Sauncey Wood Primary School

Year 2
Autumn
Science

# Materials - uses and properties

*In this unit pupils will be exploring the properties of materials and how they are used in different ways. They will be investigating, observing and evaluating. They will be experimenting with different materials to explore the properties they have.*

## Background information

There are lots of different materials, metal, wood, plastic, glass, rock, brick, paper, cardboard, these materials are suitable for lots of different jobs. Some materials have more than one property, increasing its suitability for purpose. For example glass is transparent, rigid and weatherproof.
Some materials can be easily changed with force and others can't be changed easily. Some materials can be changed by squashing, bending, twisting and stretching, this is as a result of their properties.

## Knowledge and Understanding

In this unit pupils will learn…

- Identify uses of some common materials.
- Give a reason why a material is suitable for its job.
- Identify materials that can be easily changed with force and those that can't easily be changed.
- Describe pushes and pulls needed to change a material as big or small.
- Recognise that some materials have more than one property which increases its suitability.
- Identify and compare the suitability of a variety of everyday materials.
- Suggest several reasons why a material may or may not be suitable for a particular purpose.
- Find out how the shapes of a solid object from some materials can be changed by squashing, bending, twisting and stretching.
- To describe changes in shapes as a result of the action of pushes, pulls and twists.
- Explain why plastics cause problems in the oceans.
- Explain the importance of reusing and recycling.
- Begin to describe how scientists have invented new materials .

## Enquiry skills and Key concepts

- Use evidence to compare materials and talk about what they have found out and how they found it out.
- To be able to suggest what might happen to a material when it is changed in a certain way.
- Describe what they can see happening to the materials.
- Plan to perform simple tests on different materials to observe what might happen.
- Present findings in simple tables, diagrams, pictograms, sorting circles, bar charts and templates.

## Key Vocabulary

**metal** – coins, cans, cars, table leg.

**Wood** – matches, floors, bench, shelves.

**Plastic** – cups, toys, ruler, chair.

**Glass** – windows, vase, bowl, glasses.

**rock** – buildings, bridges.
**Brick** – walls, houses.
**paper** – tissues, plates, cups, straws.
**Cardboard**- boxes, toilet rolls.
**Soft** – smooth to touch.
**Hard** – solid, firm and rigid, not easily broken.
**stretchy** – to pull or draw out in length and width.
**shiny** – reflecting light.
**dull** – lacking brightness.
**rough** – uneven or irregular surface.
**smooth** – even and regular surface.
**bendy** – soft and flexible.
**not bendy** – hard and not flexible.
**absorbent** – able to soak up liquid easily.
**not absorbent** – not able to soak up liquid easily.