

Materials – Unit 1

Definition: Material - It is anything made from matter that can be shaped or manipulated in order to make something.
A material is anything that physically occupies a space and has mass

Physics definition: Physics is the study of nature and how matter and energy behave.

POS: Y1 Everyday materials

- 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.

Prior learning: EYFS

- Observe and interact with natural processes i.e. light travelling through transparent materials
- Classifying objects from the environment around them

Links to other science topics:

- Changes of state – apply properties to each state of matter
- Rocks – apply the properties of materials to rocks

Disciplinary concepts:

Similarity and difference: How are objects different or similar?

Common misconceptions:

Children can be confused about the meaning of the word “material” – many might have heard the word only in the context of fabric. Another common misconception is that materials are all solids – children might classify liquids and gases as non-materials. This misconception can be reinforced if the materials the children investigate include only solids such as wood, glass and plastic. Avoid this by including materials such as gases (air in a balloon) and liquids when discussing materials with the children. A material is anything made from matter that can be shaped or manipulated in order to make something. A material is therefore anything that physically occupies space and has mass, which can be a solid, a liquid or a gas.

Core Knowledge:

- Everything around us is made out of a material
- Understand the term material
- Explore misconception of ‘material’ – material is not just fabric, it can be a solid liquid or gas
- Explore natural materials – rock (granite, limestone, marble), fossil fuel (coal, oil), clay, water, air, wood, plant fibre (cotton, hemp), animal products (wool, leather, tallow, horn), plant extracts (latex)
- Explore manufactured materials – metals, paper, rubber, clay, fabrics, plastics, ceramics, synthetic materials
- Understand and can use appropriately manufactured, natural, matter and synthetic in simple choices

Wider working knowledge:

Story of the rubber plant – how sap of the plant is used to make rubber and from this waterproof clothes can be made
How what people have written on has changed over the years – Walls (Stone Age), Papyrus (Ancient Egyptians) Paper

Working scientifically:

- Identify everyday objects according to a given property
- Asking simple questions and recognise that they can be answer in different ways
- Observing closely using simple equipment
- Perform simple tests
- Identifying and classifying
- Using their observations and ideas to suggest answers to questions
- Gathering and recording data to help in answering questions

End points:

- To name a wide range of materials
- To find and name objects made from different materials
- To sort objects according to materials which they are made from

CPD: Reach out CPD – everyday materials

Science association