

## Year 8 Science

### Learning Programme 4

Reading texts that pupils will study during the learning programme

Loric for LP4 is Initiative

The value we are learning about is **Justice and Integrity**:  
Justice- Fair behaviour or treatment  
Integrity- Being honest and having strong moral principles

**What will I be learning about in this Learning Programme?**  
Students will learn about Energy and Forces.

**Where have I seen this learning before?**

Students will have previously learnt about forces in Year 7 and Energy in KS3.

**What could I use it for?**

The content of this LP contains the foundation for Physics throughout KS3 and KS4.

Week 1: Heating and cooling, Week 3: Radiation,  
Week 5: Work

In LP4.1, I will know:	11/03/24 - (WK 1)	PR Focus	Key Vocabulary	Homework
the difference between energy and temperature; what the thermal energy of an object depends on; in terms of energy, why objects change temperature.			Thermal, Thermometer, Temperature.	Activate 1: 7.2.3-7.2.4 Progress Quiz
<b>In LP4.2, I will know:</b>	<b>18/03/24 - (WK 2)</b>	<b>PR Focus</b>	<b>Key Vocabulary</b>	<b>Homework</b>
how energy is transferred by particles; how to sketch diagrams to show convection currents; how a thermal insulator can reduce energy transfer.			Conductor, Convection, Radiation.	Activate 1: 7.2.1-7.2.1 Progress Quiz
<b>In LP4.3, I will know:</b>	<b>08/04/24 - (WK 1)</b>	<b>PR Focus</b>	<b>Key Vocabulary</b>	<b>Homework</b>
some sources of infrared radiation; how energy is transferred from the Sun to the Earth; the different insulation methods in terms of conduction, convection, and radiation. Extended Task			Insulator, Reflect, Absorb.	Activate 1: 7.2.3 Skills Interactive: Solar system
<b>In LP4.4, I will know:</b>	<b>15/04/24 - (WK 2)</b>	<b>PR Focus</b>	<b>Key Vocabulary</b>	<b>Homework</b>
the value of g on Earth and on the moon; the difference between mass and weight; the formula to calculate your weight on different planets and explain changes in weight.			Gravitational force, Weight, Mass.	Activate 1: 7 part 1 Checkpoint assessment - test
<b>In LP4.5, I will know:</b>	<b>22/04/24 - (WK 1)</b>	<b>PR Focus</b>	<b>Key Vocabulary</b>	<b>Homework</b>
what work is; what simple machines do; the work needed to move object different distances.			Work, Displace, Deform.	Activate 1: 9.1.1-9.1.2 Progress quiz
<b>In LP4.6, I will know:</b>	<b>29/04/24 - (WK 2)</b>	<b>PR Focus</b>	<b>Key Vocabulary</b>	<b>Homework</b>
the energy content of food; the energy values of food and fuels; the energy in foods and fuels with the energy needed for different activities. Extended Task			Energy, Joule, Kilojoule.	Activate 1: 9.1.4 Skills interactive
<b>In LP4.7, I will know:</b>	<b>06/05/24 - (WK 1)</b>	<b>PR Focus</b>	<b>Key Vocabulary</b>	<b>Homework</b>
the energy resources used to generate electricity; the advantages and disadvantages of different energy resources; how energy is transferred from an energy resource to an electrical device in the home.			Fossil fuel, Renewable, Non-renewable.	9.3 and 9.4 Glossary Quiz
<b>In LP4.8, I will know:</b>	<b>13/05/24 - (WK 2)</b>	<b>PR Focus</b>	<b>Key Vocabulary</b>	<b>Homework</b>
what you pay for when you pay your electricity bill; how to calculate the cost for home energy usage; the energy usage and cost of running different home devices.			Watt, Power, Kilowatt.	
<b>Resources to support learning:</b>				
Kerboodle, Activate books 1 and 2 and BBC Bitesize				
<b>FFET Award Challenge for this Learning Programme:</b>				
Attend an extra-curricular club, represent the academy at an event, attend an enrichment day, receive a subject praise postcard, attend a day trip, attend a head of year breakfast or afternoon tea, achieve 100 positive points on class charts, receive a letter of commendation from SLT, be invited to a wonderful Wednesday, receive a principals letter or be invited to a principals lunch, attend a residential trip, achieve the Duke of Edinburgh bronze award.				

PRT Task 1

PRT Task 2