TMS Science Launchpad - Year 2023/2024
Year 1 - Chemistry : Everyday materials

Substantive knowledge:

There are many different materials that have different describable and measurable properties.

Materials that have similar properties are grouped into metal, water, rock, water, wood, plastic and glass.

The properties of a material determine whether they are suitable for a purpose.

Wood
Properties: strong, flexible, long lasting, hard

Metal
Properties: strong, hard, shiny, smooth

Plastic
Properties: smooth, flexible, strong, waterproof

Glass
Properties - waterproof, see through, hard, smooth, strong but can shatter

Rock
Properties - some hard (granite), some soft (chalk)

Water
Properties: Natural, clear, takes many shapes. frozen = ice, heated = gas

Vocabulary:

hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy/not bendy, waterproof/not waterproof, absorbent, opaque, object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, floppy, breaks/tears, rough, smooth, shiny, dull, see through, not see through

Disciplinary knowledge

Comparative tests	Identify and classify	Observation over time	Pattern seeking	Identify and classify
Which materials are the most flexible? (interpret results)	We need to choose a material to make an umbrella. Which materials are waterproof? (plan an enquiry)	What will happen to our snowman?/What happens to ice left on the windowsill? (observe closely)	How do materials change with heat? *leave outside in sunshine/windowsill/radiator* Show examples of each material being exposed to heat (observe closely)	How can we group these materials according to their properties? (present results)
Research				
How are bricks made? Which materials can be recycled?				