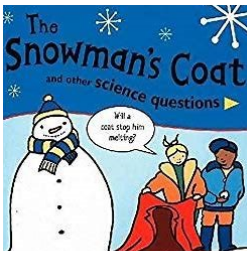
Year 5 Spring 1

Knowledge Organiser

Science: Properties and changes in materials.

We will compare and group together everyday materials on the basis of their properties, including their hardness, transparency, and conductivity (electrical and thermal). We will explore reversible and irreversible changes We will also give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials.



Key Knowledge:

- Materials have different uses depending on their properties and state (liquid, solid, gas).
- Properties include hardness, transparency, electrical and thermal conductivity and attraction to magnets.
- Some materials will dissolve in a liquid and form a solution while others are insoluble and form sediment.
- Mixtures can be separated by filtering, sieving and evaporation.
- You can get a dissolved solid back from a solution by letting the liquid evaporate.
- Some changes to materials such as dissolving, mixing and changes of state are reversible, but some changes such as burning wood, rusting and mixing vinegar with bicarbonate of soda result in the formation of new materials and these are not reversible.
- In a reversible reaction, you can get back the materials you started with.
- The result of an irreversible reaction might be a change of colour, the production of heat, light or a gas or chemical.

Key Vocabulary:

Thermal/ electrical insulator
Conductor
Change of state
Mixture
Dissolve
Solution
Soluble
Insoluble
Filter
Sieve
Reversible
Non-reversible
Burning
Rusting
New material
Evaporation
Condensation

Computing: Databases

In Computing, we will learn how to search for information and to create a database around a chosen topic.

Key Knowledge:

- A database is a collection of data organised in such a way that it can be searched, and information found easily. Database usually refers to data stored on computers.
- A database can hold lots of information so it is essential that information can be effectively investigated. In 2Investigate, data can be searched and sorted in a variety of ways. It can also be presented pictorially.

Key Vocabulary:

Avatar	Record
Binary tree	Charts
Database	Statistics
Data	Table

History: Local history Project

In History, we will explore the history of the salt workings and industry in Northwich.

Key Vocabulary:

Subsidence: houses sunk into the ground because of holes left where the brine had been pumped.

Brine: water saturated with salt.

Salt pan: shallow lead container used to heat the brine in to remove the water.

Canal: man-made water-way

Salt Occupations

Lumpman: filled the wooden moulds with salt.

Waller: raked the salt to the side of the pan.

Fireman: was in charge of the furnaces below the pans.

Lofter: would lift the tubs of salt up into the loft for drying.

Key Knowledge:

- Around 100AD, Condate (now Northwich) was founded by the Romans. They used salt pans to extract salt from the brine springs. Salt was a precious and expensive natural commodity, used to trade and preserve food.
- Middlewich, Nantwich and Northwich are all mentioned as towns producing salt in the Domesday Book.
- In the 13th century, Middlewich had over 100 'wich houses' surrounding the town's 2 brine pits.
- In the 1830s, Northwich began to subside (sink) as the mines collapsed, so the salt mines moved to Winsford.
- A wide range of industrial activities were evident by 1874, including salt-works, bleachworks, foundries and tanneries.
- Henry Ingram Thompson started the Lion Salt Works in 1894.
- In 1875, the Anderton Boat Lift was built to connect the River Weaver and the Trent and Mersey Canal.
- The Anderton Boat Lift was designed by Edwin Clark.
- In modern day, chemical factories, including ICI were established along the banks of the River Weaver.
- During the 1950s, Middlewich's only remaining salt manufacturer produced 57% of the world's white salt for cooking.
- John Brunner joined with Ludwig Mond to create the chemical company Brunner Mond and represented Northwich as an MP in 1885.
- In 1933, polythene was accidently discovered by ICI working in Northwich.

Religious Education: Islam

In RE, we will explore how the Muslim faith is expressed through family life.

Key Knowledge:

- Ramadan is the ninth month of the Islamic calendar, and a time when Muslims across the world will fast (do not eat) during the hours of daylight.
- Ramadan concludes with the celebration of Eid al-Fitr. Eid ul-Fitr or Id-Ul-Fitr is a Muslim holiday that marks the end of Ramadan, the Islamic holy month of fasting. Eid is an Arabic word meaning "festivity", while Fitr means "to break the fast.
- Muslims have strict rules about what they can and cannot eat.
- When using the term "Halal" in the UK it is normally referring to food which is permissible but can also have a wider meaning about that which is allowed by Islamic Law.
- Eid al-Adha is an important Muslim festival, celebrated around the beginning of September by people who follow Islam. It is also known as the Greater Eid, or the Festival of Sacrifice. This is because of the loyalty, obedience and great devotion shown by one man for Allah, and the lengths he was prepared to go to for his creator.
- Within Islam, the family is at the heart of the Muslim community. It is also the most important way of ensuring that children grow up as good faithful Muslims.
- The traditional Muslim family is an extended family. It usually includes parents, children, grandparents and elderly relatives. Most Muslims believe that extended families mean greater stability, continuity, love and support for each other.

Key Vocabulary:

Reciting
Ramadan
Purify
Pilgrimage
Fast
Eid al-Fitr
Eid ul-Fitr
Arabic
Halal
Sacrifice
Qu'ran
Islamophobia