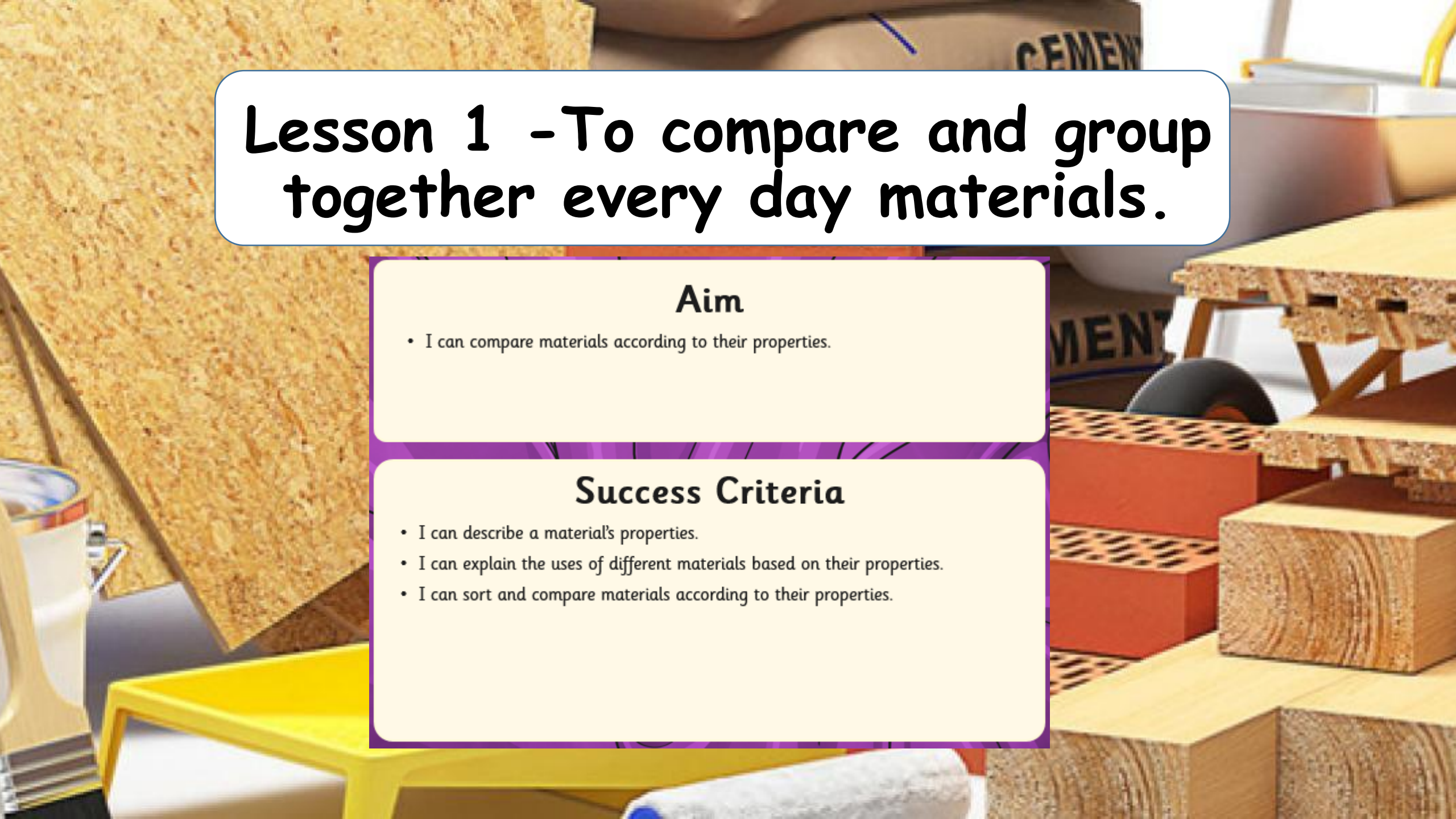




Lesson 1 -To compare and group together every day materials.

Aim

- I can compare materials according to their properties.

Success Criteria

- I can describe a material's properties.
- I can explain the uses of different materials based on their properties.
- I can sort and compare materials according to their properties.

Describing Materials

Any substance that is used to make something is a material.

Natural materials such as stone, wood and cotton are used or worked with in the way they are found in nature.

Synthetic or man-made materials are made from natural materials, but are altered with the help of heat or chemicals. Some examples include plastics, polyester and Kevlar.

Natural



Man-made



Describing Materials



Around your classroom you will see several feely bags. In each bag is a material. Can you identify the different materials just by feeling them?



While you have a go at this activity, think of words to describe each material, such as hard, soft, cold or rough.



