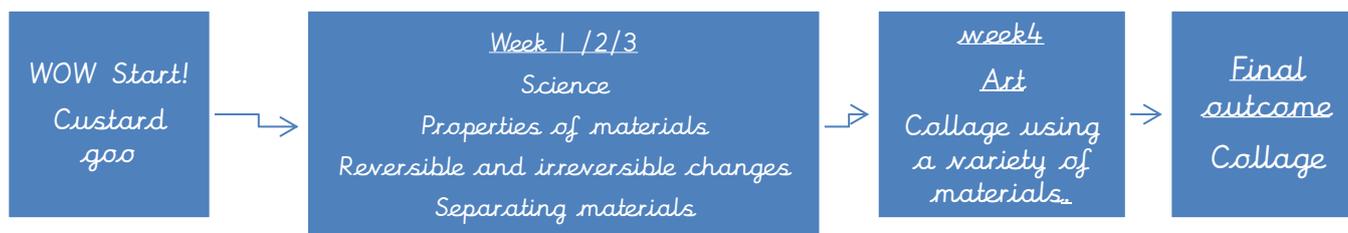


Year 5/6 Science based unit 'It's a material world' (3 weeks)



Overview of unit: The main focus of this unit is an understanding of material properties, and separating and changing materials. This will involve the practical separating and changing of materials, including demonstrating that cooking is an irreversible change, creating a chemical reaction. The final piece of artwork will combine a range of materials to create a pre-planned effect (chosen by teachers) linked to an understanding of properties.

<u>Working scientifically skills</u>	<u>Scientific knowledge skills</u>
<p>Plan enquiries, including recognising and controlling variables where necessary.</p> <ul style="list-style-type: none"> • Take measurements, using a range of scientific equipment, with increasing accuracy and precision. Eg. thermometer. • Record data and results of increasing complexity using scientific diagrams and labels. • Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions. • Present findings in written form. • Use test results to make predictions to set up further comparative and fair tests. • Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments. <ul style="list-style-type: none"> • observations • conclusions • method <p>Previous learning: Compare and group materials together, according to whether they are solids, liquids or gases.</p> <ul style="list-style-type: none"> • Observe that some materials change state when they are heated or cooled, and measure the temperature at which this happens in degrees Celsius (°C). • Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. <p>Previous knowledge:</p>	<p>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, conductivity (electrical and thermal), and response to magnets.</p> <p>Know that some materials will dissolve in a liquid to form a solution, and describe how to recover a substance from a solution</p> <ul style="list-style-type: none"> • Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. • I describe the differences between the properties of different materials. • I explain how these differences are used to classify substances (including solids, liquids, gases, acids and alkalis). • Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. • I describe methods to separate mixtures. (Filtration, distillation.) • Demonstrate that dissolving, mixing and changes of state are reversible changes. • Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning, oxidation and the action of acid on bicarbonate of soda. • I use scientific terms to describe changes. (Evaporation, condensation.) • I use my knowledge of reversible and irreversible changes to make predictions about whether changes are reversible or not. <ul style="list-style-type: none"> • solubility • conductivity • reversible/irreversible

Observe Solid Liquid Gas Degrees

- *particles*
- *residue*

Art skills

- *to use a sketch book to experiment with materials, review and revisit ideas*
- *improve the mastery of their art and design techniques, using a range of materials*
- *to learn about great artists and designers in history*
- *texture*
- *layering*
- *abstract*
- *textural*

Previous knowledge:

to improve their mastery of art and design techniques, including drawing and painting with a range of materials

learn about great artists in history (Frida Kahlo) Claude Monet - painting, Sculpture (It takes guts)

Previous Vocabulary: inspiration, style, vibrant colours

D&T

Previous knowledge:

Understand that certain foods are seasonal and choose seasonal produce for their recipe.

Previous Vocabulary - Seasonal, Recipe, Ingredients

Collage is a mixed-media piece of art made by sticking various different materials such as photographs and pieces of paper or fabric on to a backing.

Extra words

collage

materials

layering

abstract

reversible/irreversible

evaporation

condensation

melting

freezing

solidify

solid/liquid/gas

properties

functions

chemical change