

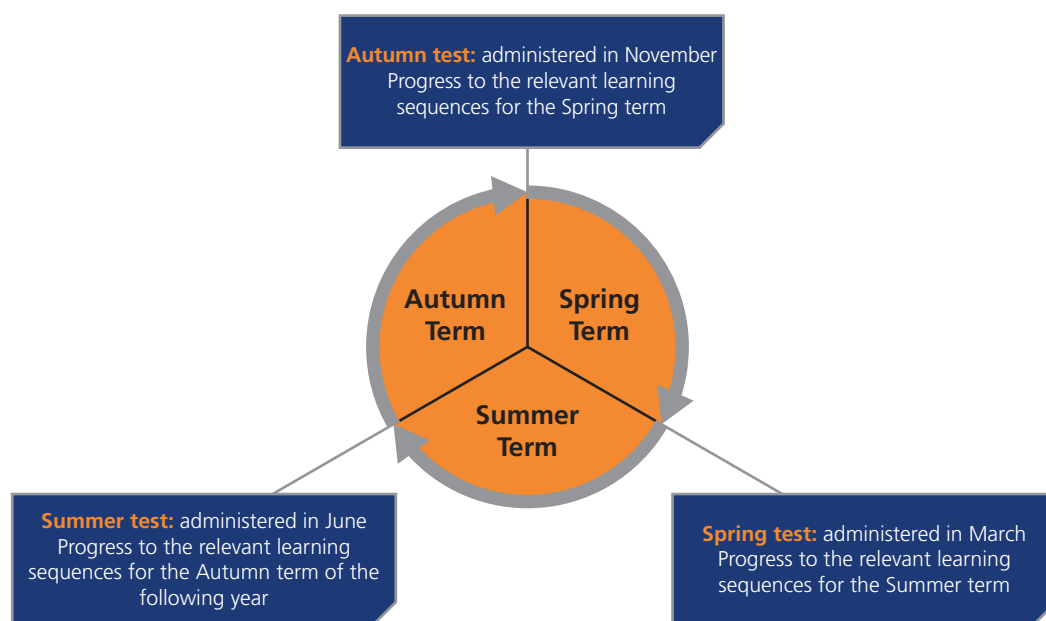
Year 5

What is *Shine Maths*?

Shine Maths provides learning sequences to support teachers in addressing gaps in learning. These gaps have been identified either by teacher assessment or through formal tests such as NTS or PUMA.

It is deliberately designed to offer teachers the maximum flexibility to intervene precisely and effectively.

How do the learning sequences work?



- ★ The learning sequences are labelled with a year group and a number, for example:
Year 5, Learning sequence 1
Year 5, Learning sequence 2
Year 5, Learning sequence 3
- ★ The sequences progress from one to the next.
- ★ They are designed to be taught either in order or as stand-alone sequences.
- ★ Learning sequence 1 supports the learning of content that may have been taught and assessed in the Autumn term.
- ★ Learning sequence 2 links to the Spring term, and Learning sequence 3 to the Summer term.
- ★ If the end of year assessment shows that a child is insecure in a particular concept, such as how to do columnar subtraction with large numbers, you use Learning sequence 3 from the previous year group in the Autumn term.
- ★ This may help bring the child up to speed – your Autumn term assessment will confirm if this is the case.
- ★ You can, of course, use any learning sequence that meets the needs of a particular child or group of children.

Ways to use *Shine Maths*

If you have been brought to the learning sequences through a standardised test such as NTS or PUMA, the test will have produced a report indicating which learning sequences are suggested for each child.

- ★ You could use the learning sequences to pre-teach a group of children 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 children 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 may choose to use the learning sequences to intervene with a group of children after a unit of work has been completed.

For example, if a few children struggled with their work on ordering fractions, you may decide to use days 1 and 2 from Year 5 Fractions 2 to give the children a better understanding of the concept.

- ★ You may be using this product at the beginning of the Autumn term. In this case, you may wish to use the Term 3 learning sequence from Year 4 to support children who are struggling with the transition to Year 5.

