

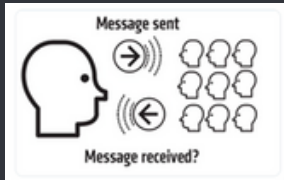
Questioning (including checking for understanding)

3 Ask questions

6 Check for student understanding



Effective questioning and classroom talk is essential to develop learning & higher order thinking. The greatest value of questioning is that they force children to practise retrieval; this strengthens and deepens memory.



Guided and Independent Practice

5 Guide student practice

7 Obtain a high success rate

9 Independent practice



Pupils complete guided or independent practice and staff review learning and plan next steps. At every stage, staff check for pupil understanding using assessment for learning strategies.

Review

We know that good teaching requires teachers to constantly refer back to the learning objective throughout the lesson and reinforce prior learning.

We understand that when the pupils are involved in identifying what they have learned in the lesson, their memories will be significantly boosted.



Cognitive Science symbols we use across the curriculum.

At Southglade, we have created symbols that are used across our curriculum to support pupils with retrieval, challenge and assessment. These symbols are used consistently across year groups, so that our pupils are familiar with the meaning of the symbols and know the expectations of the task when they are their completing work.



This symbol is used when teachers are using an assessment method to determine what pupils have remembered.



This symbol is used when teachers are wanting pupils to complete a daily, weekly or monthly review.



This symbol is used when teachers are wanting pupils to complete a retrieval activity.



This symbol is used when teachers are wanting pupils to complete a challenge or extend thinking.

Cognitive Science



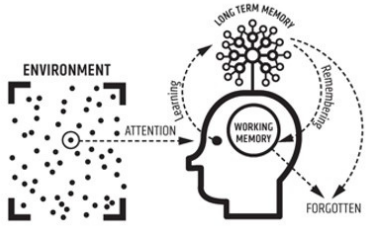
How do pupils learn at Southglade Primary and Nursery School?



An overview to explain how we use Rosenshine's principles to inform planning and teaching so that all learners are supported and make progress.

Our aims...

By adopting a whole school approach to teaching and learning, we aim deliver quality-first teaching and secure knowledge into pupils' long-term memory through developing secure schemas with connected networks of ideas.



Understanding Cognitive Science

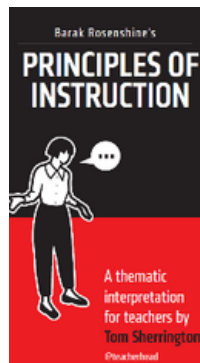
Cognitive Science is revisited regularly to reinforce the following key points:

- The capacity of the working memory is limited
- Only when knowledge is committed to the long-term memory has that knowledge been learned
- Knowledge can be forgotten from both the working and long-term memory
- Unless we give pupils opportunities to retrieve and remember knowledge from the long-term memory, it will be forgotten

Our understanding of how to optimise the working memory and manage cognitive load, ensures staff make deliberate decisions around lesson design and learning environments.

Lessons at Southglade include:

1. A daily review of previous learning using retrieval practice strategies.
2. New material presented in small steps, with teachers ensuring that each step is mastered before moving on.
3. Teachers asking a variety of open questions, and using a range of questioning techniques, to establish children's understanding.
4. Teachers model clearly, using equipment, visual and/or other aids to show children how to solve problems.
5. Time for children to do guided practice.
6. Teachers check all children's understanding in a variety of ways.
7. Children have a high rate of success, with enough mistakes to show that they are being challenged.
8. Scaffolds are provided for all.
9. Children are given opportunities to practice independently.
10. There are regular reviews of learning.



01 DAILY REVIEW Daily review is an important component of instruction. It helps strengthen the connections of the material learned. Automatic recall frees working memory for problem solving and creativity.	02 NEW MATERIAL IN SMALL STEPS Our working memory is small, only handling a few bits of information at once. Avoid its overload — present new material in small steps and proceed only when first steps are mastered.
03 ASK QUESTIONS The most successful teachers spend more than half the class time securing, demonstrating and asking questions. Questions allow the teacher to determine how well the material is learned.	04 PROVIDE MODELS Students need cognitive support to help them learn how to solve problems. Modelling, worked examples and teacher thinking out loud help clarify the specific steps involved.
05 GUIDE STUDENT PRACTICE Students need additional time to replicate, elaborate and summarise new material in order to store it in their long-term memory. More successful teachers built in more time for this.	06 CHECK STUDENT UNDERSTANDING Less successful teachers merely ask "Are there any questions?" No questions are one taken to mean no problems. False. By contrast, more successful teachers check on all students.
07 OBTAIN HIGH SUCCESS RATE A success rate of around 80% has been found to be optimal, allowing students to learn and also being challenged. Better teachers taught in small steps followed by practice.	08 SCAFFOLDS FOR DIFFICULT TASKS Scaffolds are temporary supports to assist learning. They can include modelling, teacher thinking aloud, cue cards and checklists. Scaffolds are part of cognitive apprenticeship.
09 INDEPENDENT PRACTICE Independent practice produces "overlearning" — a necessary process for new material to be recalled automatically. This ensures no overloading of students' working memory.	10 WEEKLY & MONTHLY REVIEW The effort involved in recalling recently-learned material embeds it in long-term memory. And the more this happens, the easier it is to connect new material to such prior knowledge.

Review and Retrieve Prior Learning

1 Daily review

10 Weekly and monthly review



Prior learning is revisited and learning is shared in a wider context.

Retrieval is the act of recalling learned information from memory, with no or little support.

Retrieval practice 'interrupts the forgetting'.

Sequencing Concepts and Modelling

1 Present new material using small steps

1 Provide models

1 Provide scaffolds for difficult tasks



New learning is introduced and explained in small chunks and pupils are provided with rehearsal time.

