

# Year 1: Everyday Materials

## What should I already know?

Children should be able to ask questions about the place they live. Talk about why things happen and how things work. Discuss the things they have observed such as natural and found objects. Manipulates materials to achieve a planned effect

**Science - science is**  
A subject where you ask questions about how the world works and find out the answers

### National Curriculum Objectives:

- Distinguish between an object and the material from which it is made.
- Identify and name a variety of everyday materials, including wood, metal, plastic, glass, 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 properties.

## Powerful knowledge



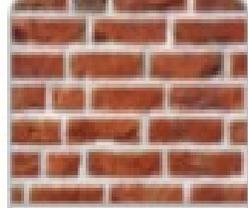
plastic



wood



metal



brick



fabric



paper



stone

The **object** is the item, the **material** is what it is made from!

Example:

The **chair** is made from **wood**.

## Significant Properties

### squashy

easily crushed or squeezed



The play dough is squashy.

### hard

not easily broken or pierced



A hard diamond.

### bumpy

uneven, raised patches



This shell is bumpy.

### absorbent

able to soak up liquid



The sponge is absorbent.

### brittle

hard, but may break easily



The glass is brittle.

### dull

lacking shine or brightness



The moth's wings are dull.

### smooth

an even and regular surface



Some smooth pebbles.

### transparent

can be seen through



This glass is transparent.

### opaque

cannot be seen through



She is hidden by the opaque screen.

### rough

uneven, irregular surface



The log has rough bark.

### translucent

allowing some light to pass through



The screen is translucent.

### shiny

reflects light, smooth surface



A shiny silver spoon.

### waterproof

repels water and liquids



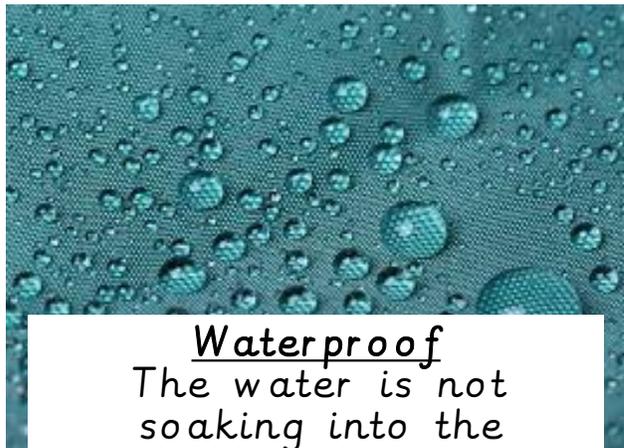
A waterproof coat.

Interesting fact -

Some materials are made by man. They are called man-made materials. Plastic is a man-made material.

# Glossary/Key Questions

<b>Object</b>	A thing that can be used. Door, chair, pencil, table.
<b>Material</b>	Materials are what objects are made from.
<b>Waterproof</b>	It keeps water out. It keeps things dry.
<b>Flexible</b>	Something that can change its shape and bend easily.
<b>Rigid</b>	Something that cannot change its shape.
<b>Opaque</b>	An object that you cannot see through.
What happens if a material is not waterproof?	The material absorbs (soaks up) the water
Why can't I see through this object?	You can't see through some objects because they are opaque.
Are all materials the same?	No! Materials have different properties which make them useful for different things.



**Waterproof**  
The water is not soaking into the material.



**Parachute**  
The material used for parachutes needs to be light, flexible and wind proof



**Flexible**

**Rigid**

## Science Year 1 - Materials - Homes

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- . 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 properties.

### In Early Years:

- Children should be able to ask questions about the place they live.
- Talk about why things happen and how things work.
- Discuss the things they have observed such as natural and found objects.
- Manipulates materials to achieve a planned effect.

### Lesson 1



Skill - Describe

Knowledge - Names different materials.

### Lesson 2



Skill - Compare

Knowledge - Objects are things. Materials are the stuff that objects are made from.

### Lesson 3



Skill - Identify, label, explore

Knowledge - Name the materials used to build a house.

### Lesson 4



Skill - Explore

Knowledge - Identify properties of materials to determine the strongest material.

WALT: Identify and name different materials.

WILF:

- Name the material.
- Describe what the material feels like.
- Describe what the material looks like.

Chn sit in a circle and feel what is inside a mystery box/bag.  
What does this material feel like?  
Encourage scientific vocabulary  
Take out the object and describe what it looks like.  
Do this with multiple materials. Repeating materials so chn understand some materials are used for more than one object. Wood, metal, plastic, glass, rock

Chn work in pairs with their backs against each other, choose an object. Choose an object. Describe the properties of the object to your partner. See if they can guess what it is made of. Swap over.

#### Recording:

Chn write a describing word for each material.

WALT: Distinguish between an object and the material from which it is made.

WILF:

- Name a variety of materials
- Find similarities
- Find differences

Show chn a wooden ruler. Ask what material they think it is made from and where that material comes from (natural, synthetic?). Talk about how it has changed (cut into blocks of wood, then cut to size, polished and marked).  
Give chn a card with different materials on them. They must keep their materials a secret. They need to go and find an object matching that material. When they have their objects, they must think of words to describe the objects and their similarities and differences with the person sitting next to them.  
Create songs for different materials to the tune of Frère Jacques. E.g Wood, wood, wood wood. It is strong, it is used for tables, it is used for chairs.

#### Recording:

Look at the pictures. Write in the name of the object and the name of the material.

WALT: Identify the materials needed to build a house.

WILF:

- Describe the materials
- Predict which material will be the most successful.
- Build a house

Go outside the school and sketch the school. Discuss the materials that have been used to make it.  
Come back in and watch a time lapse video of how to build a house. Stopping the video every time a new material is shown.  
Give chn a picture of different houses and compare how the houses have been built. Can we use more than one way of making something?

#### Recording:

Chn draw a house and label the materials that are used to build a house.  
HAPs could look at the interior.

WALT: Explore the materials for building a house.

WILF:

- Describe the materials
- Predict which material will be the most successful.
- Build a house

Go around the circle playing 'what am I?' Chn must ask questions to find out which material you are.

Read/watch 3 little pigs. Why did the first two houses fall down? Why did the third one stay standing? What materials did they build their houses out of? What material could have been used instead for the first two houses? Which material will be the most successful for house-building and why?

#### Recording:

In pairs, chn build the three pigs' houses using art straws, hay/straw, little twigs, lolly sticks, playdough, clay and Lego. Encourage them to talk about them using their scientific vocabulary.  
Will it be good material for building a house? Will it blow down when the Wolf blows? Why will it blow down? What useful properties do the materials need to have?

**Assessment:** Use the vocabulary mat to assess the children's prior knowledge and use the mats again to assess what the children have learnt.

**Key Vocabulary:** Hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy/not bendy, waterproof/not waterproof, absorbent, opaque, properties, Wood, metal, plastic, glass, rock



materials

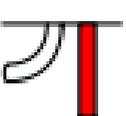


hard



soft

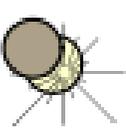
stretchy



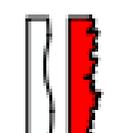
stiff



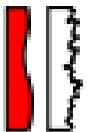
shiny



dull



rough



smooth



bendy



~~not~~



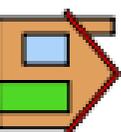
waterproof



absorbent



opaque



properties



wood



metal



plastic



glass



rock