



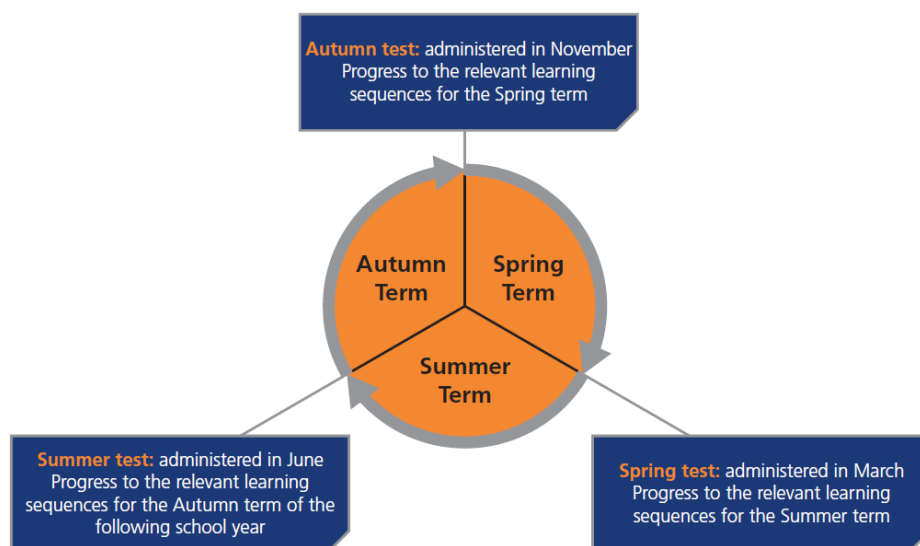
Introduction to *Shine Maths*

Shine Maths provides mathematics interventions to support teachers in addressing gaps in their pupils' learning. These gaps are identified through tests such as NTS, PUMA or PUMA for Scotland.

The resources in *Shine Maths* support precise and effective interventions by targeting specific Areas of Learning. Generating an intervention report in Boost Insights for one of the tests listed above will show you which pupils struggled with each Area of Learning, based on their scores. The report will then suggest a specific, pre-prepared Learning Sequence to target that area.

Ways to use *Shine Maths*

If you have used a termly summative test like NTS, PUMA or PUMA for Scotland to assess your pupils' understanding, you are likely to want to complete the interventions at the end of that term or at the beginning of the next term. For example, if you completed an assessment near the end of the Autumn term, you might follow up with relevant interventions at the end of that term, or in the following term before your Spring assessment:



- ★ You could use the Learning Sequences immediately after one of these assessments to target areas your pupils are struggling with, especially if your grouped intervention report shows shared areas of weakness across your class.
- ★ You could use the Learning Sequences to pre-teach a group of pupils who you know will require some support in accessing a particular unit.

For example, if your assessment of addition and subtraction from last term shows that a few pupils particularly struggled with using inverse operations, and you know you will be building on that concept next week, you may wish to use the Learning Sequence focused on inverse operations to refresh their understanding and prepare them for the next steps in learning.

- ★ You could use the Learning Sequences to give additional support to pupils who have been absent from school following illness, holidays or school closure and might benefit from intensive, targeted support.
- ★ If you're using this product at the beginning of the Autumn term, you might want to use the Learning Sequences from the last term of Year 1 to support pupils who are struggling with the transition to Year 2.

What's in a Learning Sequence?

A Learning Sequence is a set of intervention activities designed to teach a specific Area of Learning. Each sequence is labelled with a year group and a number, for example:

- ★ Year 1, Mental addition and subtraction 1
- ★ Year 1, Properties of shape 2
- ★ Year 2, Fractions 1

