

Year 5 Science – Whitegate End

In Year 5, we focus on Tim Peake and the European Space Agency. We create images of the Earth from Space and write recounts of life aboard the International Space Station. The children use videos of Tim Peake to participate in a virtual Q&A and create their own rockets through STEM activities.

Key Vocabulary

Astronaut, spacewalk, International Space Station, Perspective, Photography, orbit, ISS, Tim Peake

Pedagogy

Retrieval practice describes the process of recalling information from memory with little or minimal prompting. Low stakes tests (such as individual questions or quizzes) are often used as methods of retrieval practice as these require pupils to think hard about what information they have retained and can recall. When used in this way, tests can be a strategy for learning in addition to being an assessment of learning. The retrieval practice evidence base (both basic and applied) suggests that testing learning is often a better strategy for learning than restudying or recapping the same information.

Spaced practice (also referred to as spaced learning, distributed practice, distributed learning, and the spacing effect) applies the principle that material is more easily learnt when broken apart by intervals of time. Spaced practice is often contrasted with 'massed' or 'clustered' practice, whereby material is covered within a single lesson or a linear and sequential succession of learning.

Assessment is a continuous process, integral to learning and teaching. It plays an integral part in each teacher's planning and enables the evaluation of current practice as well as pupil achievement. Assessment is a daily part of the life of the school. Informal assessments, through monitoring of children's work and understanding of concepts, are used by teachers to inform their teaching. These can be seen in each teachers Whole Class Feedback Book and subsequent KUNCU (Keep Up Not Catch Up) sessions.

High Quality Texts

National Curriculum Expectations	Substantive Knowledge (What)	Disciplinary Knowledge (How)	Cultural Capital/ Experiences	Opportunities for Oracy	Opportunities for Play	Diversity and Culture/Similarities and differences	Life Skills	Outdoor Learning/Fieldwork	Cross Curricular Links
<p>UKS2 Working Scientifically</p> <p>During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> - planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary - taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate - recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs 	<p>Who is Tim Peake? Why is he important to us?</p> <p>What steps do you need to take to become an astronaut?</p> <p>Range of routes into the European Space Agency programme.</p> <p>Why is space exploration important to humans?</p> <p>How many people have been to the ISS?</p> <p>How much does it cost to launch a rocket?</p>	<p>What makes a rocket aerodynamic?</p> <p>How much energy is needed to leave the Earth?</p> <p>How does the ISS stay in the sky?</p> <p>How fast does the ISS travel?</p> <p>How does the Rocket land safely?</p> <p>How do astronauts eat/sleep/ live on craft?</p>	<p>Virtual Q&A via the BBC website</p> <p>Take a tour of the space stations via Youtube link.</p> <p>Life on the aircraft.</p>	<p>Speeches as an Astronaut trying to inspire others to join the ESA's space programme.</p>	<p>Make a moon shelter using play pod. And role play being astronauts.</p> <p>Design own rockets – who can achieve the greatest distance?</p> <p>Take part in the gallery competition on ESA</p> <p>Research Vincent Van Gogh 'The starry Night'.</p>	<p>Who has been to the ISS?</p> <p>Why is it important that agencies/count ries work together?</p> <p>Who can become an astronaut?</p>	<p>Resilience – PSHE LINK</p> <p>Working collaboratively. Independent research to promote lifelong learning.</p>	<p>Look out for ISS fly pasts – website shows where and when the ISS can be seen. observe and track.</p> <p>Climate detectives</p>	<p>Art – photography from space.</p> <p>Recreate 'A starry Night' from the moon's perspective.</p> <p>OUP Sticky writes.</p> <p>Research Vincent Van Gogh 'The starry Night'.</p>

<ul style="list-style-type: none">- using test results to make predictions to set up further comparative and fair tests- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations- identifying scientific evidence that has been used to support or refute ideas or arguments.	Life on the ISS								
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