

Uses of Everyday Materials

Knowledge

Everyday Materials

I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses

I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Working Scientifically

Sorting and classifying things according to the material

Ask simple questions and recognise that they can be answered in different ways.

Perform a simple test to explore questions

Observe closely, using simple equipment

Children will identify and discuss the uses of different everyday materials so that they become familiar with how some materials are used for more than one thing (metal can be used for coins, cans, cars and table legs; wood can be used for matches, floors, and telegraph poles) or different materials are used for the same thing (spoons can be made from plastic, wood, metal, but not normally from glass). They will think about the properties of materials that make them suitable or unsuitable for particular purposes and they should be encouraged to think about unusual and creative uses for everyday materials. Children will find out about people who have developed useful new materials.

Hook into a Book



Activate Prior Knowledge

EY

- Waterproof materials (making a scarecrow)
- Choosing materials for a super hero cape
- Using their senses to explore natural materials
- Compare similar and different properties of materials

KS1

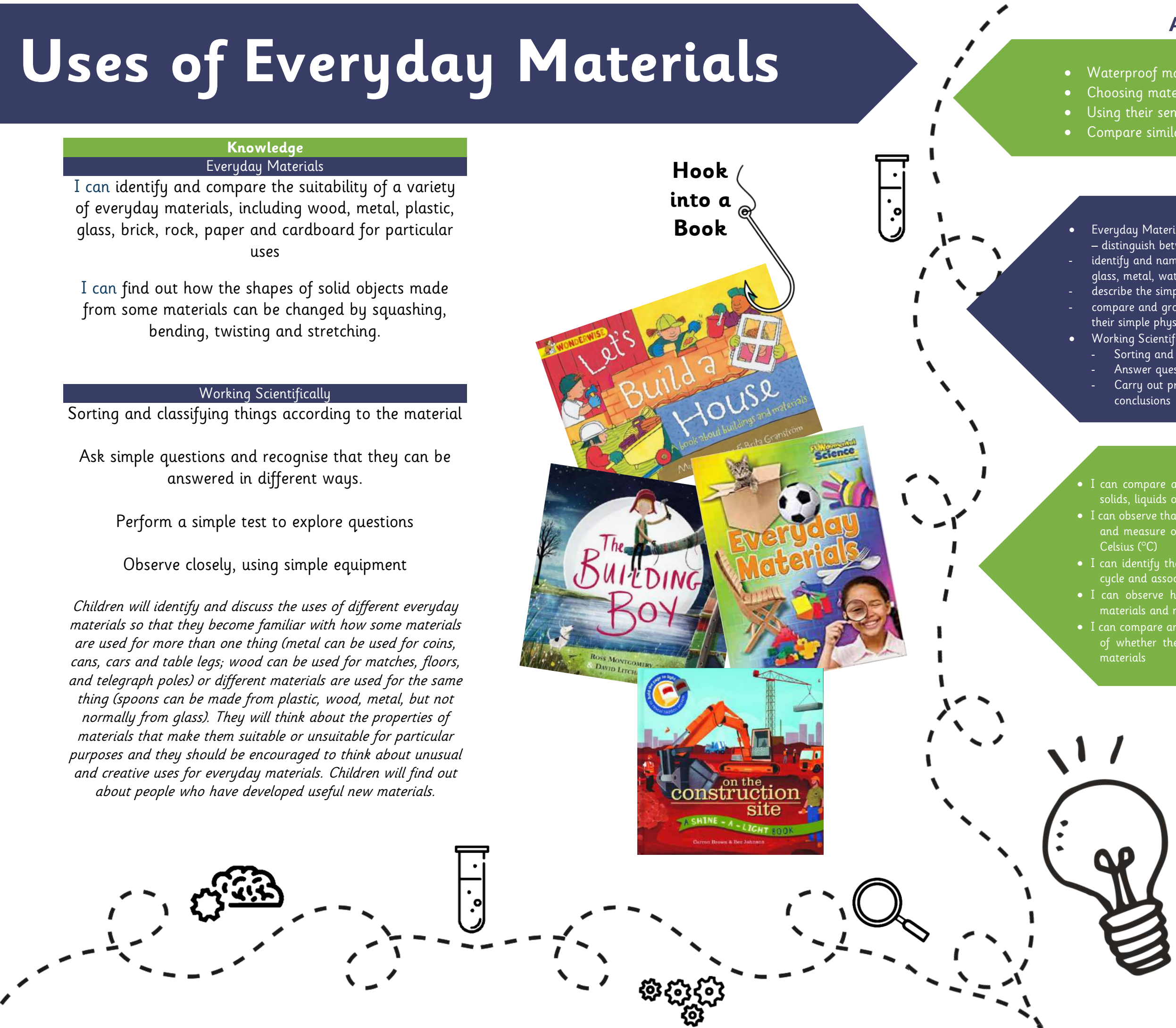
- Everyday Materials
 - distinguish between an object and the material from which it is made
 - identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
 - describe the simple physical properties of a variety of everyday materials
 - compare and group together a variety of everyday materials on the basis of their simple physical properties
- Working Scientifically
 - Sorting and classifying animal characteristics
 - Answer questions using scientific vocabulary
 - Carry out practical tests using their observations and drawing simple conclusions

