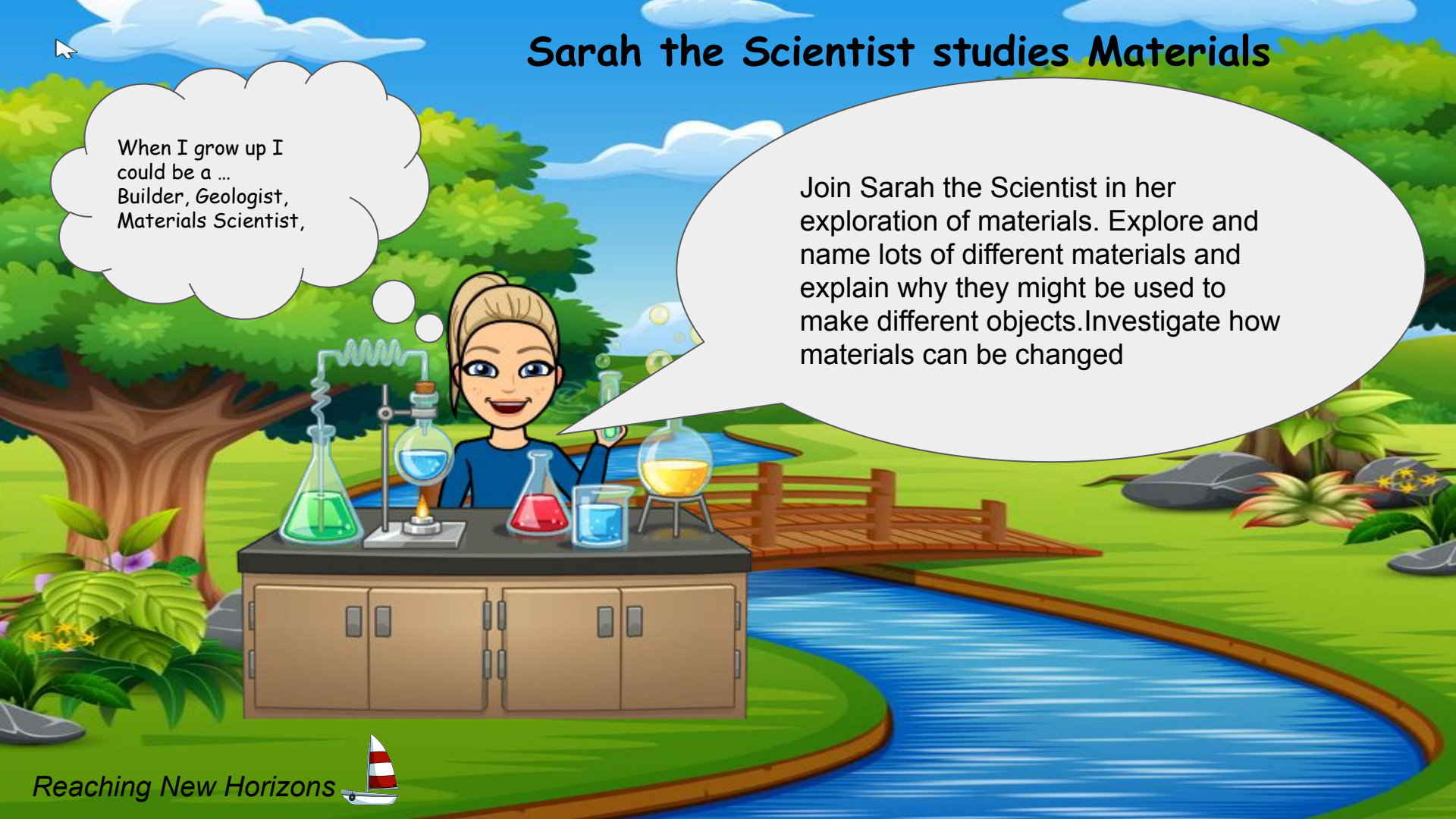
Sarah the Scientist studies Materials

When I grow up I could be a …
Builder, Geologist, Materials Scientist,



Join Sarah the Scientist in her exploration of materials. Explore and name lots of different materials and explain why they might be used to make different objects.Investigate how materials can be changed

Reaching New Horizons

EYFS Materials

Nursery

Painting with ice







Properties of ice

What does the ice feel like (prompts: smooth or rough; soft or hard; wet or dry; heavier or lighter than you thought)?
What does ice turn into when it melts?
Why have we found icy puddles this morning?
Where can you go in the world to find ice and snow all year round?

Reception

Properties of materials



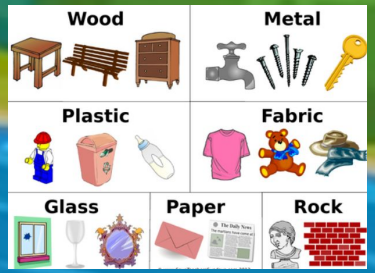
Investigating gingerbread man Puddles

Placing a Gingerbread Biscuit in different liquids to see how liquid can affect a Gingerbread Man. We used oil, milk, vinegar and juice. We made predictions and then watched the changes.