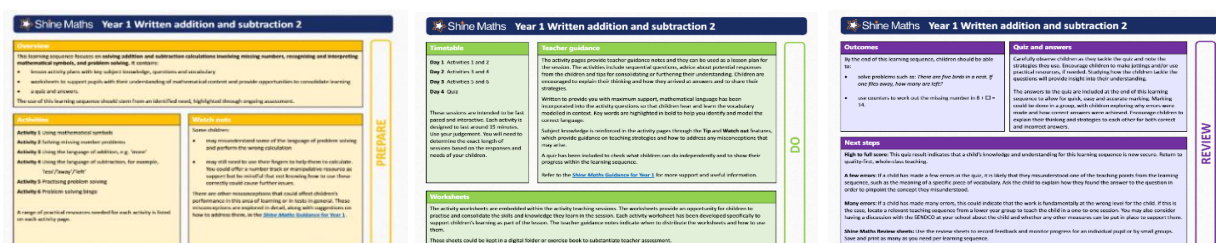
The sequences progress in difficulty from one to the next to reflect pupils' growing proficiency. They can be taught in order or as stand-alone sequences. You can deliver them purely with the PDF teaching guidance, or you can use the interactive teaching materials. Each sequence includes:

- ★ A Prepare, Do, Review (PDR) document, which introduces the Learning Sequence.
- ★ Teacher guidance, including activity instructions, teaching tips, student worksheets and answer keys.
- ★ Interactive presentations for each activity, including dynamic toolkits to support delivery.

Prepare, Do, Review

Each Learning Sequence is accompanied by a Prepare, Do, Review (PDR) document, which includes the following information:

- ★ Prepare: Planning and preparing for the intervention.
- ★ Do: How to use the teacher guidance and worksheets to deliver the intervention.
- ★ Review: Learning outcomes and how to assess student understanding.



Activities and teaching guidance

A Learning Sequence takes place over multiple days, with one or more activities delivered per day. The Learning Sequence PDF provides detailed teacher notes, including learning objectives and a list of resources for each teaching day, as well as tips, warnings and step-by-step instructions for each activity. Where relevant, student worksheets are provided alongside the teacher notes. The final day of each Learning Sequence is dedicated to a quiz to assess understanding.

Shine Maths YEAR 1 NUMBER 2

Day 1

Activity 1: Recognising and writing numbers 1 to 20 in numerals and words

- Discuss how you can represent numbers as **numerals** and **words**.
- Explain that **digits** are used to write numerals. For example, the digits 1 and 2 are used to write the number 12 in numerals and the same number can be written in words as 'twelve'.
- Run through the number cards with the children. Put the number cards in a pile face down on the table and then ask different children to say the number out loud as you show them represented as numerals.
- Now repeat the activity with the word cards for 'say' to 'twenty'.
- TIP:** Have down any of the numbers the children don't get recognition.
- WATCH OUT:** Be sure to correct the children gently if they get any of the numbers wrong when reading the word cards. It is important to clarify any misconceptions straightaway.

Activity 2: Matching the words and numerals

- Explain that one child will choose a word card from the bag and read out the number, the other children need to choose the correct number card for that word.
- Give each child a set of number cards from 1 to 20.

Shine Maths NUMBER 2

Quiz

Name: _____ Date: _____

1. Answer the following calculations.

a) $5 + 1 =$

b) $15 - 1 =$

c) $18 - 1 =$

2. Fill in the missing numbers in these sequences.

a) 2 4 6 8 12 14 18

b) 5 10 20 25 35 40

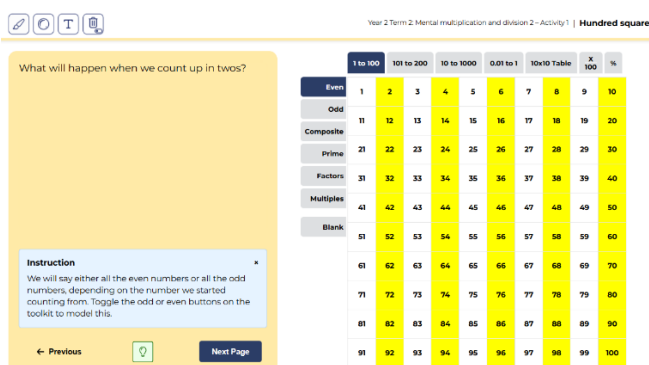
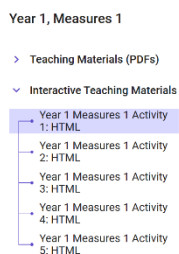
c) 10 20 30 50 60 70



Interactive teaching materials

The interactive teaching materials can be used to present each activity on screen as a digital presentation alongside an interactive toolkit to illustrate each step of the activity. They can be used with a large group on an interactive whiteboard, or with smaller groups on a desktop or laptop.

