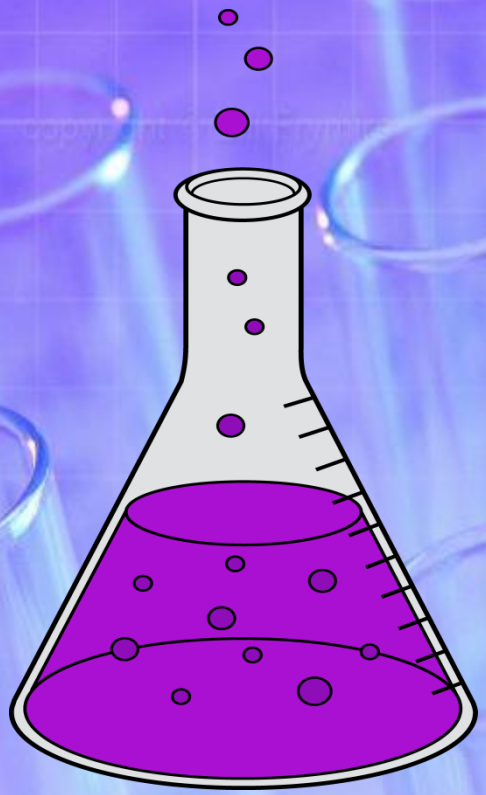
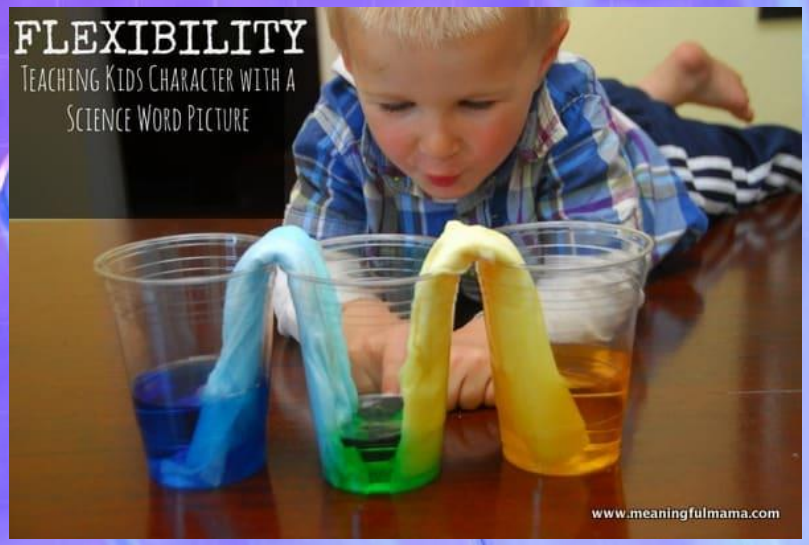
Week 4
Science Experiment



Monday

L.O. To learn about the different types of experiments.

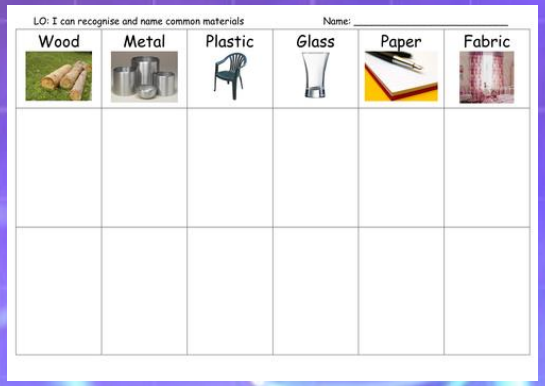
What do you think an experiment is?



An experiment is a scientific way of investigating something.

Experiments can be used to find out lots of different information. You can use experiments to prove something will happen or even to prove something won't happen! Can you think of any experiments we have tried at school before?

There are lots of different kinds of experiments.



Classifying – sorting things into groups based on their features.

Observing over time – looking at how something changes over time.

Changing variables – testing something by changing how we are testing it.

Which kind of experiment do you think this might be?

