



Year: 1
Term: Autumn

Science – Everyday Materials

Prior Knowledge

Use all their senses in hands-on exploration of natural materials. (EYFS - Materials, including changing materials)

Explore collections of materials with similar and/or different properties. (EYFS - Materials, including changing materials)

Talk about the differences between materials and changes they notice. (EYFS - Materials, including changing materials)

Key Knowledge:

What does material mean?

Children need to know that material is the ‘stuff’ an object is made from. All objects have a name e.g. door. Children should be able to distinguish between an object and the material that it is made from.

Identify every day materials

Wood, plastic, glass, water, metal, rock

Common materials and their properties

Wood	Hard, strong, stiff
Plastic	Strong, shiny, bendy
Glass	Transparent, smooth, stiff
Metal	Hard, strong, shiny
Water	Runny, wet, clear
Rock	Hard, strong

	
Wood	Plastic
	
Glass	Metal
	
Water	Rock

Names of some common properties of materials

Hard	Not easily broken
Soft	Easy to cut, fold or change shape
Stretchy	Can be made longer or wider without breaking
Stiff	Doesn't change shape easily
Shiny	Reflects light easily
Dull	Not very bright or shiny
Rough	Has an uneven surface
Smooth	An even surface with no lumps or bumps
Bendy	Can be bent easily
Waterproof	Keeps out water
Absorbent	Soaks up liquid easily
Transparent	Easy to see through
Opaque	Not able to see through

Comparing and grouping materials

Materials can be put into different groups by asking questions about the material.

- Hard or soft?
- Stretchy or stiff?
- Shiny or dull?
- Rough or smooth?
- Bendy or not bendy?
- Waterproof or not waterproof?
- Absorbent or not absorbent?
- Opaque or transparent?

Key Vocabulary

Prior vocabulary - Natural, hard, soft, smooth, bumpy, rough, wet, dry, sink, float

Working scientifically key vocabulary – observe, test, record, equipment, object

Properties	A way to describe something
Material	The 'stuff' an object is made out of
Liquid	Liquids can flow or be poured easily
Surface	An outside part or layer of something
Object	A thing that can be seen and touched
Absorbent	A material that can soak up liquid.
Wood	A hard material that forms the branches and trunks of trees and can be used as a building material, for making things, or as fuel.
Plastic	An artificial material that can be shaped when soft and has many different uses.
Glass	A hard, clear material that breaks easily and is used to make windows, bottles and mirrors.
Metal	A material that is generally hard and strong such as iron, gold or steel.
Water	A clear liquid without colour or taste.
Rock	A hard, strong material that is the dry, solid part of the earth's surface.

Deepening and broadening the knowledge and understanding for GDS learners:

- names objects that, e.g. metal could be used to make
- says that an item is made of metal but also identifies the metal, e.g. a gold ring, copper

Key Outcomes

- 1. What everyday materials can I find in the classroom and forest school area?**
Children will use simple instruments such as magnifying glasses to help them explore and identify everyday materials they can find in school. They will be able to explain the difference between the object and the material it is made from, group and classify them according to their properties..
- 2. What is the difference between man-made and natural materials?**
Children will learn to classify and group objects based on whether they are man-made or natural from their properties and explain their findings.

<p><i>wire (or any other types of common materials)</i></p> <ul style="list-style-type: none"> • uses more complex adjectives to describe materials, e.g. <i>absorbent, transparent, opaque, flexible</i> • devises and explains their own method of grouping materials based on simple physical properties • sorts a collection of objects using more than one physical property of the material it is made from, e.g. <i>smooth and shiny, rough and hard</i> 	<p>3. How can we sort materials by their properties? <i>Children will understand that man-made objects are created from different materials that have been manufactured e.g. plastics some objects are natural e.g. if made from wood. They will be able to label a picture or diagram of an object made from different materials.</i></p> <p>3. What materials are best to create an umbrella? <i>Children will choose an appropriate method for testing an object for a particular property and then use their test evidence to answer the questions about properties for making an umbrella.</i></p> <p>4. Why can we use certain materials to create specific objects? <i>Children will be able to explain why certain materials are used to create specific objects based on what they now know about everyday materials and their properties. They can say why for example children's toys are often made from plastic and why a window is made from glass etc.</i></p> <p>6. What materials would be best to make some bedroom curtains? <i>Children will use their knowledge of materials and their properties to explore the best materials for making curtains and present their findings using simple data e.g. how many layers of fabric/material are needed and why.</i></p>
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Key Skills:	
Knowledge Skills	
<ul style="list-style-type: none"> • 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. 	
Working scientifically	
<p>a. I can ask simple questions.</p> <p>b. I can use simple equipment to look very closely at things.</p> <p>c. I can test things in simple ways.</p> <p>d. I can group similar objects of items together.</p> <p>e. I answer questions in science by thinking about what I have seen.</p> <p>f. I can find information which helps me when I have to answer questions.</p>	

Future Learning	
<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. (Y2 - Uses of everyday materials)</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Y2 - Uses of everyday materials)</p>	