



## Science End Points 2022-2023



### Year 1

#### Plants

- Plants grow from seeds/bulbs and have different parts
- Plants need light and water to grow and survive
- Plants are important
- We can eat lots of plants
- Trees have 4 main parts

#### Animals including Humans

- There are many different animals with different characteristics.
  - Fish, amphibians, reptiles, birds and mammals.
- Some animals are carnivores, some herbivores and some are omnivores.
- The body parts associated with senses can be labelled on a body map.

#### Seasons

- There are 4 seasons
- There are lots of different types of weather: Rain, Sun, Cloud, Wind, Snow, etc
- Days are longer and hotter in the summer
- Days are shorter and colder in the winter

#### Materials

- There are many different materials that have different properties.
- Materials that have similar properties are grouped into metals, rocks, fabrics, wood, plastic and ceramics (including glass).
- The properties of a material determine whether they are suitable for a purpose.



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<u>Year 2</u>
Plants
<ul style="list-style-type: none"><li>• Plants need light, water and warmth to grow and survive</li></ul>
Animals including Humans
<ul style="list-style-type: none"><li>• Animals and humans have babies that grown into adults.</li><li>• Animals and humans air, water, shelter and food to survive.</li><li>• Healthy diet and exercise is important.</li></ul>
Living Things & Their Habitats
<ul style="list-style-type: none"><li>• Some things are living, dead and some have never lived.</li><li>• Habitats differ based on a living thing needs.</li><li>• Some things are living, some were once living but now dead and some things never lived.</li><li>• Animals find their food in their habitats in different ways. .</li></ul>
Forces
<ul style="list-style-type: none"><li>• Pushing and pulling can make things move faster or slower.</li><li>• Things can move in different ways.</li><li>• Bigger pushes and pulls have bigger effects</li><li>• Objects sink and float</li></ul>
Materials
<ul style="list-style-type: none"><li>• Materials have different properties and suitability.</li><li>• Some materials can be changed by squashing, bending, twisting and stretching.</li></ul>



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### Year 3

#### Plants

- Plants are producers, they make their own food.
- Their leaves absorb sunlight and carbon dioxide
- Plants have roots, which provide support and draw water from the soil
- Flowering plants have specific adaptations which help it to carry out pollination, fertilisation and seed production
- Seed dispersal improves a plants chances of successful reproduction
- Seeds/bulbs require the right conditions to germinate and grow.

#### Animals including humans

- Different food groups provides different things.
- Humans and some other animals have skeletons and muscles for support, protection and movement.

#### Forces & Magnetism

- Surfaces affect the way things move on them.
- Pulleys make an object easier to lift.
- Magnetic forces can act at a distance.
- Magnets attract and repel each other and some attract and repel different materials.
- Magnets have two poles.

#### Light & Sound

- Light is needed to see things.
- Light is reflected from surfaces.
- Light from the sun can be dangerous.
- Shadows are formed when the light from the sun is blocked by a solid object.
- Shadows change size and shape.

#### Materials (Rocks)

- There are different types of rock.
- There are different types of soil.
- What fossils are.
- Fossils tell us what has happened before.
- Fossils provide evidence.



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<u>Year 4</u>
Animals including humans
<ul style="list-style-type: none"><li>• The functions of the digestive system.</li><li>• There are 5 main types of teeth that have different functions</li><li>• Food chains consist of producers, predators and prey.</li></ul>
Living things & their habitats
<ul style="list-style-type: none"><li>• Living things can be divided into groups based upon their characteristics</li><li>• Classification keys can be used to group and organise living things.</li><li>• Some environmental changes pose a danger to living things.</li></ul>
Electricity
<ul style="list-style-type: none"><li>• Common appliance around the home run on electricity.</li><li>• What a series circuit is and the components that make it.</li><li>• Troubleshoot circuits when a bulb is not lit.</li><li>• Make and use a simple switch.</li><li>• A conductor allows electricity to pass.</li><li>• An insulator does not pass electricity.</li><li>• Electrical safety.</li></ul>
Materials: Solids, liquids & gases
<ul style="list-style-type: none"><li>• Identify solids, liquids and gases.</li><li>• Materials change state.</li><li>• Evaporation and condensation play a part in the water cycle.</li></ul>



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### Year 5

#### Animals including humans

- Our bodies change as we grow older.
- Puberty is something we all go through, a process which prepares our bodies for being adults, and reproduction
- Hormones control these changes; which can be physical and/or emotional.
- Some organisms reproduce sexually where offspring inherit information from both parents.
- Some organisms reproduce asexually by making a copy of a single parent.

#### Forces

- Gravity is a force where unsupported objects fall to the floor
- Air resistance is a force
- Water resistance is a force
- Friction is a force
- Levers, pulleys and gears allow a smaller force to have a greater effect.

#### Earth & Space

- How planets, move in relation to the sun.
- How the moon and Earth move.
- The Earth and Moon are spherical bodies.
- Day and night occur because of the Earth's rotation.

#### Materials & Separation

- The temperature effects the rate of evaporation in the water cycle.
- Some materials dissolve and some can be recovered from a solution.
- Some mixtures can be separated.



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<u>Year 6</u>
Animals including humans
<ul style="list-style-type: none"><li>• The main parts of the circulatory system and functions.</li><li>• A balanced diet is needed for a healthy body and mind.</li><li>• How nutrients and water are transported within animals and humans.</li></ul>
Evolution & Inheritance
<ul style="list-style-type: none"><li>• Life cycles have evolved to help organisms survive to adulthood.</li><li>• Over time the characteristics that are most suited to the environment become increasingly common.</li><li>• Fossils can be used in different ways to find out about the past.</li><li>• Similarities can be found in offspring of humans and animals.</li></ul>
Living things & their habitats
<ul style="list-style-type: none"><li>• Classify living things into broad groups according to observable characteristics and based on similarities and differences.</li><li>• Give reasons for classifying plants and animals based on specific characteristics.</li></ul>
Electricity
<ul style="list-style-type: none"><li>• Several things affect the brightness of a bulb, volume of a buzzer and speed of a motor.</li><li>• Symbols for components in a circuit.</li></ul>
Light & Sound
<ul style="list-style-type: none"><li>• Light travels in straight lines and light is reflected into our eyes.</li><li>• Light travels to our eyes. Light is reflected from objects to our eyes.</li><li>• Shadows are cast because light travels in straight lines.</li><li>• How some optical instruments work.</li></ul>
Materials
<ul style="list-style-type: none"><li>• All matter (including gas) has mass.</li><li>• Sometimes mixed substances react to make a new substance. These changes are usually irreversible.</li><li>• Heating can sometimes cause materials to change permanently. When this happens, a new substance is made. These changes are not reversible.</li><li>• Indicators that something new has been made are: The properties of the material are different (colour, state, texture, hardness, smell, temperature)</li></ul> <p>If it is not possible to get the material back easily it is likely that it is not there anymore and something new has been made (irreversible change)</p>