Organising groups

When planning intervention groupings, it is important to consider how much time has been given to teaching the concepts the children have found particularly challenging. It is also worth noting that some of the concepts covered in the NTS tests are not covered in the National Curriculum for this year group. Other questions may delve a little deeper into a concept than the National Curriculum guidelines suggest. Also be aware that some concepts may have been assessed in a term where they have not yet been taught in full.

Possible issues and misconceptions

When considering the results of a test, such as NTS, it is important to consider a number of generic factors (beyond those of possible gaps in knowledge or skills) that could affect a child's performance. This is not an exhaustive list as there may be individual external factors that could also have a bearing, such as the amount of sleep the child had the night before, or their situation that day.

Running out of time

Completing a test in the allocated time is a skill that is acquired through practice. This is not to advocate lots of practice tests – rather, to give pupils the opportunity to learn to complete tasks or questions, across the curriculum, within time constraints. Children need to learn how to pace themselves and how to improve the pace at which they work. Children also need to be taught strategies, such as to move on if they get stuck or select the easier questions 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 children struggle to recall number facts, such as the eight times table, 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. There are a number of games and apps that can help with this.

Test anxiety

Some children become very anxious when doing tests and there are numerous reasons for this. The school can reduce the likelihood of the children 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. Another example is writing numbers in ascending order when the question asks for descending order.

Children 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

Children frequently struggle to accurately answer word problems. Whilst the problem requires calculation skills, often the issue lies with their understanding of the question.

Children need to learn to recognise that problems have elements of both information and instructions. Multi-step problems require a sequence of actions to solve them and some children will struggle to identify the correct order. Children need to be given lots of 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

It is likely that a TA will be given responsibility for delivering the teaching sessions of this intervention. It is very important that the teacher maintains control and overview of the process. The teacher should ensure that whoever is leading the session is familiar with the materials. It is suggested that the teacher looks carefully through the available assessment information and identifies the children requiring this extra support. Please ensure the TA is given sufficient time to read and understand the sessions each day and to organise resources.

The TA and teacher work as a collaborative and supportive team, helping each other to ensure progress is maintained and that any difficulties are identified and addressed immediately. The chart below is an aide memoire to assist this process.

This table support the teacher and TA to work together to check they are both 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 target is achieved, it is clear, and 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. | |
| | Initialed by TA daily. | |
| | Initialed by teacher weekly. | |
| | Regularly monitored by Maths subject leader/SLT/SENCO. | |
| | The form is neat enough to share with other professionals or parents. | |

How to use the review and monitoring sheets

The sheets are designed to be completed by the person actually teaching the learning sequence. There are two versions. One is for use with a small group of children. The other is an individual sheet which could be used if only working with one or two children, or if the teacher wants to ensure a sharp focus on a particular child. The blank templates can be found here:

<https://www.risingstars-uk.com/specialpages/assessment/shine/maths-guidance>

Examples of both the individual and group review sheets are included. An example of helpful and effective completion, and an example of incomplete and uninformative completion, are available to assist you. Please find them here:

<https://www.risingstars-uk.com/specialpages/assessment/shine/maths-guidance>

| Key principles | Reason |
|---|---|
| All details of dates and times must be recorded accurately. | If a child makes less progress than expected, it is possible to track the attendance and see whether all sessions were taught. Sometimes TAs are asked to do other tasks and intervention teaching is seen as less important. |
| Comments on the individual pupil sheets should be restricted to progress made, skills observed, knowledge demonstrated and should not include comments relating to effort or behaviour. | Short, focused comments make it easier for the teacher to monitor the progress. |
| Negative noting is very useful for group record keeping. | Only concerns are noted. Instead of writing five times that a child knows how to reflect a shape, instead note the child who doesn't understand. |
| The TA initials his/her comments each day. | Careful monitoring by the class teacher is essential to ensure they are confident that the teaching and learning is of a high quality. |
| The teacher monitors activity and progress each week. A subject leader/member of SLT responsible for interventions monitors regularly e.g. every few weeks. | To ensure that the intervention is being delivered and monitored effectively. |