KS2

- I can compare and group materials together, according to whether they are solids, liquids or gases
- I can observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
- I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
- I can observe how magnets attract or repel each other and attract some materials and not others
- I can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials

Investing in
the UNIQUENESS
of each individual

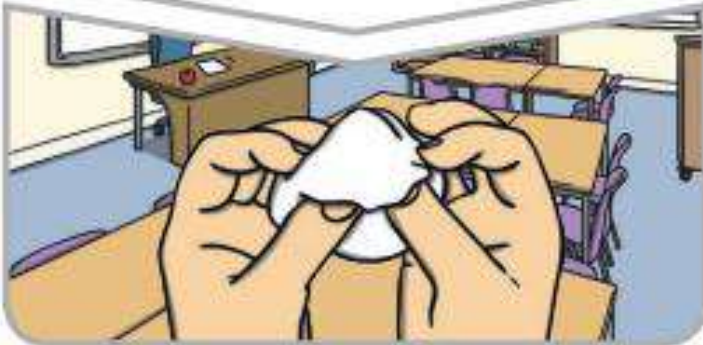
"I Am Fearfully And Wonderfully Made"
- Psalms 139 v14



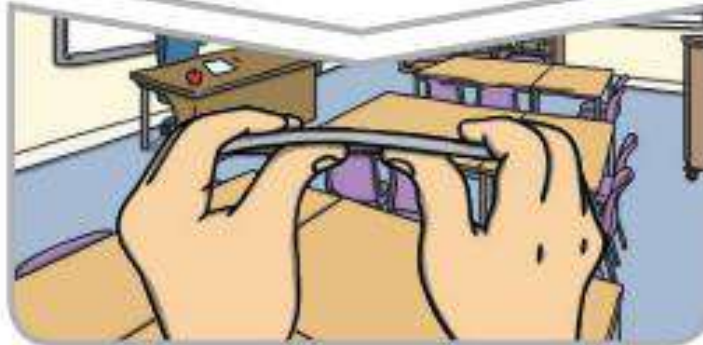
Key Vocabulary

materials	Materials are what objects are made from.
suitability	Suitability means having the properties which are right for a specific purpose.
properties	This is what a material is like and how it behaves (soft, stretchy, waterproof).

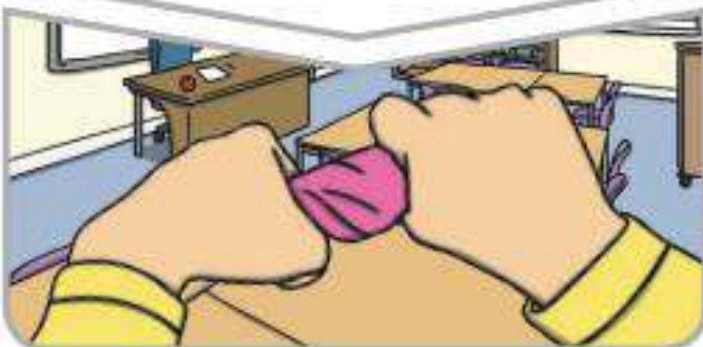
Squash an object by pushing both hands together.



