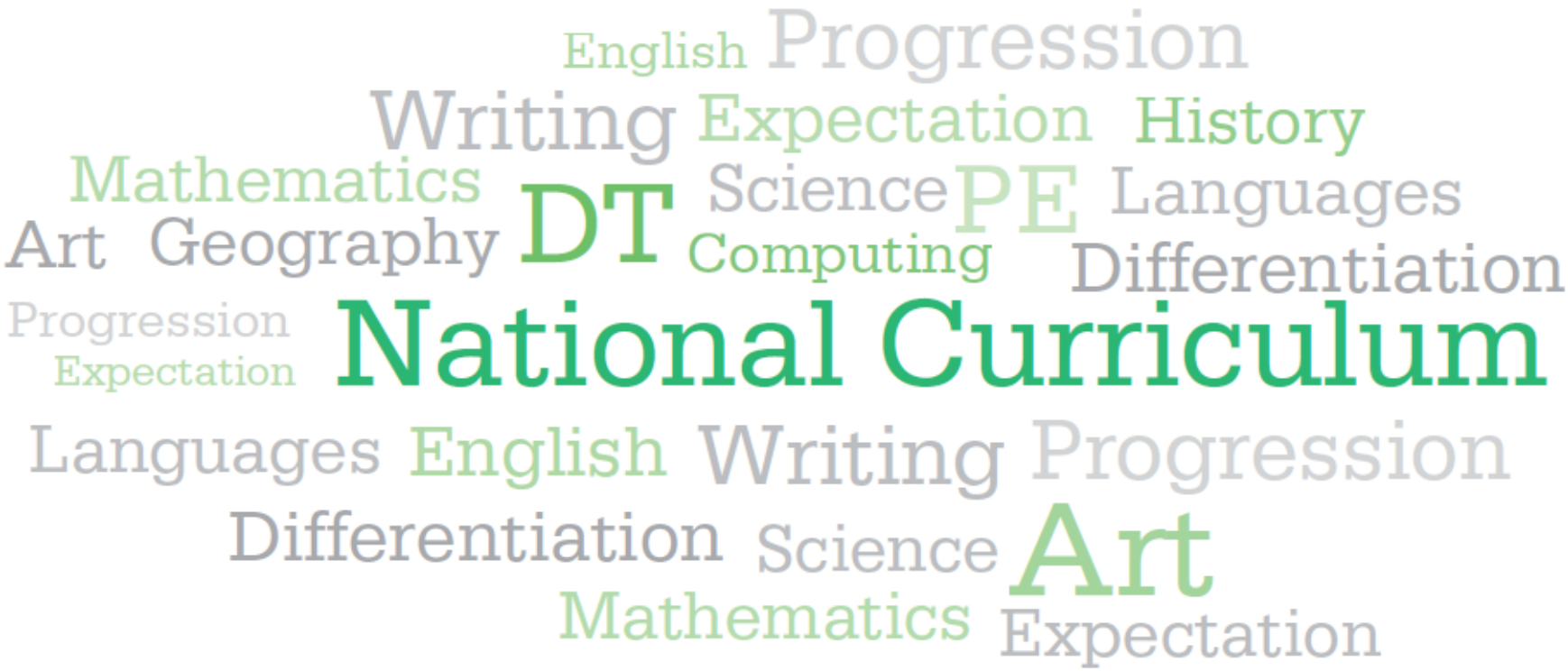
