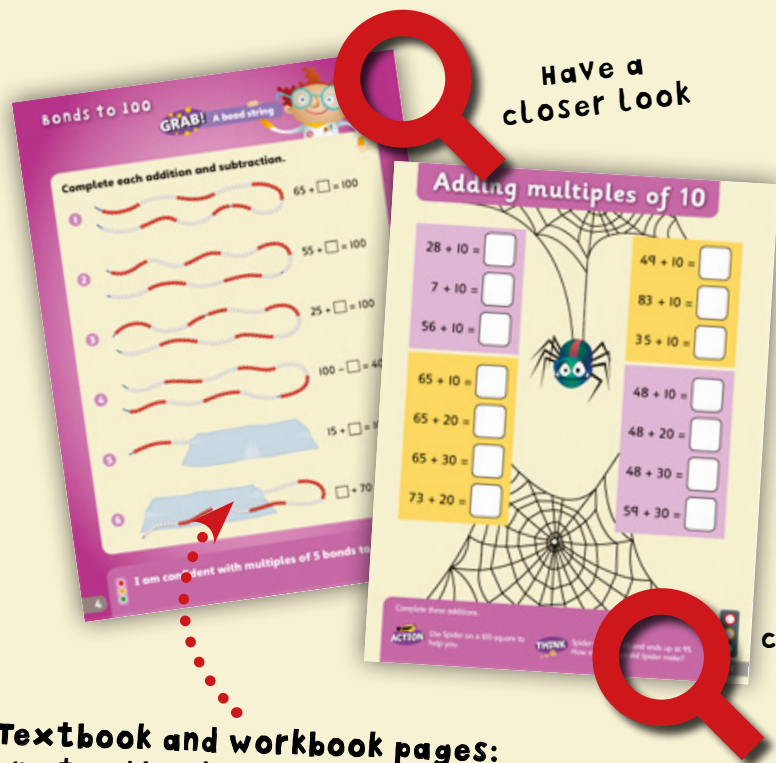
IP 2.3.1b Number chains

Children make number chains. They start with a number between 1 and 15, they halve the number if it is even, and add 1 if it is odd, until they get to 1.

They start with the 9 chain: $9-10-5-6-3-4-2-1$. What is the longest chain they can make?

Formative assessment

short-term 'on-going' assessment with Abacus



Have a closer look

Have a closer look

Learning objectives: Every lesson is tied to a step/objective on the Abacus skills progression. These are linked to the teaching focus, differentiated activities and outcomes.



Have a closer look

Textbook and workbook pages: Every textbook and workbook page has an opportunity and prompt for self-assessment based on the outcomes of the linked lesson.



Next





Key Stage 1 Area

▶ Year 1

▼ Year 2

▼ Autumn Term 1

▼ Week 1

Monday

Tuesday

Wednesday

Thursday

Friday

▶ Week 2

▶ Week 3

▶ Week 4

▶ Week 5

▶ Autumn Term 2

▶ Spring Term 1

▶ Spring Term 2

Key Stage 2 Area

▶ Year 3

▶ Year 4

▶ Year 5

Lesson: Year 2 Lesson 2

[Lesson: Year 2 Lesson 2](#)

Strand

NPV Number and place value

Main Focus

Locate numbers on 0–100 beaded lines and 1–100 squares

Objectives

NPV.19 Understand place value in 2-digit numbers by creating 2-digit numbers, placing them on a number line and solving place value additions and subtractions ([Resources](#)) ([Prerequisites](#))

Prior Learning

Recite/read numbers to 100; count, matching one-to-one; begin to understand conservation of number

Key Vocabulary

beaded number line; number square; between; digit

Starter

ST 2.1.2 Count in 10s from 10 to 100

Place Spider on 10 on the 1–100 square on [Number square tool 2.1.2a](#). Spider moves up and down the grid. Count in 10s from 10 to 100 as you move Spider down the grid, then back to 10 again. Give a stick of 10 cubes each to ten children and ask them to stand at the front. Count in 10s along the line, with sitting children flashing 10 fingers as they do so. The ten children sit down. Call out five names of children holding cubes, they stand up. *How many cubes?* Count in 10s to answer. Repeat for different multiples of 10.

