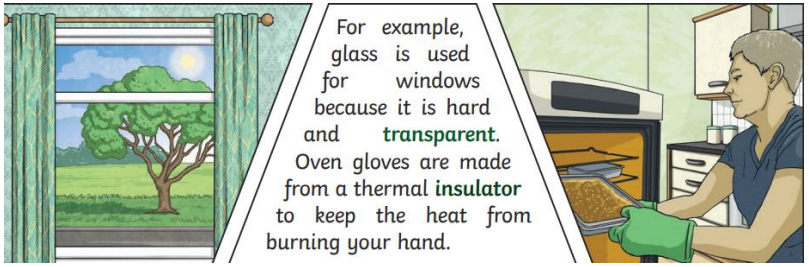
Year **5 Science**
Aut 1

Topic: **Material Properties**

Key Facts

Different materials are used for particular jobs based on their properties: electrical conductivity, flexibility, hardness, insulators, magnetism, solubility, thermal conductivity, transparency.

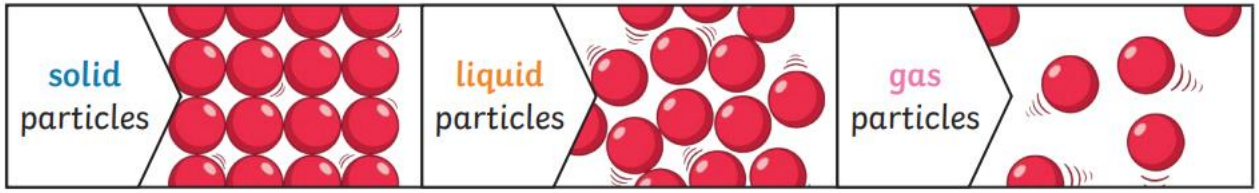


Diagram/Investigations

Put several objects made of different materials in a bag. Can you identify what they are made of by feeling them? Can you describe how you knew (the metal coin was cold and smooth, the sponge was soft and rough and I could squeeze it, etc.). Why do we think things were made with specific materials?

Investigate the properties of different materials.

Plan an experiment to see what material would be best for keeping mountaineers warm whilst climbing some of the world's highest summits.



Key Learning:

Compare and group together everyday materials on the basis of properties including hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets.

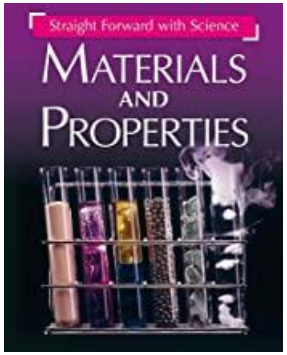
Give reasons based on evidence from comparative and fair tests, for particular use of everyday materials including wood, plastic and metals.

Prior Learning:

This unit builds upon previous work from year 3:
Identify and compare the suitability of a variety of everyday materials including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.

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

Books to support/ Enrichment Opportunities:



Subject Specific Vocabulary	
Key word	Definition
Material	The substance something is made out of.
Hardness	The ability of a material to resist change in shape.
Solubility	The maximum quantity of a substance that can be dissolved in another
Transparency	The quality of being easily seen through
Conductivity	The ability or power to conduct or transmit heat, electricity, or sound.
Electricity	The presence or flow of charged particles
Thermal	Caused by or related to heat or temperature.
Magnetism	The force exerted by magnets when they attract or repel each other.
Permeability	The ease of passage of liquids or gases or specific chemicals through the material.