Monday 12th July 2021
WALT: Use passive voice within a scientific report

Vocabulary:
solution
solute
solvent
dissolve
soluble
insoluble
hypothesis
fair test

Prior learning:

What does it mean to be a scientist?

In what ways were you a scientist last week?

I am a scientist…

I want to **explain** the world around me.

I **question** everything.
How?
What?
Why?

I make a **prediction**.
I **investigate** then use what I find out to **explain**.
I **change my mind** after finding things out.

Learning Journey

1. Understand the structure of atoms and elements

2. Understand how solutions are formed

3. Use scientific knowledge to create a hypothesis

4. Set up a fair test

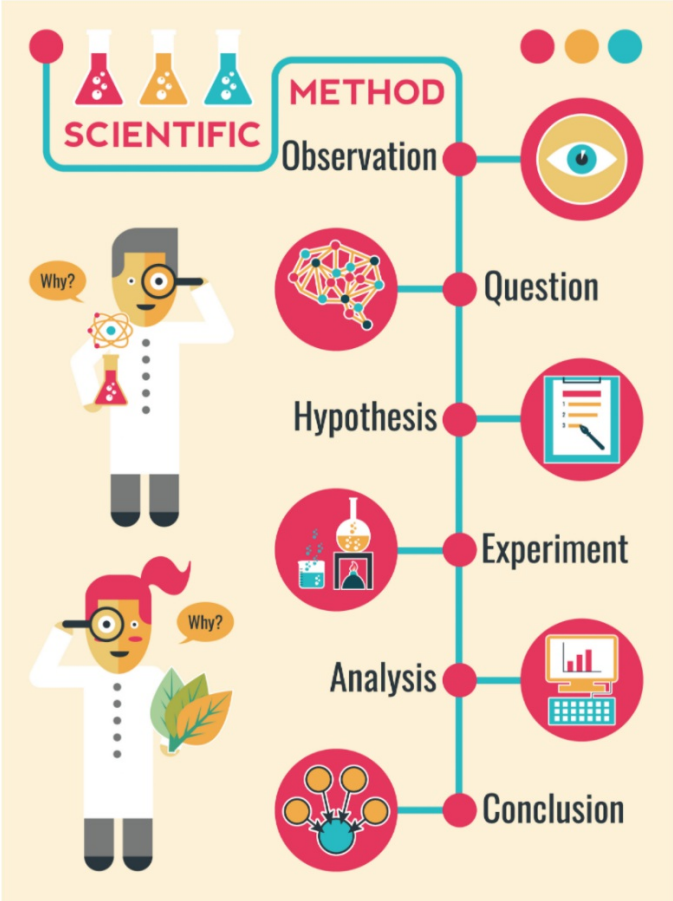
5. Plan, write and edit/revise a scientific report

6. Publish and present findings

We have conducted an investigation to discover whether different materials are **soluble** or **insoluble** in water.

As scientists, we need to discuss our findings in order to draw conclusions.

Scientists present their work by writing scientific reports.



Our plan will help us to form the **layout** for our scientific report.

What **language** features do we need to include?

Title of experiment:	
Purpose/Introduction:	
Hypothesis	
Materials	
Method	
Results	
Discussion	
Conclusion	

Success criteria for a scientific report:

Language

- Impersonal language
- Scientific vocabulary
- Tense - depending on section of report
- Conjunctions
- Commas in a list
- Passive voice

Layout

- Title
- Purpose/introduction
- Hypothesis
- Materials
- Method
- Results
- Discussion/conclusion

Active Voice vs. Passive Voice - Recap

S V O
S V O

What's the same and what's different?

The adult lays the eggs on the underside of leaves.

The eggs were laid on the underside of leaves by the adult.

Passive voice - the object is made the subject and has something done to it.

Active or Passive?

The plane is boarded by the family.	The magician pulled a rabbit from the hat.
Issac threw a ball at the window.	Helen practised her recorder every day.
The flowers were grown by my nan.	The damage was caused by the storm.

Active:

Passive:

Title: Soluble or insoluble?

T.S. A solution is formed when a substance (solute) is dissolved in another substance (solvent). The aim of this investigation was to determine whether all materials are soluble in water.

1) It was predicted that... This was based on...

2) controlled variables (stirs, time, amount), independent variable (material), dependent variable (measured - soluble or insoluble)

3) It was observed that... atoms breaking down...

C.S. Some materials do dissolve in water (soluble), others do not and are therefore insoluble. This is due to the atomic structures of the materials, some can be broken down by water molecules but others cannot.

Soluble or insoluble?

A solution is formed when a substance (solute) is dissolved in another substance (solvent). The aim of the investigation was to determine whether all materials are soluble.

It was predicted that not all materials are soluble, because in real life, sugar has been seen to dissolve in the milk used when making cereal whereas it has been noticed that sand does not dissolve when at the beach.

To ensure the test was fair, a number of controlled variables were in place. The number of stirs, the amount of liquid (water) and the amount of material tested were kept the same. However, the independent variable was that the material was deliberately changed each time. These included sugar, salt, gravy, coffee, flour and rice. The measured dependent was whether the material dissolved or not – making it soluble or insoluble.

It was observed that not all materials were soluble – some dissolved and some did not. The materials which dissolved into the water (sugar, salt and coffee) did so because the atoms making the water molecules were stronger that the ones making the materials and therefore broke the atoms apart. On the other hand, the materials which did not dissolve (rice and flour) had a stronger atomic structure, and so remained intact. Also noted was that some of the water became cloudy, this was due to starch coming out of the rice and flour, which is insoluble.

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Title:

T.S. _____

_____

_____

1) .....

2) .....

3) .....

C.S. _____

_____

_____

Vocabulary:
solution
solute
solvent
dissolve
soluble
insoluble
hypothesis
fair test
measure

Materials:
salt, sugar, flour, rice, gravy granules, coffee granules

Passive voice:

The object is made the subject and has something done to it.

The materials were measured accurately by a scientist.

The salt, sugar, flour, rice, coffee and gravy was poured into the cups by one member of the group.

Language

Impersonal language
Scientific vocabulary
Tense
Conjunctions
Commas in a list
Passive voice

Layout

Title
Purpose/introduction
Hypothesis
Materials
Method
Results
Discussion/conclusion

I	if
S	since
A	as
W	when
A	although
W	while
A	after
B	before
U	until
B	because