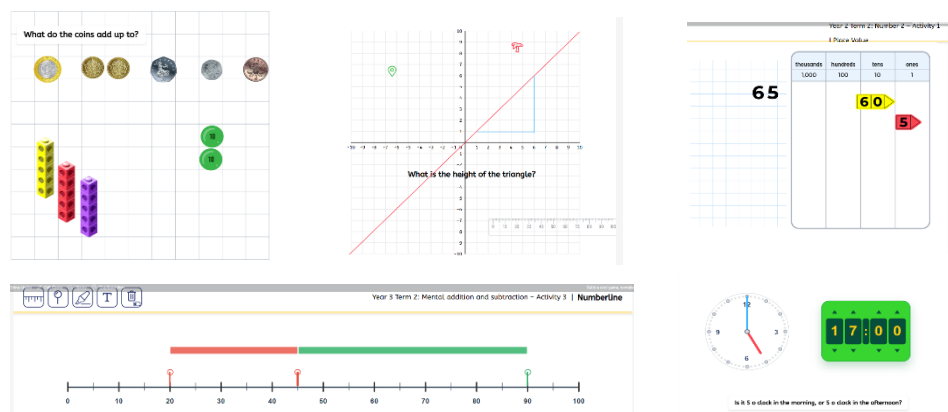
Click on the 'Interactive Teaching Materials' dropdown in the left-hand panel. This will show you the list of activities, with links to each interactive. Click on a link to open it in your browser. This will open a 'start' screen, which will take you to the interactive presentation.



On the left panel, the activity is presented as text addressed to the pupils. This information is broken up into digestible segments, so the intervention leader can click through at their own pace and illustrate each idea on the right with the interactive toolkits. The icons at the bottom of the left panel provide guidance to support delivery, with hints and suggestions for how to illustrate each concept with the interactive tools available.

There is a standard toolkit, plus six specialised toolkits used across the Learning Sequences. Educational experts have selected the most useful toolkit for illustrating each activity and bringing the maths to life:

- ★ 100 Square
- ★ Counters
- ★ Co-ordinate Grid
- ★ Place Value
- ★ Number Line
- ★ Clock



For more detailed support on how to use the toolkits, visit the [Hachette Learning help centre](#).



Organising groups

When planning intervention groupings, it is important to consider how much time has been given to teaching the concepts the pupils have found particularly challenging. Also be aware that some concepts may have been assessed in a term where they have not yet been taught in full.

Those who score 0 points, or very few points, in any Area of Learning may need a more substantial intervention. These pupils are highlighted on the report with an asterisk.

Pupils in Year 1 may be experiencing testing for the first time, and this may cause them to struggle with taking the tests. It is important to look at the results of the tests you have used alongside your teacher assessment of the pupils to ensure accurate grouping.

Other factors that might impact pupil performance

When considering the results of a test, it is important to consider generic factors beyond those of possible gaps in knowledge or skills that could affect a child's performance. Please note this is not an exhaustive list.

Running out of time

Completing a test in the allocated time is a skill that is acquired through practice. Pupils need to learn how to pace themselves and how to improve the pace at which they work. Pupils also need to be taught strategies, such as to move on if they get stuck or to select the questions they are most confident with first.

Timing of the test in relation to the teaching programme

When considering test outcomes, be sure to check if that area of the maths curriculum has been taught to the class that term. If they haven't completed the relevant Learning Sequences yet, they will struggle to access the test.

Fluency of recall of number facts

Many pupils struggle to recall number facts, such as the number bonds to 10, quickly enough. Identify individuals or groups whose grasp is slow or insecure and provide short daily sessions of about 10 minutes to really focus on closing the gap and improving their recall speed.

