Knowledge Organiser: Year 5 Properties of Materials

Lesson Sequence

1. Use evaporation to recover the solute from a solution

2. Recognise and describe reversible changes

3. Observe chemical reactions and describe how we know new materials are made

4. Investigate rusting reactions

5. Investigate burning reactions

6. Investigate chemical reactions – acids and bicarbonate of soda

Properties of Materials

conducts energy	
insulates energy	
transparent	
waterproof	
durable (strong)	
magnetic	

Everyday Materials

Metal saucepans **conduct** heat to warm food.

Wooden spoons and plastic handles **insulate** heat so hands do not get burned.

Soluble Materials

Some solids **dissolve** in water (**SOLUBLE**).

coffee 

sugar 

salt 

jelly 

Some solids do not **dissolve** in water (**INSOLUBLE**).

pepper 

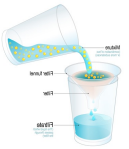
sand 

wax 

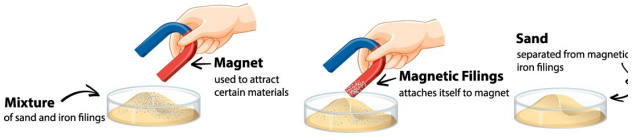
Separating Materials

Sieving

Filtering



Magnetism



Magnetic metals:

- iron
- nickel
- steel

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Before & After Test

Label the 2 materials used to make this wire.

Explain why the properties of these materials make it a good choice for its purpose.

_____

_____

_____

_____

Nahim wants to carry out a fair test to see which solids dissolve in water.
Name 2 variables he must keep the same to make it a fair test.

1. _____

2. _____

What is the variable that he must change?

_____

Sort these materials in the following table:


coffee


sugar


salt


pepper


sand


jelly


wax

Soluble	Insoluble

Draw lines to match the mixtures to the best method of separation.

Mixture	Process of separation
sand and water	magnet
gravel and water	sieving
iron filings and sand	picking out by hand
flour and water	filtering