



|  YEAR 6 (1 of 2) | | Environmental | Physics | Chemistry | Biology |
|--|--|---|---|--|--|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Electricity | Evolution and Inheritance | Energy Resources, Renewable/ Non- Renewable | Energy: Light, sound (pitch) Forces | Reproduction in Plants | Life Cycles and Reproduction |
| <p>Know the importance of the major discoveries in electricity.</p> <p>Recognise that all matter is made up of atoms (tiny particles too small to be seen by the human eye).</p> <p>Describe atoms as being made up of:</p> <ul style="list-style-type: none"> protons (+ve electrical charge) neutrons electrons (-ve electrical charge) | <p>Describe the structure of an animal cell:</p> <ul style="list-style-type: none"> cell membrane nucleus nuclear membrane DNA/genes cytoplasm vacuole <p>and a plant cell –cell wall, chloroplasts.</p> <p>Know that DNA/genes are found in the nucleus of an animal and plant cell.</p> <p>Know that some animals consist of only a single cell e.g. the amoeba.</p> | <p>Explain the difference between renewable and non-renewable energy resources.</p> <p>Understand that fossil fuels are a finite resource. (coal, natural gas,oil).</p> <p>Describe the environmental impact of fossil fuels:</p> <ul style="list-style-type: none"> Carbon dioxide and global warming Greenhouse effect oil spills Acid rain | <p>Know that sound and light are forms of energy.</p> <p>Extend work from Y3</p> <p>Recognise that light appears to travel in straight lines.</p> <p>Look at a range of phenomena including rain-bows, soap bubbles, objects looking bent / refracted in water and coloured filters.</p> <p>Find patterns between the pitch of a sound and features of the object that produced it.</p> | <p>Describe the sexual reproduction of flowering plants e.g. peas.</p> <p>Know the functions of:</p> <ul style="list-style-type: none"> sepals petals stamen (male) anther, pistil (female) ovary or ovule | <p>Describe the differences in the life cycles of a mammal, an amphibian (frog—external fertilisation), an insect and a bird and identify internal or external fertilisation.</p> <p>Describe the changes as humans develop to old age.</p> |
| <p>Describe electricity as a flow of electrons.</p> <p>Understand that static electricity is caused when electrons are transferred.</p> <p>Associate the brightness of a bulb or the volume of a buzzer with the number and voltage of cells in a circuit.</p> | <p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</p> <p>Recognise that living things produce offspring of the same kind but normally offspring vary and are not identical to their parents.</p> <p>Ctd on next page</p> | <p>Recognise advantages and disadvantages of both types of energy resources (including climate change).</p> <p>Recognise their role in sustaining energy resources and taking care of the Earth.</p> <p>Understand the link between energy resources and global sustainability.</p> | <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force / transfer of energy to have a greater effect.</p> | <p>Understand the process of seed and fruit production:</p> <ol style="list-style-type: none"> pollen wind, insect and bird pollination. fertilisation Growth of ovary Mature fruit Seed germination and plant growth. | <p>Know the reproductive organs of humans:</p> <ul style="list-style-type: none"> testes (sperm) ovaries (eggs) <p>Describe the development of the embryo:</p> <ul style="list-style-type: none"> egg zygote embryo growth in uterus foetus newborn. |

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| Understand how electricity should be used safely. | Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. | | | | |
| Use recognised symbols when representing a simple circuit diagram. | | | | | |
| Compare and give reasons for variations in how components function, including: <ul style="list-style-type: none"> brightness of bulbs loudness of buzzers on/off position of switches | | | | | |
| Understand the term electrical potential/energy. (simple) | | | | | |