Test anxiety

Some pupils become very anxious when doing tests. A major factor in Year 1 would be that the pupils may not have sat formalised tests before. The school can reduce the likelihood of the pupils becoming anxious by emphasising that tests are there to help teachers to identify where extra help might be needed.

Accurate reading of the question

It is easy to read a question too quickly and fail to notice the key information or to misunderstand the question. An example of a common error would be when a child underlines something when the instruction says to circle it. Pupils need to be taught that test questions require careful and deliberate reading – they need to avoid rushing and making assumptions about what they are going to be asked to do.

Understanding how to unpick word problems

Pupils frequently struggle to accurately answer word problems. Whilst the problem requires calculation skills, often the issue lies with their understanding of the question. They need to be given opportunities to practise identifying the key words and elements in the problem and then learn how to interpret this key information to form the correct calculation.



The role of the teacher and teaching assistant

The teaching assistant and teacher work as a collaborative and supportive team, helping each other to ensure pupils are making progress and any difficulties are identified and addressed. It is likely that the TA will be given responsibility for delivering the interventions, but it is important that the teacher maintains control and overview of the process.

The class teacher should:

- ★ Review the assessment information, identify pupils who require extra support and select the intervention.
- ★ Consider the composition of intervention groups based on the grouped intervention report.
- ★ Ensure the TA has sufficient time to read and understand the sessions and organise resources.
- ★ Provide information for the SENDCO/SLT on the impact of the interventions.

The teaching assistant should:

- ★ Prepare each session as explained in the Prepare, Do, Review document.
- ★ Mark the activities with the pupils and discuss how answers could be improved.
- ★ Observe each pupil and make notes on the review and monitoring sheets (see guidance below).

How to use the review and monitoring sheets

These forms are designed to be completed by the person teaching the Learning Sequence. There are two versions: one is for use with a small group of pupils, and the other is an individual sheet. The templates can be found here: <https://www.hachettelearning.com/shine-interventions/shine-intervention-documents>

Each sheet also comes with examples of good and bad practice: one example shows helpful and effective completion of the sheet, and the other shows incomplete and uninformative completion.

- ★ Remember to record dates and times – if a pupil makes less progress than expected, it's important to be able to track attendance to see whether all the sessions were taught.
- ★ Comments on the individual pupil sheets should focus on their learning progress, not their effort or behaviour. Shorter comments make it easier for the teacher to monitor progress.
- ★ For group record keeping, only note concerns. Instead of writing next to each pupil that they have met an objective, only make a note for the pupils who do not understand.
- ★ The teaching assistant should initial their comments each day, and the teacher should monitor activity and progress each week.

The table below can be used to support the teacher and teaching assistant to check they are using the monitoring and review sheets as effectively as possible.



TA evaluation	Success criteria	Teacher evaluation
	All top sections (names, year, stage) fully completed.	
	Times and days of sessions completed.	
	Target accurately written – only one per sheet.	
	Week-ending dates are pre-populated.	
	Comments describe the progress towards achieving the objectives of the unit.	
	When progress is slow or non-existent, the target/ strategies are reviewed.	
	When the target is achieved, it is clear, and the teacher decides on the next steps.	
	When the objective is achieved and unit completed, this is celebrated through sticker/certificate, etc. Parents are informed that the target is achieved.	
	Initialled by TA daily.	
	Initialled by teacher weekly.	
	Regularly monitored by the Maths subject leader/SLT/SENDSCO.	
	The form is neat enough to share with other professionals or parents.	