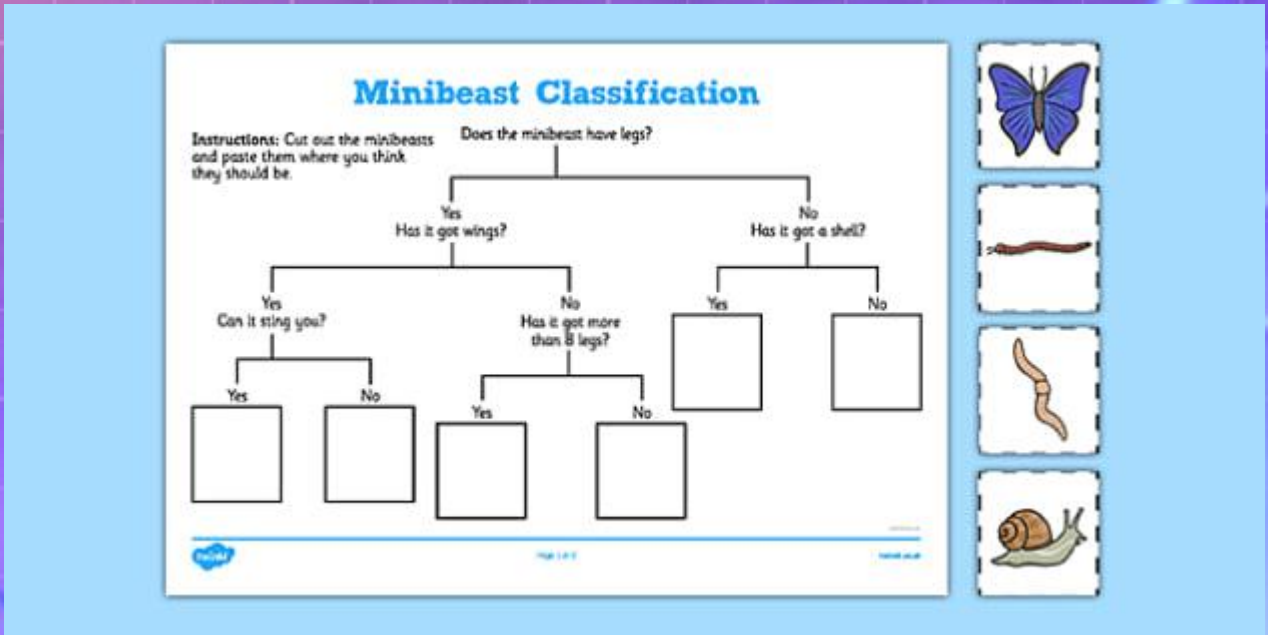
In this experiment, one plant was in the dark and one was in the light. They looked to see how they grew differently.

Which kind of experiment do you think this might be?

This is experiment was changing variables!

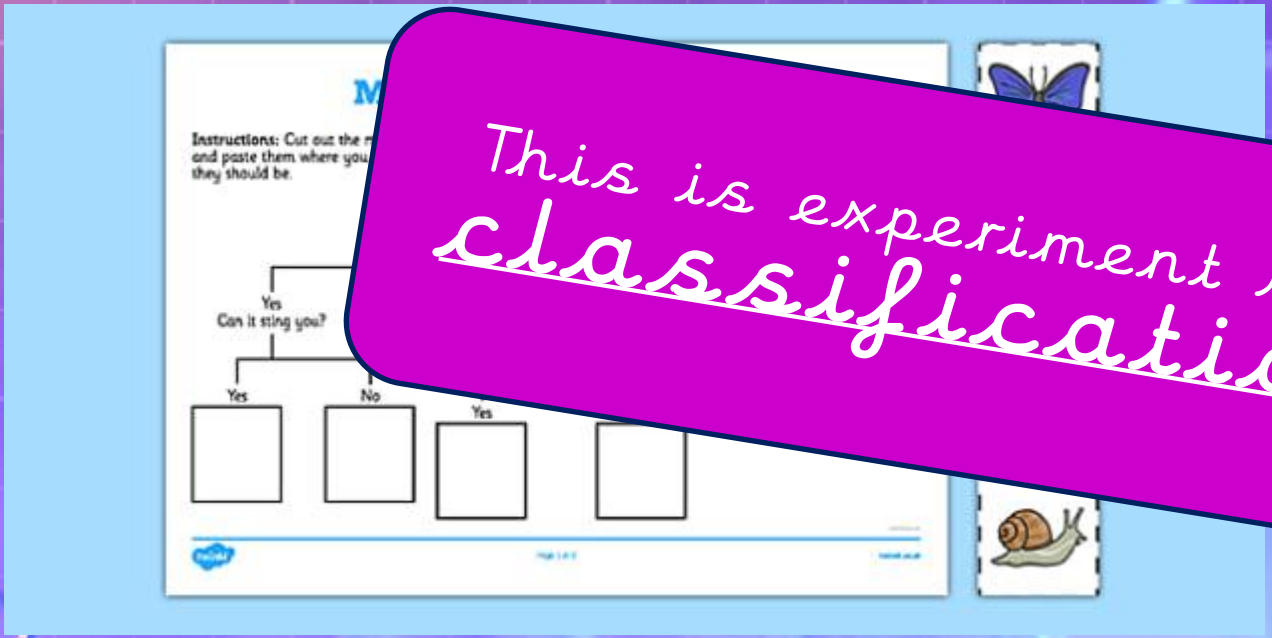
In this experiment, one plant was in the dark and one was in the light. They looked to see how they grew differently.

