






# Science

The following lessons offer ways to use an interactive whiteboard to teach science, using different whiteboard tools to target different learning styles. Using an interactive whiteboard gives teachers and children a unique opportunity to project, annotate and save large-scale images.

In science lessons, the whiteboard can be used to aid practical activities such as investigations. It can also display experiments and tests that would normally not be considered safe to perform in a classroom. The use of peripherals, such as the digital microscope or the digital camera, adds an extra dimension to lessons: organisms can be observed at close proximity and habitats can be photographed for children to explore.

Using a combination of tools, the whiteboard can assist the children's structured written work: word banks, photographs and video clips can be projected onto the whiteboard as an aide-mémoire; children's results can be shared using data-handling programs and resultant bar charts or line graphs can be projected to encourage class discussions and analysis.

Lesson title	Objectives	Expected prior knowledge	Cross-curricular links
Lesson 1: Similar skeletons 	QCA Unit 4A 'Moving and growing' <ul style="list-style-type: none"> <li>To know that humans (and some other animals) have bony skeletons inside their bodies and to raise questions about different bony skeletons</li> <li>To make and record relevant observations of bones and skeletons.</li> </ul>	<ul style="list-style-type: none"> <li>Know that our skeletons help us to move and that they support our bodies.</li> </ul>	ICT QCA Unit 4C 'Branching databases'
Lesson 2: Skeleton investigation 	QCA Unit 4A 'Moving and growing' <ul style="list-style-type: none"> <li>To learn that human skeletons are internal and grow as humans grow.</li> <li>To identify a question, make a prediction and test it.</li> <li>To decide and make a body measurement.</li> <li>To use bar charts to present measurements.</li> <li>To say what the evidence shows and whether it supports the prediction.</li> </ul>	<ul style="list-style-type: none"> <li>Know that our skeletons help us to move.</li> <li>Know how to take accurate measurements.</li> </ul>	<b>Mathematics</b> Measuring: Choose and use standard metric units and their abbreviations when estimating, measuring and recording length, weight and capacity. Handling data: Answer a question by identifying what data to collect; organise, present, analyse and interpret the data in tables, diagrams, tally charts and bar charts.
Lesson 3: Supporting skeletons 	QCA Unit 4A 'Moving and growing' <ul style="list-style-type: none"> <li>To learn that the skeleton supports the body.</li> </ul>	<ul style="list-style-type: none"> <li>Know that a skeleton protects the soft, delicate parts of an organism.</li> </ul>	<b>English</b> Sentence structure and punctuation
Lesson 4: Muscles and bones 	QCA Unit 4A 'Moving and growing' <ul style="list-style-type: none"> <li>To learn that animals with skeletons have muscles attached to the bones.</li> <li>To learn that a muscle has to contract (shorten) to make a bone move.</li> <li>To learn that muscles work hard when you exercise.</li> <li>To make observations and comparisons relating to exercise and rest.</li> </ul>	<ul style="list-style-type: none"> <li>Know that bones do not move freely on their own.</li> </ul>	<b>PE</b> PoS (4a) How exercise affects the body in the short term; (4b) To warm up for different activities.
Lesson 5: Different organisms 	QCA Unit 4B 'Habitats' <ul style="list-style-type: none"> <li>To group organisms according to observable features.</li> <li>To use keys to identify plants or animals.</li> </ul>	<ul style="list-style-type: none"> <li>Know that groups of organisms share similarities.</li> </ul>	ICT QCA Unit 4C 'Branching databases'