Formative assessment

short-term 'on-going' assessment with Abacus



Have a closer look



Assessment questions: within the teaching we include key assessment questions so that when the whole class teaching is taking place, you have access to a bank of targeted questions designed to reveal children's understanding.

Watch out for: We also list things that you might need to look out for.

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Next



Starter

ST 2.1.2 Count in 10s from 10 to 100

Place Spider on 10 on the 1-100 square on [Number square tool 2.1.2a](#). Spider moves up and down the grid. Count in 10s from 10 to 100 as you move Spider down the grid, then back to 10 again. Give a stick of 10 cubes each to ten children and ask them to stand at the front. Count in 10s along the line, with sitting children flashing 10 fingers as they do so. The ten children sit down. Call out five names of children holding cubes, they stand up. *How many cubes?* Count in 10s to answer. Repeat for different multiples of 10.

Main Teaching

- Show 1-100 square on [Number square tool 2.1.2b](#) with numbers 23, 45, 67, 96, 40 and 71 hidden. Point to one hidden number. Children write the missing number on their whiteboards and, on a count of 5, they show you.
- Reveal the number and say it together.
- Show 0-100 beaded line on [Bead string tool 2.1.2](#). Count in 10s along it. Give each pair of children a 1-100 bead string and ask them to show you 31 beads. *You did not have time to count in ones, so how did you do that so quickly?* Model how to count in 10s to 30, then add one more.
- Call out other 2-digit numbers, e.g. 42, 57, 69, 25. Children take it in turns to show them, agreeing that they are showing the correct number before holding it up.
- Write 51 on the board and ask children to tell you where it goes on the beaded line, but without pointing! They must explain in words. Repeat with 39, 25 and 43.
- *Katrina the caterpillar likes to arrange things in lines. Help her to find numbers on this line.* Ask children up to the board to drag and place tags after given numbers on the beaded line, including numbers just after and just before multiples of 10. Are children using the 'landmarks' of 10s to help them locate numbers? NB: It is important to place labels AFTER each bead rather than labelling the bead.

Key questions

- *How do you know which number is hidden?*
- *Which tens number is 48 near? Describe where 48 will go on the bead string.*
- *Do you need to count in ones to show 49? How can you show this number really quickly?*

Watch out for

- Children who do not know what number comes before or after a given number.
- Children who are not using the landmarks of 10 to show and locate numbers.

Formative assessment

short-term 'on-going' assessment with Abacus



Have a closer look



Have a closer look

Individual practice games: In Abacus, you can view pupil scores from allocated maths practice games to help inform your assessment and overall profile of a child. In each game, children are auto-assessed on the skills practised and a score is generated. You are shown the last percentage a child achieves on a game attempt and on a further click-through you can see an average score across all attempts. To pass any level of an individual practice game, children need to score 80% or more.

Guided activities: The Guided activities in every lesson not only enable you to diagnose potential problems but also form the basis of on-going short-term assessment. Assessment questions help you to gauge pupil understanding and progress and give immediate feedback.

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Class

Class A

Pupil name	Last viewed	Skill	Date	Bronze	Silver	Gold
James Brown	 Starfish Strike 2.11a (IPG 2.11a)	Support: Subtract units from a number to 49 to leave a multiple of 10, e.g. $36 - 6 = 30$. This is suggested for use in Year 2 Week 11, and focuses on teaching from Lesson 52. NPV.19	03/12/2013	30%		
Arif Baker	 Sand Search 3.8a (IPG 3.8a)	Support: Slowly find multiples of 3 and 4. This is suggested for use in Year 3 Week 8, and focuses on the starter activities within Lessons 38 and 39. MMD.30 MMD.34	27/11/2013	100%	100%	100%
Tess Derby	 Clam Collector 5.9b (IPG 5.9)	Core: Collect, in order, a set of 1- or 2-place decimal numbers between 1 and 20. This is suggested for use in Year 5 Week 9, and focuses on teaching from Lesson 43. DPE.63	27/11/2013	80%	60%	60%
Peter Jones	 Bingo! 1.16b (IPG 1.16b)	Core: Identify shapes with $1/2$, $1/4$ and $3/4$ shaded. This is suggested for use in Year 1 Week 16, and focuses on teaching from Lesson 79. FRP.12	13/12/2013	83%	89%	100%
Thomas Lloyd	 Bingo! 4.13c (IPG 4.13c)	Extend: Find fractions equivalent to $1/2$, $1/3$, $1/4$ or $1/5$. This is suggested for use in Year 4 Week 13, and focuses on teaching from Lesson 64. FRP.12	29/11/2013	100%	90%	100%