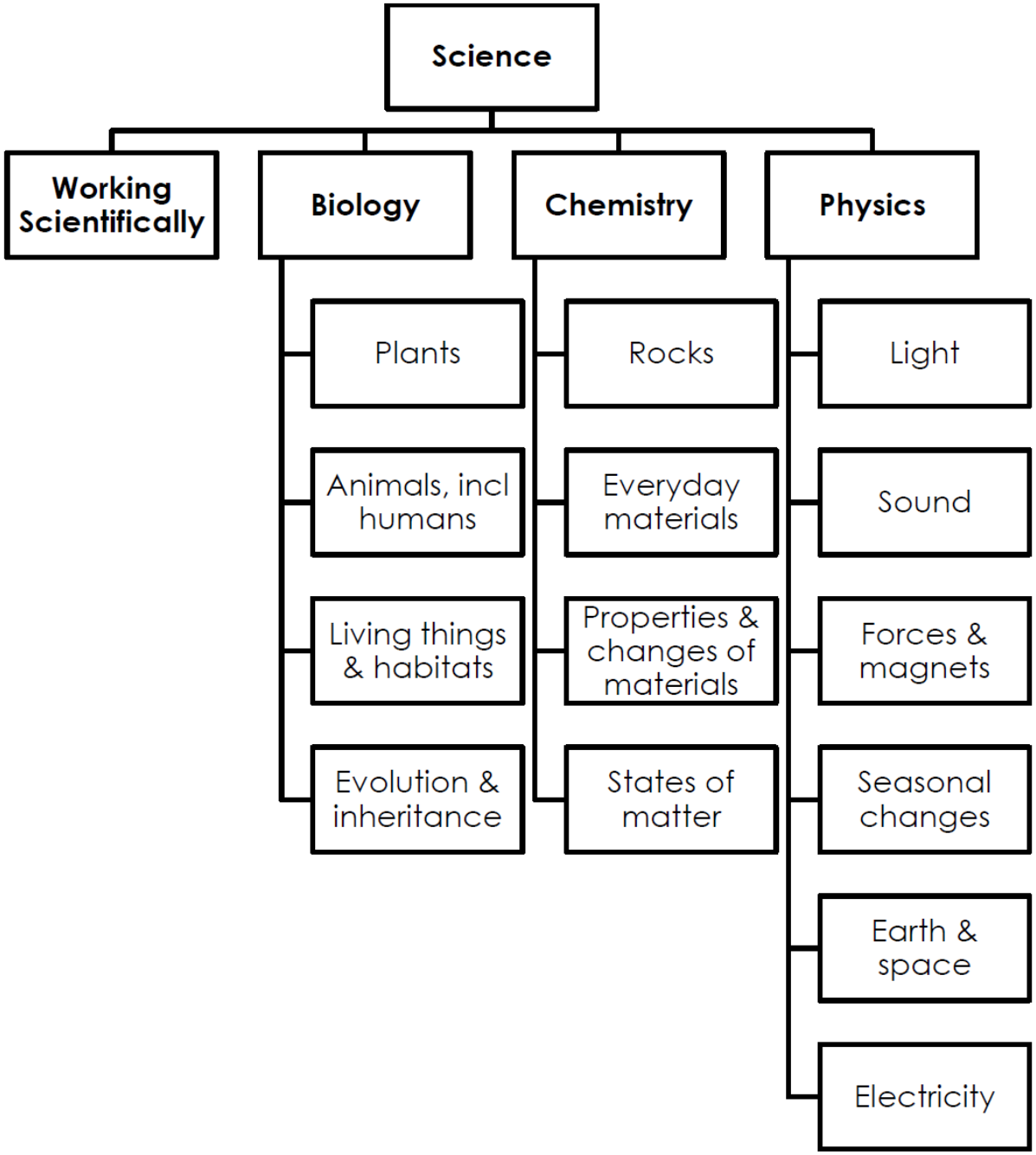
FOCUS MINIS

