

# Rosenshine's Principles of Instruction

## 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.

## New Material in Small Steps



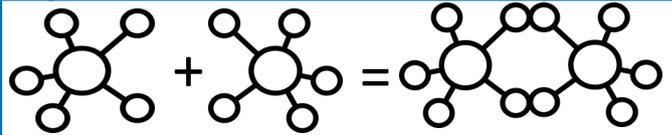
Our working memory is small, only handling a few bits of information at once. Avoid its overload—present new material in small steps and proceed only when first steps are mastered.

## Ask Questions



The most successful teachers spend more than half the class time lecturing, demonstrating and asking questions. Questions allow the teacher to determine how well the material is learned.

## Provide Models



Students need cognitive support to help them learn how to solve problems. Modelling, worked examples and teacher thinking out loud, help to clarify the specific steps involved.

## Guide Student Practice



Students need additional time to rephrase, elaborate and summarise new material in order to store it in their long-term memory. More successful teachers build in more time for this.

## Check Student Understanding



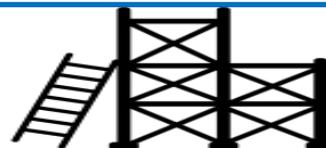
Less successful teachers merely ask "Are there any questions?" no questions are taken to mean no problems. False. By contrast, more successful teachers check on all students.

## Obtain High Success Rate



A success rate of around 80% has been found to be optimal, showing students are learning and also being challenged. Better teachers taught in small steps followed by practice.

## Scaffolds for Difficult Tasks



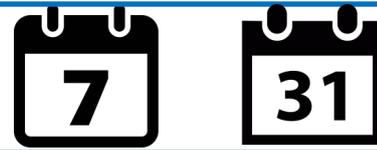
Scaffolds are temporary supports to assist learning. They can include modelling, teacher thinking aloud, cue cards and checklists. Scaffolds are part of cognitive apprenticeship.

## Independent Practice



Independent practice produces 'overlearning' - a necessary process for new material to be recalled automatically. This ensures no overloading of students' working memory.

## Weekly and 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.