Curriculum Rationale and Overview

Subject: Physics

Year group: 7

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
National Curriculum context	Fuels and energy sources Energy transfers Energy sources	Biology and chemistry are taught in this term	Forces as pushes and pulls Use force diagrams Forces are measured in Newtons Forces are needed for a change in motion	Frequency of sound waves Properties of sound and light waves The uses of light waves	Biology and chemistry topics are taught this term.	Our Sun as a star and other stars in our galaxy, other galaxies. Seasons and Earth's tilt Light year as a unit of astronomical science.
Scheme of Learning Title:	Energy		Forces	Waves		Space
Content *What will students know?*	The 8 different energy stores. How energy is transferred. The difference between renewable and non-renewable energy.		The effect of forces on the shape, direction and speed of an object. The effects of magnetic, gravitational and electric fields.	The features of sound and light wave. How the ear works How we see objects		Parts of the Solar System and its formation Where the Earth fits into the Solar System and the Galaxy.
What will students understand?	That energy can not be created or destroyed. Why it is so challenging to replace non-renewable energy		That a force is required if you want to change the shape, speed or direction of an object.	How we can use sound and light for medical and communication purposes		How and why we have seasons. How and why we have day and night.

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What will students be able to do?	Calculate power Calculate the efficiency of different energy transfers Identify energy transfers and changes to energy stores		Calculate resultant force Change the subject of an equation.	Explain how we hear Explain how we see colour Explain what happens when light hits a boundary Explain the impacts of hearing and sight damage.		Interpret data from graphs to compare daylight hours and average temperatures across the world. Use models to represent seasons and changes to the phases of the moon.
How will they be formally assessed?	End of topic test: Explain how energy is transferred from one object to another.		End of topic test: Recall the different types of forces and how they interact.	End of topic test: Explain how we see objects. Explain how we hear sounds.		End of topic test: Describe the constituent planets of the Solar system and the different bodies that are found in the Universe.