Core

Gui 2.3.1 Double digits

T

Explain to children that they will be doubling numbers and adding the digits of the answer. Shuffle the number cards 2-15 made from [Resource Sheet 2](#) and spread them out, face down. Each child takes a card and writes its double on their whiteboard. Support any children who need help partitioning, e.g. double 13 is double 10 (20) and double 3 (6), which makes 26. When each child has an answer, go around the group. If their answer is a single-digit number, they do nothing! If it is a 2-digit number, they add the digits, e.g. 26, so $2 + 6 = 8$. If the answer is odd, they are given a counter. Replace the cards face down, move them around a bit and play again. If they take the same card as before, they either put it back or swap with another child. Each child should double at least six numbers. The child with the most counters wins!

Assessment Focus

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- Can children recognise which numbers are odd and which are even?
- Can children spot patterns?

IP 2.3.1a Double bubbles

Children complete the double bubble images made from [Resource Sheet 294](#), writing two numbers between 20 and 25 in the empty wands and then doubling them.

Support

Y2 WBI p14 Doubling

Extend

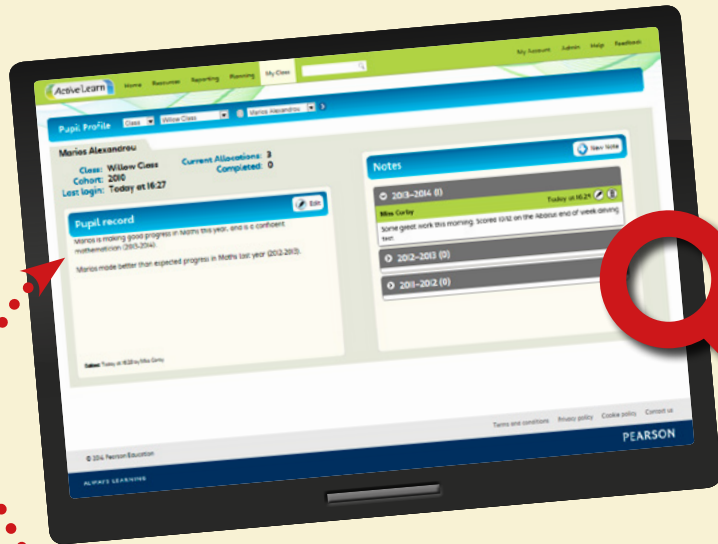
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Children make number chains. They start with a number between 1 and 15, they halve the number if it is even, and add 1 if it is odd, until they get to 1.

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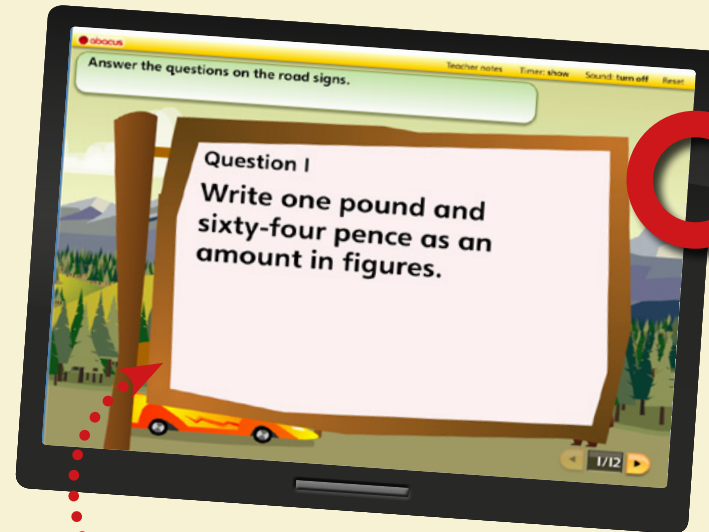
Formative assessment

Medium-term 'formative' assessment with Abacus



Have a closer look

Pupil profile: In the Abacus teacher toolkit, you can keep regular notes of your observations and assessments. The notes are dated and can inform parent evening discussions and act as prompts for future teaching on similar topics.



