

Materials

Reception

- Rainbow experiment
- drawing of natural materials
- pancakes – changing state
- floating and sinking
- Recycling
- **Possible Big Question: What are things made from? Is form fixed?**



Year 1

- Distinguish between an object and the material from which it is made
- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock
- Describe the simple physical properties of a variety of everyday materials
- Compare and group together a variety of everyday materials on the basis of their simple physical properties
- **Possible Big Question: Which materials can be recycled and why?**



Year 2

- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching
- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- **Possible Big Question: How have the materials we use changed over time?**



Year 3

Rocks

- 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.
- **Possible Big Question: Who was Mary Anning and what did she discover?**



Year 4

States of Matter

- 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.
- **Possible Big Question: Why is burning coal not sustainable?**



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
- Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
- Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- Demonstrate that dissolving, mixing and changes of state are reversible changes
- 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
- Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- **Possible Big Question: What are microplastics and why are they harming the planet?**

Year 6

- No explicit focus in this year group, however this can be added in addition to what is already taught.