

Features of Effective Teaching in Mathematics.

Features of effective Maths teaching

Teaching is rooted in the development of a deep conceptual understanding of important concepts.

Use of the concrete-pictorial-abstract approach to secure mathematical understanding. Teaching and learning move through carefully sequenced small steps.

Teaching and learning will address and tackle misconceptions.

Pupils' will engage in daily review of prior learning to develop fluency.

Careful questioning will assess if mathematical understanding is accurate.

Pupil's have frequent opportunities to retrieve maths facts from their long term memory quickly and efficiently. Lessons are interactive; encouraging peer talk, questioning, modelling, guided and independent practice.

Opportunities for challenge and embedding learning through greater depth will be planned.



Lessons are designed based on key features of Rosenshine's Principles of Instruction.

Lesson design
1. Daily review
Begin each lesson with a short review of previous learning: Daily review can strengthen previous
2. Present new material using small stens
'Present new material in small steps with pupil practice after each step: Only present small
amounts of new material at any time, and then assist pupils as they practice this material.'
3. Ask questions
'Ask a large number of questions and check the responses of all students: Questions help students
practice new information and connect new material to their prior learning.'
4. Provide models
'Providing pupils with models and worked examples can help them learn to solve problems faster.'
5. Guide pupil practice
'Successful teachers spend more time guiding pupils' practice of new material.'
6. Check for pupil understanding
'Checking for student understanding at each point can help students learn the material with fewer errors.'
7. Obtain a high success rate
'It is important for pupils to achieve a high success rate during classroom instruction.'
8. Provide scaffolds for difficult tasks
'The teacher provides pupils with temporary supports and scaffolds to assist them when they learn difficult tasks.'
9. Independent practice
'Require and monitor independent practice: Pupils need extensive, successful, independent practice in order for skills and knowledge to become automatic.'
10. Weekly and monthly review
'Engage pupils in weekly and monthly review: Pupils need to be involved in extensive practice in order to develop well-connected and automatic knowledge.'