

## Lesson details - Thursday 25th June

Year Group: 8

Subject: Science

Where I will find my work: In this document

Hyperlinks: Throughout

### Do Now Questions

10. Name three topics you have studied this year
11. Consider these topics, which was your favourite?
12. Why did you enjoy this topic the most?

### Engage

LO: To revise science from this year, to prepare for next year.

Keywords:

Chemistry, Biology, Physics, Cell, Atom, Force

### Learn

Use the following BBC bitesize pages to refresh your knowledge!

Biology <https://www.bbc.co.uk/bitesize/subjects/z4882hv>

Chemistry <https://www.bbc.co.uk/bitesize/subjects/znxytyrd>

Physics <https://www.bbc.co.uk/bitesize/subjects/znxytyrd>

### Build

Complete BBC Bitesize quizzes from the pages linked above.

### Apply

Answer the learning grid questions below

### Review

Purple Pen the learning grid questions using the model answers

Well done!

**Pressure and motion:** learning grid. Year 8 summer learning

Read the question and do some short research. Write a couple of sentences into the answer space.

<b>Question</b>	<b>Your answer</b>
What is pressure in gases? Can you explain in terms of particles?	
What are the factors that affect motion, such as force, speed, and acceleration?	
How does air pressure influence weather patterns and the formation of wind?	
What are the different types of forces, such as gravity, friction, and magnetism?	
How do simple machines, like levers or pulleys, help us to multiply forces and make tasks easier?	

## Pressure and motion: learning grid. Year 8 summer learning

### Solutions

<b>Question</b>	<b>Answers you can use to make your answers better.</b>
What is pressure in gases? Can you explain in terms of particles?	Pressure in gases is the force that the gas particles push on their surroundings. Imagine a bunch of tiny particles moving around really fast inside a container. When they bump into the walls of the container, they create pressure because they are pushing on it. The more particles there are and the faster they move, the higher the pressure will be.
What is motion? What is a force, speed, and acceleration?	Motion is how objects move, and it is influenced by factors like force, speed, and acceleration. Force is a push or pull that can make something move or stop, speed is how fast something is going, and acceleration is how quickly an object's speed changes.
How does air pressure influence weather patterns and the formation of wind?	Air pressure is the weight of the air pushing on everything around us. Differences in air pressure create wind, and wind is responsible for moving weather systems and creating different types of weather like storms or breezes.
What are the different types of forces, such as gravity, friction, and magnetism?	Forces are like pushes or pulls that can make objects move, stop, or change direction. Gravity is a force that pulls things towards the Earth, friction is a force that opposes motion and makes things slow down, and magnetism is a force that attracts or repels certain materials.
How do simple machines, like levers or pulleys, help us to multiply forces and make tasks easier?	Simple machines are tools that can help us do work with less effort. For example, a lever is a long bar that can help us lift heavy objects by using a smaller force, and a pulley is a wheel with a rope that can help us lift or move things by pulling down on the rope. By using these simple machines, we can make tasks easier and save energy.

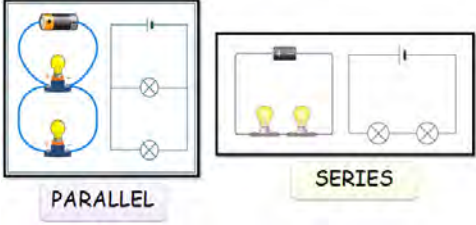
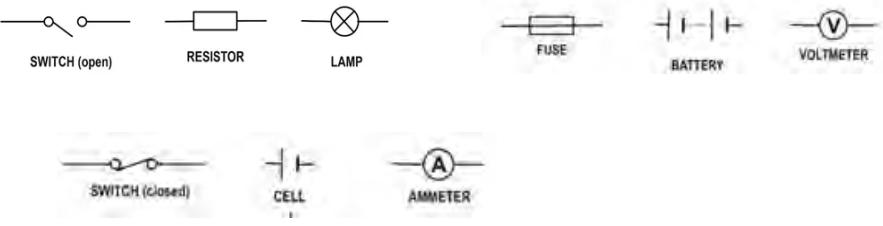
**Electricity:** learning grid. Year 8 summer learning

Read the question and do some short research. Write a couple of sentences into the answer space.

<b>Question</b>	<b>Your answer</b>
How does electricity flow through different materials? How could you investigate which materials conduct electricity and which ones do not?	
Draw a series and a parallel circuit with bulbs in a label them up.	
Draw the circuit symbols for a switch, resistor, lamp, closed switch, cell, ammeter, fuse, battery and voltmeter.	
What is resistance in a circuit? How does the length and thickness of a wire affect the flow of electricity in a circuit?	
How does rubbing certain materials together create static electricity?	

# Electricity: learning grid. Year 8 summer learning

## Solutions

Question	Answers you can use to make your answers better.
<p>How does electricity flow through different materials? How could you investigate which materials conduct electricity and which ones do not?</p>	<p>Electricity flows through materials when there are tiny particles called electrons that can move freely. To investigate which materials conduct electricity, you can set up a simple circuit using a battery, wires, and a bulb. Connect different materials into the circuit, and if the bulb lights up, it means the material conducts electricity.</p>
<p>Draw a series and a parallel circuit with bulbs in a label them up.</p>	
<p>Draw the circuit symbols for a switch, resistor, lamp, closed switch, cell, ammeter, fuse, battery and voltmeter.</p>	
<p>What is resistance in a circuit? How does the length and thickness of a wire affect the flow of electricity in a circuit?</p>	<p>Resistance in a circuit is like a roadblock that slows down the flow of electricity. Longer wires have more resistance, which means the electricity has a harder time getting through. Thicker wires have less resistance, so the electricity can flow more easily.</p>
<p>How does rubbing certain materials together create static electricity?</p>	<p>When certain materials rub together, like rubbing a balloon against your hair, they transfer tiny particles called electrons. This creates a build-up of electric charge on the materials, known as static electricity. The charged objects can attract or repel other objects, causing things like hair to stick to the balloon or creating small shocks when you touch something metal.</p>