



Big Question: What do the stars above Saltney look like?

AoLE: Science and Technology	Subject: Science – Physics	Year: 9
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Big Question / Aim / Objective / Concept	Vision (Proposed outcome) / Purpose of curriculum	Prior knowledge / Learners previous knowledge
What do the stars above Saltney look like?	In this topic students will understand the world beyond ours. Looking at the solar system we are in and how the universe is structured. Including origins of the solar system. Students will be looking to day and night, Seasons and the different gravitational pulls of each planet.	Concepts of contact and non-contact forces Understand forces: Gravity. Parts of our solar system The names of the four seasons

What does progression look like in this Big Question?

Progression Indicator	Description of learning (What matters statements)	Student evidence of progression (Blooms) / Knowledge
Excelling	I can apply my knowledge of energy and forces I can research, devise and use suitable methods of inquiry to investigate my scientific questions.	Evaluate the models of the universe and how they have developed Evaluate the origins of the solar system
Advancing	I can predict the behaviour of waves in different circumstances I can use a range of models to explain and make predictions.	Explain how to calculate weight of an object Explain how we have day and night Explain the organisation of the universe
Securing	I can explore magnetic fields to investigate factors that affect their strength. I can use my findings to draw valid conclusions.	Describe the origins of the solar system Describe how the planets orbit Describe the four seasons
Beginning	I can use waves in order to learn more about the world around me. I can review my own opinions based on new scientific evidence	Recall the structure of the solar system Recall the four seasons Recall what gravity is

Authentic learning experiences (Local / National / International)	Skills (Literacy / Numeracy / DCF) / Cross Curricular links
Local: Look at the planets you can see above Saltney and the constellations of the stars. National: Compare the constellations of stars with what different areas of the country can see. International: Look at what different areas of the planet can observe in the universe	Literacy <ul style="list-style-type: none"> • Analysis of models of the universe • Written assessment Numeracy <ul style="list-style-type: none"> • Calculating the weight of objects on different planets • Comparing gravitational field strength data DCF <ul style="list-style-type: none"> • Using model and simulators to look into the solar system



	<ul style="list-style-type: none">• Researching models of the solar system.
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Assessment (How will we know that students have learnt what we taught them?)	
<p>Formative assessment:</p> <ul style="list-style-type: none">• Teacher circulating• Q&A discussions on various phenomenon and scientific understanding• Identify key terms to definitions/examples• Peer/self-assessment tasks• Group experimental work• Explanations of specific processes such as conduction, convection and radiation• Lesson tasks such as measuring angles precisely allows the use of whiteboards or tasks that feedback to the teacher to ensure pupils have learnt the desired process	<p>Summative assessment:</p> <p>Written assessment mid-point Describe the big bang theory and how the universe originated?</p> <p>Summative Assessment End of topic</p> <p>End of unit test Solar system</p>

Evaluation (to be completed 2024)		
Strengths	Areas for Development	Pupil Voice