

How do we support students with SEND in the delivery of our Science Curriculum?

Effective teaching remains as relevant for students with special educational needs and/or disabilities as any other student. Principles of good teaching, such as those outlined below by Rosenshine help all students make progress:

THE PRINCIPLES OF INSTRUCTION

TAKEN FROM THE INTERNATIONAL ACADEMY OF EDUCATION

This poster is from the work of Barak Rosenshine who based these ten principles of instruction and suggested classroom practices on:

- research on how the brain acquires and uses new information
- research on the classroom practices of those teachers whose students show the highest gains
- findings from studies that taught learning strategies to students.



<p>01 DAILY REVIEW</p> <p>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.</p>	<p>02 NEW MATERIAL IN SMALL STEPS</p> <p>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.</p>
<p>03 ASK QUESTIONS</p> <p>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.</p>	<p>04 PROVIDE MODELS</p> <p>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.</p>
<p>05 GUIDE STUDENT PRACTICE</p> <p>Students need additional time to rephrase, elaborate and summarise new material in order to store it in their long-term memory. More successful teachers built in more time for this.</p>	<p>06 CHECK STUDENT UNDERSTANDING</p> <p>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.</p>
<p>07 OBTAIN HIGH SUCCESS RATE</p> <p>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.</p>	<p>08 SCAFFOLDS FOR DIFFICULT TASKS</p> <p>Scaffolds are temporary supports to assist learning. They can include modelling, teacher thinking aloud, cue cards and checklists. Scaffolds are part of cognitive apprenticeship.</p>
<p>09 INDEPENDENT PRACTICE</p> <p>Independent practice produces 'overlearning' — a necessary process for new material to be recalled automatically. This ensures no overloading of students' working memory.</p>	<p>10 WEEKLY & MONTHLY REVIEW</p> <p>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.</p>

Purbeck 6 Strategy for students with SEND:

We do recognise that students with SEND may require additional support to learn aspects of the curriculum and this is why we are committed to the following classroom practices:



PURBECK 6: SUPPORTING SEND STUDENTS IN THE CLASSROOM

Create a positive and supportive environment for all students	Ensure you have a holistic understanding of students needs	Ensure all students have access to high quality teaching	Tailored resources	Work collaboratively with learning mentors and teaching assistant	Use exam concessions to support in assessments
<p>Where appropriate, we:</p> <ul style="list-style-type: none"> Welcome students to the room in a positive manner. When talking to students use clear, simple language. If a student is quiet but apparently not engaging, be aware they may be displaying secondary behaviours that may be ignored. Come down to the student's level and ask "How can I help?" and/or "What can I do to make this better for you?" 	<p>Where appropriate, we:</p> <ul style="list-style-type: none"> For TIER 1 and TIER 2 students, read and act on the information available on SIMS Student View, e.g. SEND interventions, Exam concessions, Exit passes and Lucid results. For TIER 3 and TIER 4 (EHCP), read and act on the Individual Education Plan (IEP), found in SIMS Linked Docs. These are updated regularly – any major changes will be emailed out to you. Use formative assessment to check for misconceptions; and adapt teaching appropriately. 	<p>Where appropriate, we:</p> <ul style="list-style-type: none"> Ensure students are seated in a placement that suits their learning. Provide clear and concise explanations and instructions. Scaffold work. Give students small manageable targets to work towards. Provide visual instructions for all students, e.g. display the task instructions on the whiteboard during a task. 	<p>Where appropriate, we:</p> <ul style="list-style-type: none"> Use readable fonts on PowerPoints and worksheets, e.g. Calibri, Tahoma and Verdana, and font size should be at least size 14. Use clear headings on worksheets; make these bold and twice as big as the main text font. Use a dark coloured text on a light-coloured background. Avoid pink, red and green backgrounds, as this can cause difficulties for students who are colour blind. Use a single pastel blue coloured background on PowerPoints. Print worksheets on blue paper or provide coloured overlays. 	<p>Where appropriate, we:</p> <ul style="list-style-type: none"> Direct the Teaching Assistant/Learning mentor to students you would like them to work with. Leave a space for the TA/LM to work with students. Ensure the TA/LM are aware of the intended learning outcomes. 	<p>Where appropriate, we:</p> <ul style="list-style-type: none"> Ensure that students with exam concessions can be found on SIMS. Request support by emailing AA Concessions. Please provide: <ul style="list-style-type: none"> An electronic copy of the assessment The names of students who will require support Length of test An email with the names of any student who used their extra time in class so we can update concessions On the day, send students to H24 with a paper copy of the test and any equipment they need. Only students who require a reader and extra time need to come to H24. If the student(s) just require extra time, they remain in the classroom and are offered additional time.

Diagnostic Testing:

Some students with SEND require further support with phonics and may have gaps in phonic knowledge. All students at the school are screened with Lucid and also through Reading Plus. Students who require support with reading and/or hand-writing are assessed and provided with exam concessions (used in all summative assessments) as appropriate.

Working alongside the SENCO:

The Science department draws from expertise from the SENCO to support is in best adapting our curriculum to meet the needs of students with SEND. This involves the SENCO undertaking learning walks within Science lessons and feeding back to colleagues about our approaches to teaching students and the scaffolds we use to access the curriculum. We work in partnership with our SENCO to ensure that schemes of learning are fit for purpose and accessible to students with SEND.