FOCUS EDUCATION




# Progression in the new National Curriculum



| | Biology | | | | Chemistry | | | | Physics | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Plants | Animals, including humans | Living things & habitats | Evolution & inheritance | Rocks | Everyday materials | Properties & changes of materials | States of matter | Light | Sound | Forces & magnets | Seasonal changes | Earth & space | Electricity |
| Yr 1 | X | X | | | | X | | | | | | X | | |
| Yr 2 | X | X | X | | | X | | | | | | | | |
| Yr 3 | X | X | | | X | | | | X | | X | | | |
| Yr 4 | | X | X | | | | | X | | X | | | | X |
| Yr 5 | | X | X | | | | X | | X | | X | | X | |
| Yr 6 | | X | X | X | | | | | | | | | | X |

| **Unit:** Working scientifically (taught throughout each unit) | **Y1** | **Y2** | **Y3** | **Y4** | **Y5** | **Y6** |
|---|---|---|---|---|---|---|
| | Yes | Yes | Yes | Yes | Yes | Yes |

| **Years 1 and 2** | **Years 3 and 4** | **Years 5 and 6** |
|---|---|---|
| Asking simple **questions** and recognising that they can be answered in different ways | Asking relevant **questions** and using different types of scientific enquiries to answer them | Planning different types of scientific enquiries to answer **questions**, including recognising and controlling variables where necessary |
| | Using straightforward **scientific evidence** to answer questions or to support their findings | Identifying **scientific evidence** that has been used to support or refute ideas or arguments |
| **Observing** closely, using simple equipment | Making systematic and careful **observations** and, where appropriate, taking accurate **measurements** using standard units, using a range of equipment, including thermometers and data loggers | Taking **measurements**, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where necessary |
| Performing simple **tests** | Setting up simple practical **enquiries**, comparative and **fair tests** | |
| **Identifying** and **classifying** | **Identifying** differences, similarities or changes related to simple scientific ideas and processes. | |
| **Using their observations** and ideas to suggest answers to questions | **Using results** to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions | **Using test results** to make predictions to set up further comparative and fair tests |
| Gathering and **recording** data to help in answering questions | **Recording** findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables | **Recording** data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs |
| | Gathering, recording, classifying and presenting **data** in a variety of ways to help in answering questions | |
| | **Reporting** on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions | **Reporting** and **presenting** findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations |
| *Pupils should read and spell scientific **vocabulary** at a level consistent with their increasing word and spelling knowledge at key stage 1.* | *Pupils should read & spell scientific **vocabulary** correctly & with confidence, using their growing word reading & spelling knowledge.* | *Pupils should read, spell & pronounce scientific **vocabulary** correctly.* |

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Plants | Yes | Yes | Yes | - | - | - |

| Year 1 | Year 2 | Year 3 |
|---|---|---|
| ▪ Identify and **name a variety of common wild & garden plants**, including deciduous and evergreen trees.<br>▪ Identify and describe the basic **structure** of a variety of common flowering plants, including trees. | ▪ Observe and describe **how seeds and bulbs grow** into mature plants.<br>▪ Find out and describe how **plants need** water, light and a suitable temperature to grow and stay healthy. | ▪ Identify and describe the **functions** of different parts of flowering plants: roots, stem/trunk, leaves and flowers.<br>▪ Explore the requirements of plants for life & growth (air, light, water, nutrients from soil, & room to grow) & how they vary from plant to plant.<br>▪ Investigate the way in which **water is transported** within plants.<br>▪ Explore the **part that flowers play** in the life cycle of a flowering plant, including pollination, seed formation and seed dispersal. |

| **Unit:** Animals, including humans | **Y1** | **Y2** | **Y3** | **Y4** | **Y5** | **Y6** |
|---|---|---|---|---|---|---|
| | Yes | Yes | Yes | Yes | Yes | Yes |

| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
|---|---|---|---|---|---|
| ▪ **Identify and name** a variety of common animals including fish, amphibians, reptiles, birds & mammals.<br>▪ **Identify and name** a variety of common animals that are carnivores, herbivores and omnivores.<br>▪ Describe and compare the **structure** of a variety of common animals (fish, amphibians, reptiles, birds & mammals, including pets). | ▪ Notice that animals, including humans, have **offspring** which grow into adults.<br>▪ Find out about and describe the **basic needs of animals**, including humans, for survival (water, food and air). | ▪ Identify that animals, including humans, need the right types and amount of **nutrition**, and that they cannot make their own food; they get nutrition from what they eat | ▪ Construct and interpret a variety of **food chains**, identifying producers, predators and prey. | | ▪ Describe the ways in which **nutrients** and water are transported within animals, including humans. |

| | | | | | |
|---|---|---|---|---|---|
| ▪ Identify, name, draw and label the basic parts of the **human body** and say which part of the body is associated with each sense. | ▪ Describe the importance for **humans** of exercise, eating the right amounts of different types of food, and hygiene. | ▪ Identify that **humans** and some animals have skeletons and muscles for support, protection and movement. | ▪ Describe the simple functions of the basic parts of the **digestive system** in humans.<br>▪ Identify the different types of **teeth** in humans and their simple functions | ▪ Describe the **changes as humans develop** from birth to old age. | ▪ Identify and name the main parts of the **human circulatory system**, and describe the functions of the heart, blood vessels and blood.<br>▪ Recognise the **impact of diet, exercise, drugs and lifestyle** on the way their bodies function |

