

# MATERIALS

## Core Learning of this unit

- Names of a variety of **everyday materials**, including wood, plastic, glass, metal, brick, paper, fabrics, elastic, **foil** water, and rock.
- The difference between an **object and the material** from which it is made.
- The **physical properties of materials** such as: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent.
- Learn about **biodegradable plastics**, with a materials scientist.
- Shadows** are formed when **light** hits an opaque object is blocked. Shadows are the **same shape** as the object that is **blocking the light**.

## Object, Materials and Physical Properties

Object: brick

Material: clay

+ sand

+ soil



Physical Properties: hard, rough

### Prior Learning & Curriculum links



#### Prior learning

- Foundation Stage: Knowledge of similarities and differences in relation to objects and materials (eg; clothes they wear in winter).

#### Curriculum Links

- Geography: Exploring how plastic damages marine life.
- DT: Making a flying object (a kite) using suitable recycled materials.
- History: Exploring different materials used to make aircraft overtime.
- PSHCE: Article 24: Children have the right to a clean and safe environment.

### Working Scientifically



- Children will **describe** the simple physical properties of a variety of everyday materials.
- Children will **compare** everyday materials by their physical properties.
- Children will **categorise** a variety of everyday materials on the basis of their simple physical properties.

### Vocabulary



- Absorbent:** able to soak up easily.
- Stiff:** not easily bent or changed in shape
- Stretchy:** able to stretch.
- Opaque:** not able to be seen through.
- Transparent:** able to be seen through.
- Rough:** not smooth or level.
- Waterproof:** keeps out water.
- Flexible:** can bend without breaking.
- Rigid:** unable to bend or be forced out of shape.
- Opaque:** A material that does not let light pass through.
- Transparent:** A material that lets light through and you can see things very clearly through it.



#### Significant People

**Revathi S. Kamath** is an Indian architect in Delhi. She is a pioneer of mud architecture in India. She is also credited with building the tallest stainless steel structure in India.