



Adaptive Teaching in Science

Making use of prior knowledge

This provides support for students when a new topic and new content is introduced.

Mind Maps/ Knowledge Retrieval

Activities such as these, and bubble and spider diagrams, can be used early in the teaching of a new science topic to link the new and previous learning. They can also be used to provide a scaffold or framework for ongoing learning through the topic.

Teacher intervention/discussion

When students are working on an enquiry or task, the teacher takes the opportunity to work with groups/individuals to provide scaffolding through questioning and discussion.

The teacher probes their understanding, challenges their reasoning and explores whether they can explain the scientific ideas and concepts.

Chunking or Memorisation Techniques

This includes chunking or memorisation techniques such as 'Actions to Words' where pupils add movements to their learning to develop their vocabulary and knowledge.

Peer discussion

Groups can be carefully chosen with a view to providing peer-support and by getting pairs to work together, utilising dialogic and analytic talk effectively.

Pre-taught and embedding vocabulary

The teaching of scientific-specific terms and new vocabulary, early and repeated, allows students use this vocabulary and build a fuller understanding of its meaning in different scientific contexts. Knowledge mat work, and *science stories* allow teachers to introduce and assess vocabulary. ***Time for talk***

Students need time to process new scientific ideas and information and it helps if they can verbally make sense of new ideas by talking about them with their peers.

Help sheets

These can be a checklist, visual examples or vocabulary sheets etc.

Grids and frameworks

In science, we use a variety of grids, graphs and charts as scaffolding tools, for example:

Scientific diagrams, bar charts, scatter graphs, etc.

Demonstrating our learning in many ways

We include many different ways for children to show their understanding such as drama activities, presenting to an audience, written scientific reports, etc. Each class takes learning outside to ensure learning is as hands-on and relevant to their lived experience as possible.