Have a closer look

Weekly driving tests: Each week, children will do an Abacus "driving test". This is a test of the skills children have practised during the week, and a certificate is provided at the end. The weekly driving tests help you to diagnose any shortfall in the building blocks that children need for mental and written calculation. You can decide whether your class has demonstrated skills well enough to get a "driving test" certificate.

Next



Pupil Profile Class Willow Class Marios Alexandrou

Marios Alexandrou

Class: Willow Class Current Allocations: 3
Cohort: 2010 Completed: 0
Last login: Today at 16:27

Pupil record Edit

Marios is making good progress in Maths this year, and is a confident mathematician (2013-2014).
Marios made better than expected progress in Maths last year (2012-2013).
Edited: Today at 16:28 by Miss Corby

Notes New Note

- 2013-2014 (1) Miss Corby Today at 16:29 Some great work this morning. Scored 10/12 on the Abacus end of week driving test.
2012-2013 (0)
2011-2012 (0)

Year 5 Autumn 1 • Problem solving and reasoning • Commentary chart

Q. no.	Abacus objectives	National curriculum objectives	Answers	Marks	Common difficulties	Advice
1	NPV.59 Order and compare 5-digit numbers and say a number between	Y5.NPV.1 Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	For example: 10 278 < 10 279 < 10 287 < 10 288 < 10 782	2	Most recognise that the first two digits '10' can be retained in the two missing numbers, but some are unable to work out the remaining three digits. A few may use the digits 2, 7 and 8, which appear in the given three numbers, to complete the missing numbers ignoring the less than signs.	Practise placing numbers on a number line, in this case 10 000–11 000
2	NPV.59 Order and compare 5-digit numbers and say a number between	Y5.NPV.1 Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	965 908; 965 809; 956 908; 96 950; 96 590	2	Most children find the largest of the five numbers, but some are then unable to continue the process for the remaining four numbers.	Advise children to cross out the largest number and find the largest of the remaining numbers, continuing this process until all five have been ordered.
3	MAS.55 Subtract 3-digit from 4-digit numbers by counting up MAS.56 Use mental strategies to add 2-digit, 3-digit and 4-digit numbers	Y5.NAS.2 Add and subtract numbers mentally with increasingly large numbers	a) ✓ b) ✗ c) ✗ d) ✓	2	These are straightforward questions as there are no place value boundaries crossed. Children who do not realise this may add or subtract in columns which could lead to recording mistakes. Some children may find the subtraction questions harder.	Offer more opportunities to sort questions into those that can be solved simply by mental strategies and those that cannot.
4	MAS.56 Use mental strategies to add 2-digit, 3-digit and 4-digit numbers MAS.49 Count up to subtract any 3-digit from 3-digit number	Y5.NAS.4 Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	£160	2	Subtracting the £50 (rather than adding) or adding the £80 (rather than subtracting). Some children may add or subtract both, or only carry out one part of the calculation.	When solving word problems, get children to identify which are 1-step and which are 2-step or multi-step problems.
5	MAS.56 Use mental strategies to add 2-digit, 3-digit and 4-digit numbers	Y5.NAS.2 Add and subtract numbers mentally with increasingly large numbers	423 Children may recognise that it is 25 from 375 to 400, then partition the 48 into 25 and 23, leaving an answer of 423.	2	Common errors include 433 or 443.	Practise complements to 100 and partitioning 2-digit numbers in different ways, e.g. $48 = 25 + 23$.
6	MAS.49 Count up to subtract any 3-digit from 3-digit number	Y5.NAS.2 Add and subtract numbers mentally with increasingly large numbers	a) 44 b) 423	2	Children may be confused by the wording, adding rather than finding the difference / subtracting, giving 396 and 743 respectively as answers.	Visualise numbers on an empty number line to show how they are related to each other.

