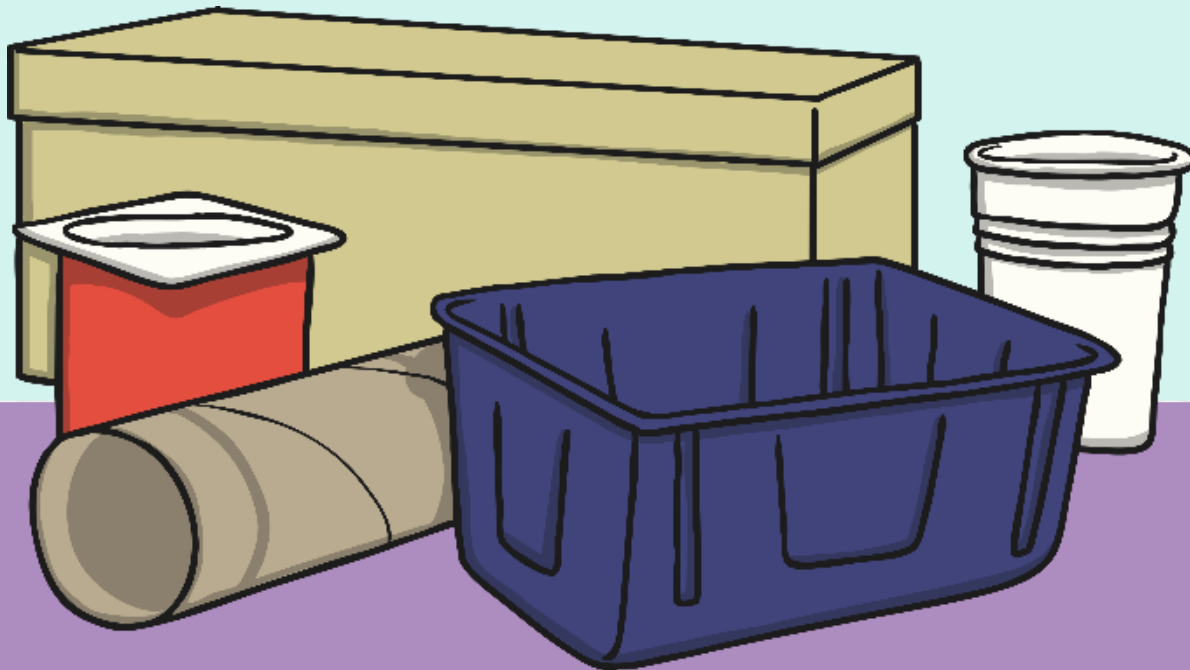


# Materials – Comparing Suitability



# Aim

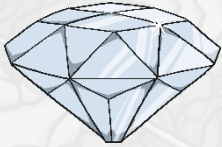
- I can compare the suitability of different everyday materials.

# Success Criteria

- I can explain why different materials can be used to make the same object.
- I can tell you which properties make some materials suitable for different purposes.
- I can tell you which properties make some materials unsuitable for different purposes.



# Properties – how we describe materials. Can you read today's words?



hard



soft



stretchy



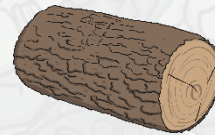
stiff



shiny



dull



rough



smooth



bendy



not bendy



absorbent



not absorbent



waterproof



not waterproof



transparent



opaque



**Watch the video link.  
How many different uses of materials can you see?**

<https://www.bbc.co.uk/bitesize/clips/zm2jmp3>





# Reasons for Using Materials



glass

Why are window panes made from glass?

What is it about glass that makes it a good material for window panes?

Why wouldn't other materials be as suitable?



# Reasons for Using Materials



Which material do you think is best to make a ruler from? Why?

When might a **plastic** ruler be more suitable?

When might a **wooden** ruler be more suitable?

When might a **metal** ruler be more suitable?





# Spoons



What material are spoons made from and why?

Why do you think spoons are made from different materials?

When would the spoons made from the different materials be used?

Who would use them and why?





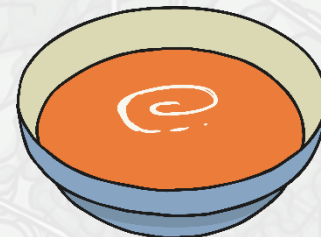
# Suitability

Although these materials are all suitable for spoons, the spoon you would choose to use would depend on what you were using it for.

Which spoon would you give a toddler to eat their dinner with? Why?

Which spoon would you use to make a cake with? Why?

Which spoon would you use to eat soup with? Why?





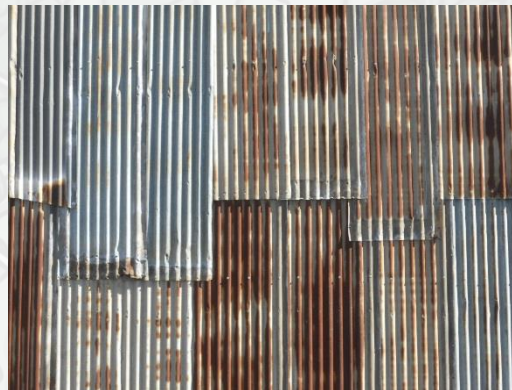
# Suitability

Suitability means having the properties which are right for a specific purpose.

Metal, wood and plastic are all suitable materials for spoons.



Metal is suitable because it is strong and lasts a long time.



Wood is suitable because it is strong and has a high heat tolerance.

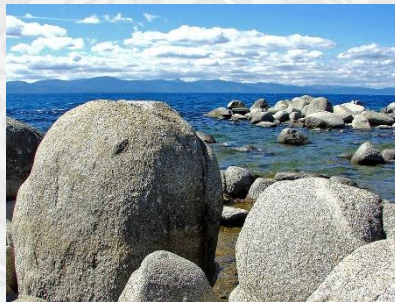


Plastic is suitable because it is light and cheap.



# Discussion

Which material do you think would be the most suitable material for making coat hangers from and why?



There are 3 follow up activities next. Choose 1, 2 or even all 3 to complete.

Photo courtesy of Kat...; mikecogh; terren in Virginia; Andreas; SixRevisions; inkknife\_2000 (4.5 million views); Thiago Avancini (@flickr.com) - granted under creative commons licence – attribution



# ★ Comparing Suitability of Everyday Materials

I can compare the suitability of different everyday materials.



Read the objects and match them up with the material that you think is the most suitable for them to be made from. Draw a line connecting the object with the material. Some objects might be connected to more than one material and some materials might have more than one object connected to them. The first one has been done for you.

## Object

mirror

coat hanger

pillow

rabbit hutch

chair

house

## Material

wood



glass



metal



fabric



plastic



brick







# Comparing Suitability of Everyday Materials

I can compare the suitability of different everyday materials.



Read the object descriptions and write down a material which you think would be suitable for the job. Explain the properties it has that make it suitable.

**Description**

**Material**

**Why is it Suitable?**

A hutch to keep a rabbit in. It has to be kept outdoors and keep the rabbit warm and dry.



\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_

A cup for a toddler. It has to be light, brightly coloured and safe for a toddler to use.



\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_

A pillow case. It has to be soft and able to go in the washing machine.



\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_

A vase. It has to hold flowers and look pretty.



\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_





# Comparing Suitability of Everyday Materials

I can compare the suitability of different everyday materials.



Draw an everyday object in the box. Try and choose something which is made of more than one material. Write some sentences to explain why the materials that have been used are suitable.



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