Bend an object by grabbing both ends of the object and bringing the ends inwards together.



Twist an object by turning your hands in opposite directions.



Stretch an object by pulling your hands slowly and gently apart.



Key Knowledge

Properties of Materials



wood:
hard, stiff,
strong, opaque,
can be carved
into any
shape.



glass:
waterproof,
transparent,
hard, smooth.



plastic:
waterproof,
strong, can
be made to be
flexible or stiff,
smooth or rough.



metal:
strong, hard,
easy to wash.



paper:
lightweight,
flexible.



cardboard:
strong, light,
stiff.



fabric:
soft, flexible,
hard-wearing,
can be stretchy,
warm, absorbent.



rubber:
hard-wearing,
elastic, flexible,
strong.

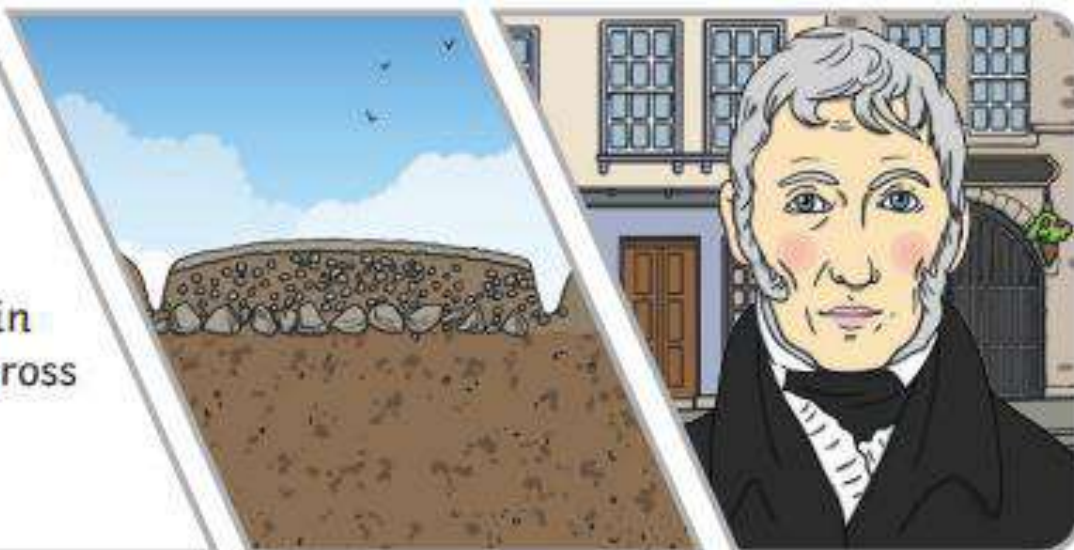
Key Knowledge

John McAdam	John McAdam was a Scottish engineer who experimented with using new materials to build roads, inventing a new process called ' macadamisation '.
John Dunlop	John Dunlop was a Scottish inventor who invented the air-filled rubber tyre. It was originally invented in 1887 to use with bicycles, and then became very useful when automobiles were developed.
Charles Macintosh	Charles Macintosh was a Scottish inventor and chemist who invented waterproof fabrics in 1818. The Mackintosh raincoat was introduced in 1824.
Macadamisation	Macadamisation was the name given to John McAdam's construction process of building roads. The name tarmac means a road made like this using tar.

People who developed new **materials**:

John McAdam's

process was so successful that roads were built in this way right across the world.



John Dunlop

originally used rubber to make tyres for his son's tricycle.



Charles Macintosh

invented the first waterproof fabric by painting a dissolved rubber solution onto cloth.