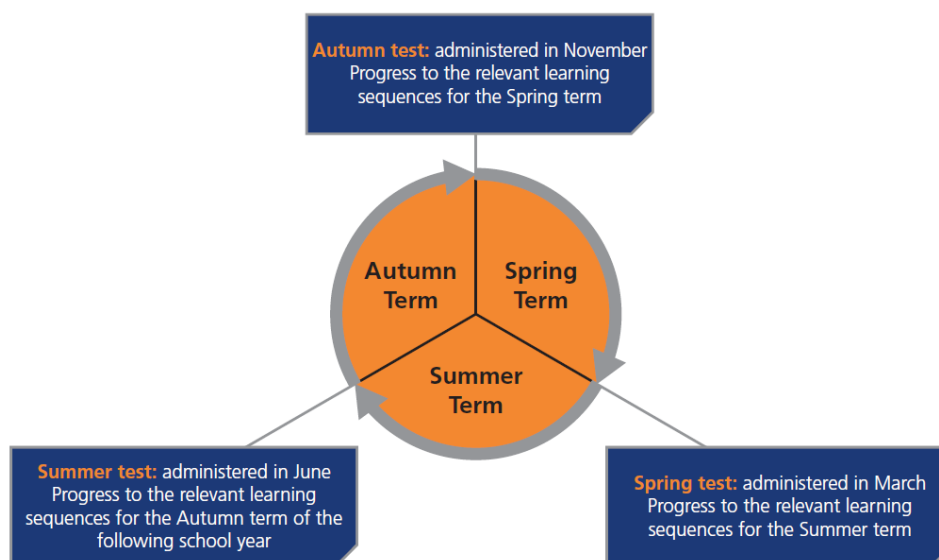
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- ★ You could use the Learning Sequences immediately after one of these assessments to target areas your pupils are struggling with, especially if your grouped intervention report shows shared areas of weakness across your class.
- ★ You could use the Learning Sequences to pre-teach a group of pupils who you know will require some support in accessing a particular unit.

For example, if your assessment of addition and subtraction from last term shows that a few pupils particularly struggled with estimating when adding and subtracting, and you know you will be building on that understanding of estimation next week, you may wish to use the Learning Sequence focused on estimating to refresh their understanding and prepare them for the next steps in learning.

- ★ You could use the Learning Sequences to give additional support to pupils who have been absent from school following illness, holidays or school closure and might benefit from intensive, targeted support.
- ★ If you're using this product at the beginning of the Autumn term, you might want to use the Learning Sequences from the last term of the previous year to support pupils who are struggling with the transition.



What's in a Learning Sequence?

A Learning Sequence is a set of intervention activities designed to teach a specific Area of Learning. Each sequence is labelled with a year group and a number, for example:

- ★ Year 3, Statistics 2
- ★ Year 4, Perimeter, area and volume 3
- ★ Year 6, Negative numbers 2

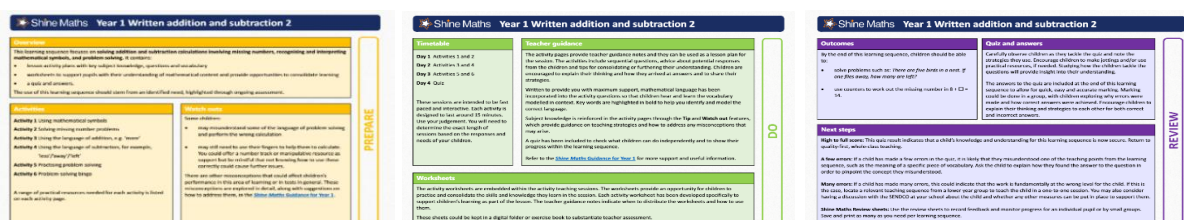
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Shine Maths YEAR 1 NUMBER 2

Day 1

Activity 1: Recognising and writing numbers 1 to 20 in numerals and words

Discuss how you can represent numbers as **numerals** and **words**.

Explain that **digits** are used to make numerals. For example, the digits 1 and 2 are used to write the number 12 in numerals and the same number can be written in words as 'twelve'.

Run through the number cards with the children. Put the number cards in a pile face down on the table and then ask different children to say the number out loud as you show them represented as numerals.

Now repeat the activity with the word cards for 'one' to 'twenty'.

TIP: If a child has any of the numbers the children do not get recognition.

WATCH OUT: Be sure to correct the children gently if they get any of the numbers wrong when reading the word cards. It is important to clarify any misconceptions straightaway.

Activity 2: Matching the words and numerals

Explain that one child will choose a word card from the bag and read out the number, the other children need to choose the correct number card for that word.

Give each child a set of number cards from 1 to 20.

