Knowledge Organiser: **Science – Everyday Materials** **YEAR 2:** Spring 1

**Key objectives:**

* identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular use
* find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

**Scientific vocabulary:**

**Basic**

**Words with a similar meaning to stretchy: elastic, flexible, pliable, springy, bendable, malleable.**

**Subject Specific**

Reflective- shows a mirror image. Non-reflective- does not show a mirror image.

**Absorbent:- Can soak up liquid.**

**Waterproof:- Does not soak up liquids.**

**Challenge**

**Material: the substance an object is comprised of. Eg. A window is comprised of glass.**

**Property: a characteristic quality or distinctive feature of something.**

Properties of objects

Opaque- not see-through

Transparent and Translucent—see-through.

Flexible: - able to bend without breaking.

Rigid:- Not able to bend without breaking.

**Scientific knowledge:**

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| **Materials** |
| Examples of materials are: wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay.  Objects are made of one or more materials.  Eg. Windows can be made of glass.  Pans can be made of metal. |

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| **Properties** |
| Properties usually have an opposite.  Pairs of opposite properties include:  Rough and Smooth  Hard and Soft  Absorbent and Waterproof  Flexible and Rigid  Reflective and Non-reflective  Opaque and Transparent  Sharp and Blunt  Stretchy and Rigid  Shiny and Dull |

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| **Linking Objects, Materials and Properties.** |
| All objects are made of one or more materials that are chosen specifically because they have suitable properties for the task. For example, a water bottle is made of plastic because it is transparent allowing you to see the drink inside and waterproof so that it holds the water.  When choosing what to make an object from, the properties needed are compared with the properties of the possible materials, identified through simple tests and classifying activities.  A material can be suitable for different purposes and an object can be made of different materials. |

The shape of a malleable object can be changed by various actions. (bending, stretching, squashing, twisting, rolling, pressing).

**Homework challenges:**

**Make a house out of a cardboard box. Find suitable materials to make the different parts of your house. Make a waterproof roof, transparent windows, soft carpets, rigid furniture etc.**

**Famous people/jobs:**

**Engineer, designer**