



INNOVATORS STEAM CURRICULUM PLANNING

CYCLE A		Virtue Focus:	Aspiration & Cooperation	The Big Question: Water, water everywhere but none of it to drink! Can we make sea water safe to drink? Including mini-topic: What did the Romans do for us?	
Autumn 1 st Half		Enquiry Focus:	Asking questions		
Science	<p>Children will compare and group materials together according to whether they are solid, liquids or gases; they will learn and observe that some materials change state when they are heated or cooled and measure or research the temperature at which this happens. Children will learn about evaporation and condensation in the water cycle. They will learn how to separate of salt from water by creating their own filtration system. They will learn that some materials dissolve in liquid to form a solution and can be recovered from a solution; they will use their knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating; Children will demonstrate that dissolving and mixing and changes of state are reversible changes.</p> <p>For children in year 4, this learning will be built upon in Upper Key Stage 2.</p>			Purpose & Outcome: <ul style="list-style-type: none"> Children will develop their understanding of the water cycle. They will design a water filtration system and use it to clean water that they have collected from the beach. SCARF whole school focus (including Equality Objective where relevant): Y4- Healthy relationships, listening to feelings, bullying, assertive skills Y5- Feelings, friendship skills including compromise, assertive skills , cooperation, recognising emotional needs	
Technology	<p>Children will learn how to set up, use and record videos using a green screen to bring their Roman diary entries to life.</p>			Key Topic Texts: <div> Tuesday (David Weisner), The Children of the Water God StS. The Rhythm of the Rain, Grahame Baker-Smith </div>	Hook / Trip/ Visits & Visitors: <ul style="list-style-type: none"> Design a filtration system to get drinking water Beach trip to collect salt water for our filtration systems
Engineering	<p>Children will design a filtration system to get drinking water from salt water. They will generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>			Outdoor Learning Experiences: Children will filter and sieve water to clean it for the KS1 classes to play with. Children will develop their place value and addition knowledge through outdoor learning and the use of natural resources. Children will explore dissolving and solutions by making hot chocolate over a camping stove.	Links to Local Industry / Real Life: <ul style="list-style-type: none"> A visit from a local water chemist

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<p style="text-align: center;">Arts</p>	<p>Portrait Art & Art History: Monet's Waterlilies. Pupils will learn about the founder of the impressionist movement, Monet, and will develop their drawing ability and their understanding around the colour wheel and how to create a variety of shades.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>In humanities, children will learn about British history including the impact Romans have had, including the building of the roads. This will lead into our following STEAM topic, relating to communities, after half-term.</p>	<p>English Curriculum:</p> <p>Children will write their own narrative after exploring a large variety of narrative books. They will continue recalling key punctuation and grammar skills from previous year groups. Throughout this writing children will be taught how to edit to improve and correct their own writing. They will also explore the purpose of a range of punctuation, giving them opportunity to include this in their own writing. Their focus text is a wonderful picture book called Tuesday by David Wiesner.</p> <p>Through the topic, children will write their own diary entries from the perspective of a Roman Child. Escape from Pompeii is the high-quality text that will be used to launch this topic. They will then use their diaries to create a drama piece.</p>
<p style="text-align: center;">Mathematics</p>	<p>Children in Y4 will work with 10,000. Children will master various ways of representing number and will order and compare numbers. They will all learn to show addition and subtraction through a variety of methods including the formal written method.</p> <p>Children in year 5 will learn about place value with numbers up to a million. They will spend time exploring and rounding numbers whilst developing their knowledge around negative numbers. Children in Year 5 will apply their addition and subtraction skills to add and subtract whole numbers with more than four digits and learn to complete multi step problems.</p>	<p>Guided Reading:</p> <p>Children will explore The Rhythm of the Rain and Tuesday, along with other short texts relating to their science. Escape to Pompeii will be read as part of humanities learning.</p>