OBJECTIVES

- Read and write numbers from 1 to 20 in numerals and words.

RESOURCES

- Activity 1: Number cards (numerals) from 1 to 20; word cards from one to twenty.
- Activity 2: Pairs bag; word cards from one to twenty; number cards (numerals) from 1 to 20 (one set per child).

Shine Maths NUMBER 2

Quiz

Name _____ Date _____

1. Answer the following calculations.

a) $5 + 1 =$ _____

b) $15 - 1 =$ _____

c) $18 - 1 =$ _____

2. Fill in the missing numbers in these sequences.

a) 2 4 6 8 _____ 12 14 _____ 18

b) 5 10 _____ 20 25 _____ 35 40 _____

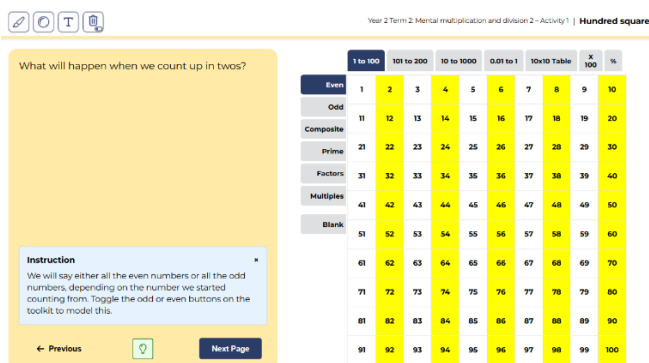
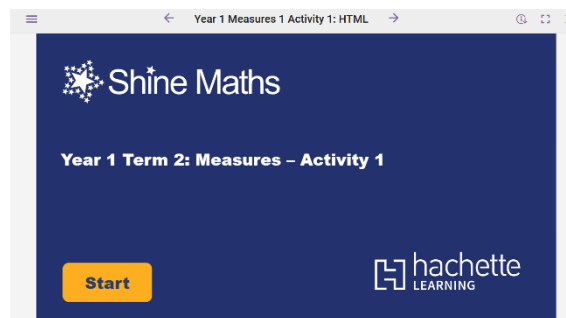
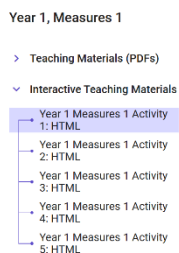
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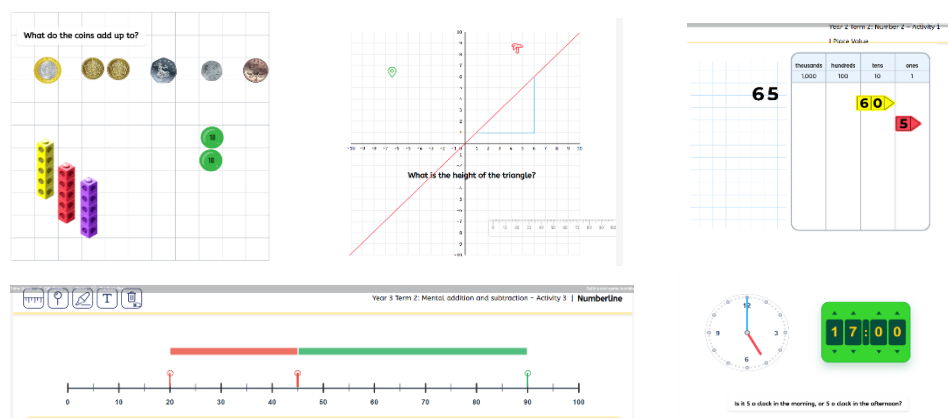
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Timing of the test in relation to the teaching programme

When considering test outcomes, be sure to check if that area of the maths curriculum has been taught to the class that term. If they haven't completed the relevant Learning Sequences yet, they will struggle to access the test.

Fluency of recall of number facts

Many pupils struggle to recall number facts, such as the number bonds to 10, quickly enough. Identify individuals or groups whose grasp is slow or insecure and provide short daily sessions of about 10 minutes to really focus on closing the gap and improving their recall speed.

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