	Year 7 Physics					
	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
BIG Q Content *(max 5)* Please log into Seneca to support your child to understand this learning.	***What skills are needed in science?*** Explain how to write a scientific method. Describe how to complete an experiment. Collect scientific data. Analyse data in graphs. Write a scientific conclusion.	***How is energy transferred?*** Describe how energy is transferred by food. Describe how energy is transferred by fuels. Calculate the cost of energy in the home. Explain how we generate the energy we need. Describe how we use energy responsibly.	***How is energy stored?*** Define the types of energy store. Identify types of energy store. Describe gravitational potential energy. Describe kinetic energy. Describe elastic potential energy.	***How do we hear noises?*** Describe a sound wave. Compare the pitch and volume of different sounds. Explain how the ear detects sounds. Describe how sound travels through mediums (materials). Describe the types of materials that are good at absorbing and reflecting sounds.	***How do we see things?*** Describe light waves and explain how fast they travel in a vacuum. Explain how light waves reflect using mirrors. Explain why light waves refract using lenses. Explain how the eye detects light and acts like a pin-hole camera. Describe why different objects appear different colours.	***How do we apply the skills we use in science?*** Calculate values using equations. Plot scientific data on accurate graphs. Explain what factors ensure experiments are valid. Determine the accuracy of our experiments.
Vocabulary *(max 10)* Please log into MAPPER to support your child to learn these words.	Method Independent Variable Dependent Variable Control Variable Current Potential Difference Solar Cell Power Evaluation Conclusion	Energy Power Fuel Joule Watt Kilowatt-Hour Renewable Non-Renewable Standing Charge Thermal Power Station	Kinetic Energy Gravitational Potential Energy Elastic Potential Energy Dissipated Thermal Energy Conservation Transfer Wasted Energy Useful Energy Efficiency	Sound Wave Longitudinal Pitch Amplitude Frequency Volume Medium Ultrasound Auditory Range Hertz	Light Wave Transverse Primary Colour Retina Lens Reflection Refraction Opaque Translucent Transparent	Formula Units Rearrange Directly Proportional Resolution Axis Scale Anomaly Line of Best Fit
Catholic Link	Life and Dignity of the Human Person: Cleaner air means fewer illnesses.	Call to Family, Community and Participation: Schools, homes, and community buildings can share solar energy.	Rights and Responsibilities: People have the right to energy but the responsibility to protect the Earth.	Care for God's Creation: People should care for the environment by reducing noise pollution.	The Dignity of Work and Workers: Scientists, drivers, engineers, and doctors use reflected light.	Life and Dignity of the Human Person: Science should improve people's lives.
Careers Link	Solar Project- Solar panel installer	Energy cost and electricity- Oil rig engineer, designer, nutritionist	Energy stores- Sales managers, mechanics	Waves (Sound and hearing) - Audiologist, music teacher, singer	Waves (Light)- Radiologist, theatre technician, light engineer	Working scientifically- Aerospace engineer, meteorologists

Ways to enrich the Y7 Physics curriculum at home: https://www.iop.org/explore-physics/at-home

- List the electrical devices in your home such as a kettle, a television, and a laptop. Either look on the device or research the wattage of each device. Estimate how long each device is on per week and list the most expensive to the cheapest to run!
- Log how many layers people in your household wear at different times of the year. Does everyone wear the same amount?
- As a family, go outside on a "listening walk". Draw a map marking your location then sketch shapes or symbols representing every natural and mechanical noise you hear.