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Living things and habitats | - | Yes | - | Yes | Yes | Yes |

| Year 2 | Year 4 | Year 5 | Year 6 |
|---|---|---|---|
| ▪ Explore and compare the differences between things that are **living, dead, and things that have never been alive**.<br>▪ Identify that most living things live in **habitats** to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.<br>▪ **Identify and name a variety of plants and animals** in their habitats, including micro-habitats.<br>▪ Describe **how animals obtain their food** from plants and other animals, using the idea of a simple **food chain**, and identify and name different sources of food. | ▪ Recognise that living things can be grouped in a variety of ways.<br>▪ Explore and use classification keys to help group, identify & name a variety of living things in their local & wider environment.<br>▪ Recognise that **environments can change** and that this can sometimes pose dangers to living things. | ▪ Describe the differences in the **life cycles** of a mammal, an amphibian, an insect and a bird.<br>▪ Describe the life process of **reproduction** in some plants and animals. | ▪ Describe how living things are **classified** into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.<br>▪ Give reasons for **classifying** plants and animals based on specific characteristics. |

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Evolution and inheritance | - | - | - | - | - | Yes |

**Year 6**

- Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.
- Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.
- Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Rocks | - | - | Yes | - | - | - |

**Year 3**

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.
- Describe in simple terms how fossils are formed when things that have lived are trapped within rock.
- Recognise that soils are made from rocks and organic matter.

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Everyday materials | Yes | Yes | - | - | - | - |

| Year 1 | Year 2 |
|---|---|
| ▪ Distinguish between an **object and the material** from which it is made.<br>▪ **Identify and name** a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.<br>▪ Describe the simple **physical properties** of a variety of everyday materials.<br>▪ **Compare and group** together a variety of everyday materials on the basis of their simple physical properties. | ▪ Identify and **compare the suitability** of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.<br>▪ Find out how the shapes of solid objects made from some materials can be changes by squashing, bending, twisting & stretching. |

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Properties and changes of materials | - | - | - | - | Yes | - |

| Year 5 |
|---|
| ▪ Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.<br>▪ Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.<br>▪ Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.<br>▪ Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.<br>▪ Demonstrate that dissolving, mixing and changes of state are reversible changes.<br>▪ Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. |

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| States of matter | - | - | - | Yes | - | - |

**Year 4**

- Compare and group materials together, according to whether they are solids, liquids or gases.
- Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Light | - | - | Yes | - | Yes | - |

**Year 3**

- Recognise that they need light in order to see things and that dark is the absence of light.
- Notice that light is reflected from surfaces.
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
- Recognise that shadows are formed when the light from a light source is blocked by a solid object.
- Find patterns in the way that the size of shadows change.

**Year 5**

- Recognise that light appears to travel in straight lines.
- Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.
- Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.
- Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Sound | - | - | - | Yes | - | - |

**Year 4**

- Identify how sounds are made, associating some of them with something vibrating.
- Recognise that vibrations from sounds travel through a medium to the ear.
- Find patterns between the pitch of a sound and features of the object that produced it.
- Find patterns between the volume of a sound and the strength of the vibrations that produced it.
- Recognise that sounds get fainter as the distance from the sound increases.

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Forces and magnets | - | - | Yes | - | Yes | - |

| Year 3 | Year 5 |
|---|---|
| ▪ Compare how things move on different surfaces.<br>▪ Notice that some forces need contact between two objects, but magnetic forces can act at a distance.<br>▪ Observe how magnets attract or repel each other and attract some materials and not others.<br>▪ Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.<br>▪ Describe magnets as having two poles.<br>▪ Predict whether two magnets will attract or repel each other, depending on which poles are facing. | ▪ Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.<br>▪ Identify the effects of air resistance, water resistance and friction that act between moving surfaces.<br>▪ Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have greater effect. |

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Seasonal changes | Yes | - | - | - | - | - |

**Year 1**

- Observe changes across the four seasons.
- Observe and describe weather associated with the seasons and how day length varies.

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Earth and space | - | - | - | - | Yes | - |

**Year 5**

- Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.
- Describe the movement of the Moon relative to the Earth.
- Describe the Sun, Earth and Moon as approximately spherical bodies.
- Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

| Unit: | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|---|---|---|---|---|---|---|
| Electricity | - | - | - | Yes | - | Yes |

| Year 4 | Year 6 |
|---|---|
| ▪ Identify common appliances that run on electricity.<br>▪ Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.<br>▪ Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.<br>▪ Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.<br>▪ Recognise some common conductors and insulators, and associate metals with being good conductors. | ▪ Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.<br>▪ Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.<br>▪ Use recognised symbols when representing a simple circuit in a diagram. |