Reaching New Horizons

Year 1







Reaching New Horizons

Testing Materials





Key Stage One

Sorting Materials



Year 2

Materials

Object, material, wood, plastic, glass, metal, water, rock,

properties

hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see through, not see through

opaque, transparent and translucent, reflective, nonreflective, flexible, rigid, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching

Waterproof Materials

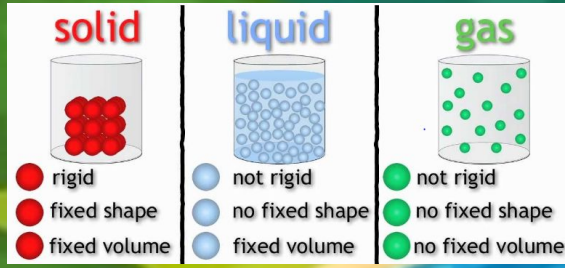


Year 4





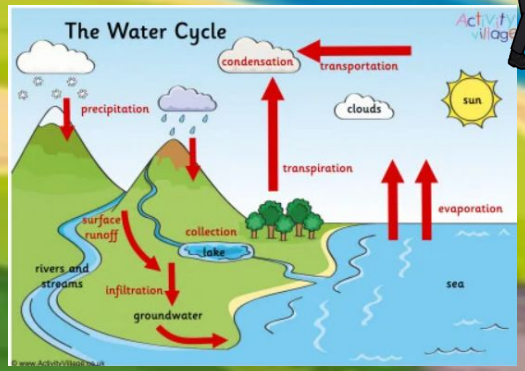
Solids, Liquids and Gases

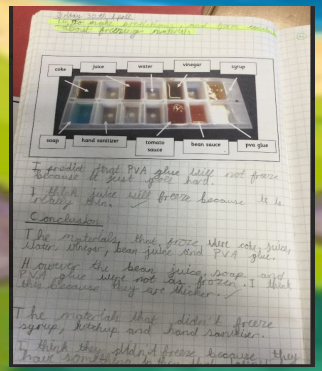


The Water Cycle









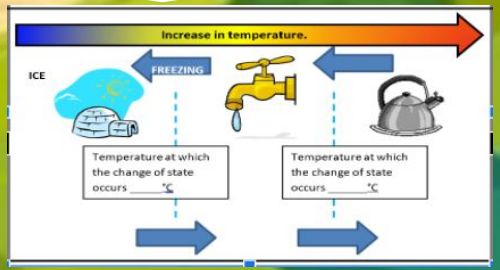
States
Solid, liquid, gas, water vapour, state change

Changes
melting, freezing, melting point, boiling point,

Water cycle
evaporation, condensation, precipitation, temperature,

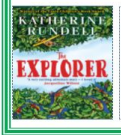


Melting and Boiling Point



Reaching New Horizons

LG: To be able to identify and use different methods for separating materials.



Fred, Laila , Con and Max need your help. The water from the Amazon is not safe to drink. Using your knowledge of separating materials, your challenge is to purify the water so that it is safe to drink. Choose you equipment wisely and explain the methods you have used.



Filtering & Sieving

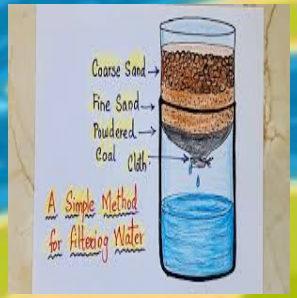
LG: How does the temperature of the tea affect how long sugar takes to dissolve ?

You are going to plan a safe and valid experiment in which we will investigate whether the temperature affects the speed at which sugar dissolves in tea.



Year 5









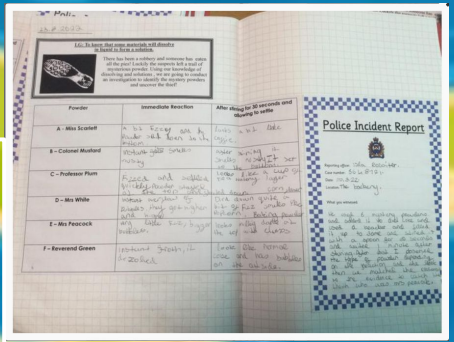
Investigating dissolving

Dissolving

change of state,mixture, solution, suspension, soluble, insoluble

Changes over time

Properties
thermal conductor/insulator,
electrical conductor/insulator
flexibility, hardness, magnetism, solubility, transparency.



Reversible changes

Sieving, filtering, evaporation,

Irreversible changes

burning, rusting, new material, reactant

Challenge:

Your challenge is to find the best thermal insulator to keep a cup of tea warm. You will need to use a temperature sensor and record and analyse the results in a line graph.









Reaching New Horizons