Skegby Junior Academy – Knowledge Organiser | Year 3/4 | Autumn 1: 2022/2023

Working Scientifically - Being a Scientist

Key Vocabulary	
Hypothesis	A question/statement you would like to investigate.
Prediction	What you think will happen in your experiment.
Equipment	The materials you will need to conduct the experiment.
Variable	The thing in your experiment that you change or test.
Method	The process in which you test your prediction.
Results	Information found through an experiment.
Conclusion	A summary of your experiment (the findings).
Observation	The action or process of carefully watching something and stating what happens.
Experiment	A trial or test made to find out about something.

SINK OR SWIM?

1 TRY THIS INDOORS ...

Fill a large bowl or container with water. One at a time, put the different things you have chosen to test into the water and watch to see which of them floats and which of them sinks.

Put the orange in the water. Does it float or sink? What happens when you peel the orange and put it back into the water? Does the orange float or sink? What about the peel?

You will need

- Large bowl or container
- Water
- Selection of things to test, e.g. small toy, pencil, coin, cork, elastic band, candle, empty plastic bottle ...
- A small orange
- Paper, lollipop sticks, card, foil, sponge, playdough or plasticine
- Lego pieces, coins or other small items

WHAT DO YOU NOTICE?

Things to talk about ...

What are your ideas about why some things float and others sink? Can you predict which things will float or sink? Why does an orange float with its skin on, but sink with its skin peeled off? Do other fruit or vegetables float or sink? What happens if you take off the skin?

Introduction

I am going to explain how to carry out a **fair test**. This is an **experiment** where two or more **variables** are compared. One **variable** is changed and the other is measured. Everything else is kept the same!

Example

For instance, how can I find out which brand of kitchen paper is the most absorbent?

Explanation

Firstly, I will cut a piece of each kitchen paper so that they are exactly the same size [a 20cm square]. **Next** I will measure out 25ml of water and make a puddle on the table. I will make a separate puddle for each type of kitchen paper. **After that** I will lay each piece of paper onto its puddle and leave it for 30 seconds. **Finally**, I will carefully pick up each piece of kitchen paper and compare how much water is left in each puddle.

Conclusion

The kitchen paper that leaves the least water is the most absorbent and therefore the best.

Tell your partner how to...

Tell your partner how to carry out a **fair test**.

Tell your partner how to...

Introduction

(explain what you will be talking about)

Example

(give an example to support your point)

Sequencing

Firstly,...

Then...

After that...

Conclusion

(sum up the key points)

Useful conjunctions

Firstly,...

Next,...

After that,...

Finally,...

In conclusion,...

Therefore,...

Consequently,...

Furthermore,...

So,...

Therefore,...