Using Materials



Why is it useful to know the properties of a material?

It is useful because if you know the properties of a material, you can then choose the best material for a purpose.

Look again at the objects from the feely bags. Why was each material chosen to make these things?

Talk to your partner about your ideas.



Testing Properties



To find out which properties a material has, they have to be tested.
You are going to test several different materials to find their properties.

You will test for:

- magnetism;
- hardness;
- transparency;
- flexibility;
- permeability.



Testing Properties



Follow the instructions for each test,
and try out each test with each
material.

Complete your Testing Properties
Activity Sheet with your results.



Testing Properties

Follow these instructions to test the properties of different materials

Magnetism test
Push a magnet to each material. If it is attracted to the magnet, it is a magnetic material. If it is not attracted to the magnet, it is a non-magnetic. Cross or tick to show whether each material is magnetic.

Temperature test
Heat each material to find if you can. If you can completely see through it, it is transparent. If you can see through it a little, it is translucent. If you can't see through it at all, it is opaque. Cross or tick to show whether each material is transparent.

Permeability test
If a material is permeable, it allows liquids to go through it. Impermeable materials do not allow liquids through, so they are waterproof.
Place each material over a jar that is in an empty tray, using an object to hold it in place. If necessary, pour 20ml of water into the material. If the material is permeable, water is at the bottom of the tray. Cross or tick to show whether each material is permeable.

Record your results below:

Material	Properties				
	Magnetic Y or N	Hardness 1-5	Temperature Y or N	Permeability Y or N	Permeability Y or N

Source: Test 1: Properties and Changes of Materials (Project 10) of National Curriculum Framework for School Education

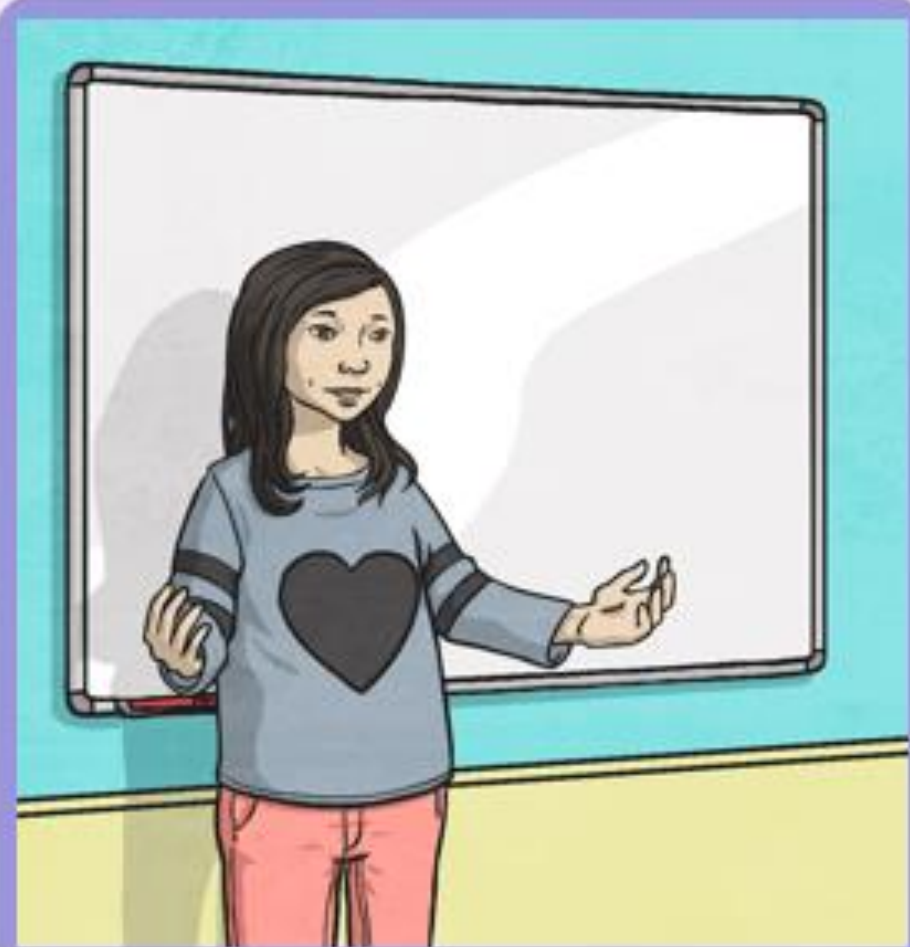


Properties and Purposes



Some of you have been thinking of uses for the different materials based on their properties.

Share your ideas with your class, who will feedback their thoughts.



Review your learning

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