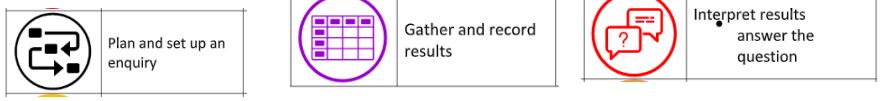
Year 2 – Marvellous Materials- 2 half terms: SPRING TERM: MATERIALS SCIENCE

Prior Learning: Children should know some materials (wood, fabric, glass, plastic and metal) and some properties including waterproof and absorbent

Concept: Materials

In this unit we will investigate which materials would be suitable for a variety of uses. We will use this knowledge to invent our own invention!

Working scientifically:



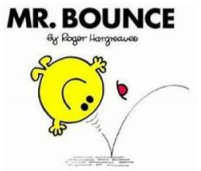
1. TWAL identify and compare materials

We will explore more materials and see if we can group items made out of same materials (Yr 1 + paper, cardboard, stone, water, sand). Let's mindmap what these materials are used for. Are there objects that can be made from more than one material e.g. spoon?

That different materials can be used for the same uses.

2. TWAL to identify suitable material for uses

Mr Bounce needs a new bouncy ball! Let's set up a simple test to see what materials we could use to make the bounciest ball! Record your results in a table. Can you answer the question from your results? Spend a couple of lessons planning and setting up an experiment, gathering and interpreting results.



Suitable and unsuitable materials.

3. TWAL to identify suitable material for wrapping a present

Bear wants something to wrap present for the girl and the boy who took him to play piano in the city! He needs to take on a boat in a bag. What properties will the paper need have? Let's set up another experiment. Can you work more independently this time?

Opaque and translucent

4. TWAL to identify suitable material for fixing a boat

We will learn about Charles Mackintosh and his invention of the raincoat! Then we will solve a problem for the bear! He has a hole in his boat. Use your scientific skills to solve the problem and invent something to help. Introduce the terms buoyant and

Buoyant means something that floats.

5. TWAL to identify suitable material for a boat design

Discuss what properties the boat will need (buoyant or sinks, waterproof or absorbent?) Spend a few lessons in partners to plan and set up an enquiry, gather results and interpret the results. Use this to design and test you own boat on the pond!

TWAL to understand that some solid objects can be changed

We will investigate a variety of solid objects. Are they all easy to hold? Would water be easy to hold? We will investigate which solids can change shape by twisting, stretching, squashing and twisting including slime!

Some solids change shape.

Words we will know!