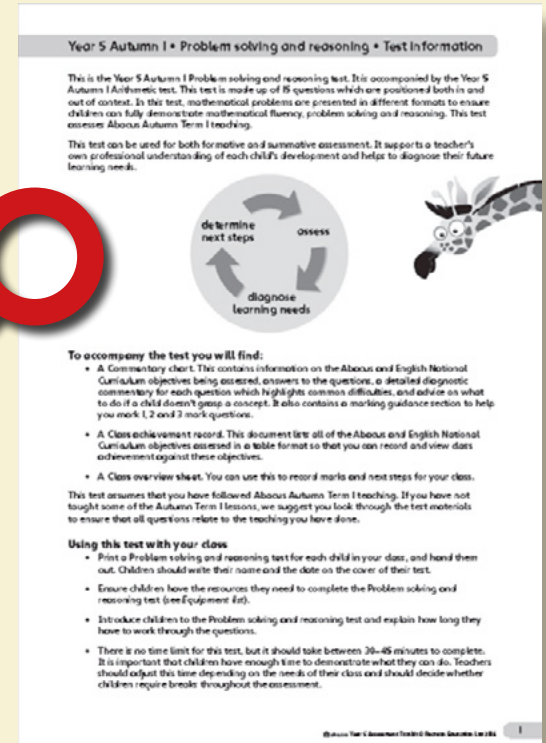
Summative assessment



Our **Assessment Toolkits** from Year 2 onwards contain an **Arithmetic test** and a **Problem solving and reasoning test** to mirror the government's new approach to end of key stage testing. They allow children to practise the skills they have learnt in a more formal environment.

Each test is accompanied by:

- **Test Information** which provides need to know information on each test.
- A **Commentary Chart** with information on the Abacus and English National Curriculum objectives being assessed, answers to the questions, a detailed diagnostic commentary for each question which highlights common difficulties, and advice on what to do if a child doesn't grasp a concept.
- A **Class Achievement Record** which lists all of the Abacus and English National Curriculum objectives assessed in a grid format so that you can record and view class achievement against these objectives.
- A **Class Overview Sheet** for you to record marks and next steps for your class.



Have a closer look



For Year 1, our half-term Assessment Toolkits contain a **Progress check**, which teachers can use to inform their understanding of pupil attainment.

Home



The government's reforms in assessment and accountability



The new primary curriculum is now statutory for all maintained schools in England, and the government has unveiled some key changes regarding the future of assessment and accountability.

Key messages

- **Attainment:** The government has set an aspirational target that **85% of children will reach a new expected standard** (similar to a Level 4b) by the end of primary school.
- **Progress:** Progress will be measured using an optional baseline assessment in Reception.
- Schools will need to achieve either the **target in progress or in attainment**. They will be deemed to be below standard only if there is poor progress from Reception to the end of Primary AND fewer than 85% of children achieve the expected standard.
- Schools will be expected to **publish information about their pupils' progress and attainment** on their website to provide a picture of school performance.



Next



The government's reforms in assessment and accountability



- It will be **up to schools to decide how they track and monitor pupil progress** and report this information to parents. There will be no prescribed system for ongoing assessment and reporting.
- There will still be statutory national curriculum tests at key stages 1 and 2, but they will be more demanding. In maths, children will be assessed in **arithmetic** and contextualised and applied mathematics, with an emphasis on **problem solving and reasoning**.
- A precise scaled score will be reported at the end of key stages instead of a level. The **DRAFT performance descriptors for key stage 1 and key stage 2 statutory teacher assessment have now been released**. For maths there are four descriptors in key stage 1 and one in key stage 2.

2014/2015 school year

DRAFT Performance descriptors for teacher assessment released.

New national curriculum statutory.

Year 2: Outgoing curriculum SATs and Levels.

Year 6: Outgoing curriculum SATs and Levels.

2015/2016 school year

FINAL Performance descriptors for teacher assessment published.

EYFS profile no longer compulsory.

Reception: Baseline assessment from approved list.

Year 2 & Year 6: New national curriculum statutory.

Year 2: NEW externally set and internally marked end of key stage assessments.

Year 6: NEW externally set and externally marked end of key stage assessments.



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Useful information

- 🔍 Read the government's full consultation response
- 🔍 View the sample questions, mark schemes and commentaries for 2016 assessments in full
- 🔍 View the DRAFT Performance descriptors for statutory teacher assessment in key stages 1 and 2
- 🔍 Read Ruth Merttens's analysis on what the sample questions tell us
- 🔍 View the correlation between the NC level descriptors for the outgoing National Curriculum, Abacus and the new 2014 National Curriculum Attainment Targets.

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