St Bernadette's Catholic Primary School
Willow Class: Properties and Changes of Materials

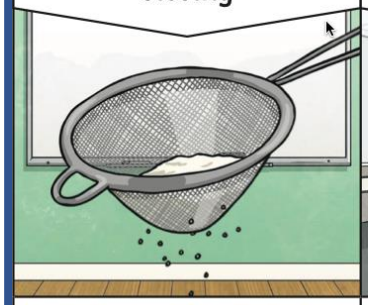
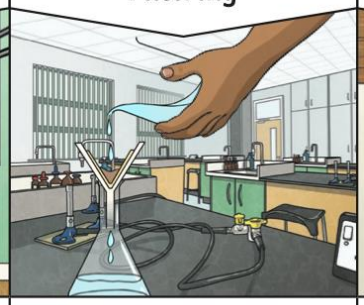
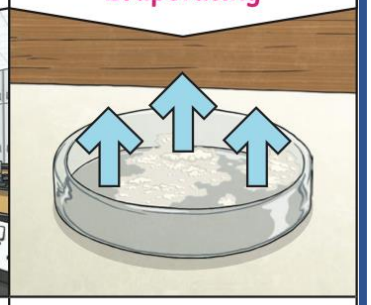
Gospel Value- Stewardship

What I should know already

Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. Compare and group materials together, according to whether they are solids, liquids or gases. Observe that some materials change state when they are heated or cooled, and measure or research 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.

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.
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.

Reversible changes, such as mixing and dissolving **solids** and **liquids** together, can be reversed by:

Sieving	Filtering	Evaporating
		
Smaller **materials** are able to fall through the holes in the sieve, separating them from larger particles.	The **solid** particles will get caught in the filter paper but the **liquid** will be able to get through.	The **liquid** changes into a **gas**, leaving the **solid** particles behind.

Word	Definition
Thermal conductor	A material or device which allows heat to carry through.
Electrical Conductor	A material or device with allows electricity to carry through.
Electrical Insulator	Does not allow electricity to pass through it.
Dissolve	When something solid mixes with a liquid and becomes part of the liquid.
Solution	A solution is made when one substance dissolves into another.
Soluble	Able to be dissolved, especially in water.
insoluble	Cannot be dissolved, especially in water.
Filter	Separates an insoluble solid that is mixed in a liquid.
Sieve	Separates solids of different sizes.
Reversible	Can be reversed back to its original state.
Non-reversible	Cannot be reversed back to its original state.
Evaporation	The process of liquid heating and changing into a gas.