Which kind of experiment do you think this might be?



In this experiment, they were looking at how minibeasts were different than others and sorting them by their differences.

Which kind of experiment do you think this might be?



This is experiment was **classification!**

In this experiment, they were looking at how minibeasts were different than others and sorting them by their differences.

Which kind of experiment do you think this might be?

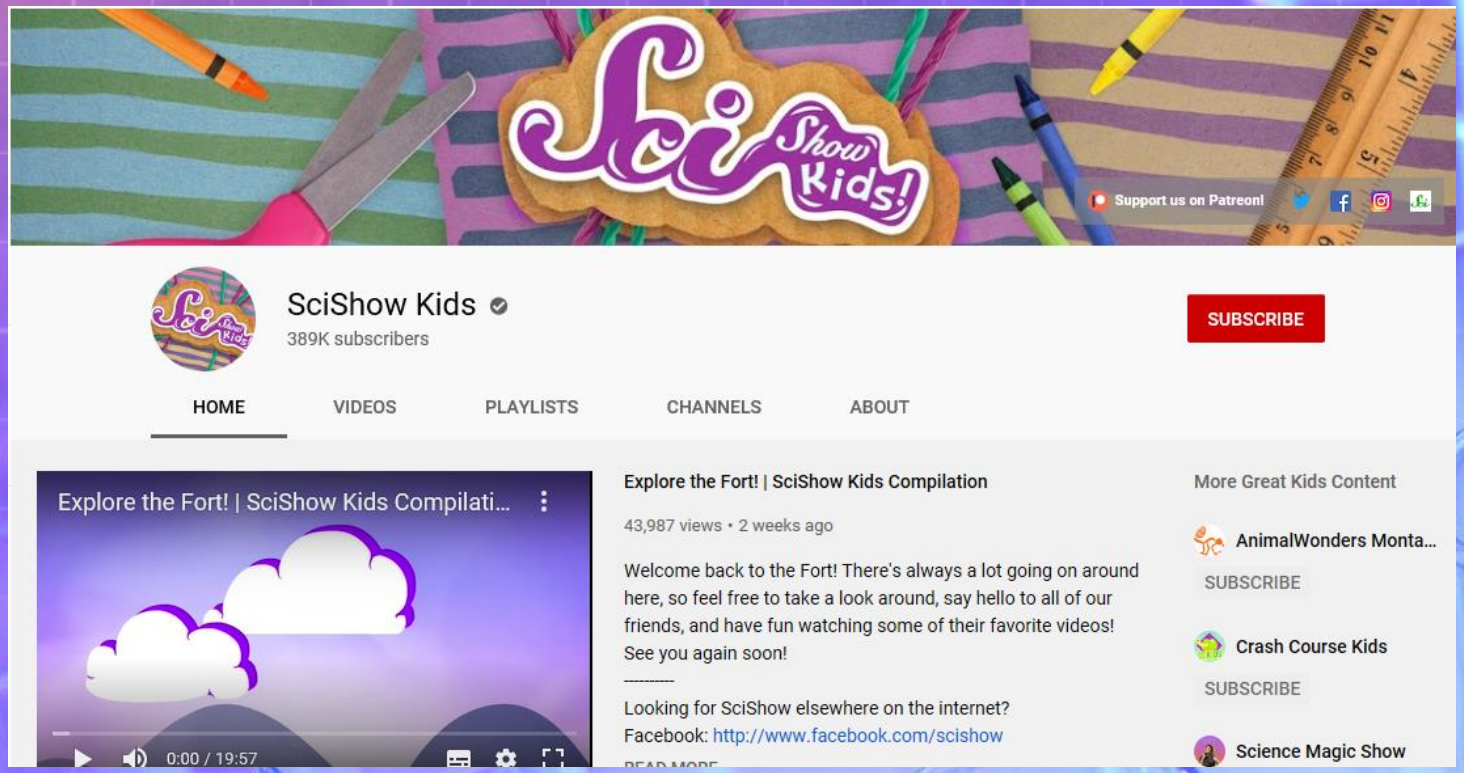
In this experiment, rainwater was collected over a month. They recorded how much rainfall there was each month and could see which month had the most rain.

Which kind of experiment do you think this might be?

This is experiment was observing over time!

In this experiment, rainwater was collected over a month. They recorded how much rainfall there was each month and could see which month had the most rain.

Plenary: Have a look at the Sci Show Kids Channel on Youtube!



Tuesday

L.O. To understand what features all experiments need.

Can you remember what an experiment is?

An experiment is where we carry out a test to prove or disprove something.

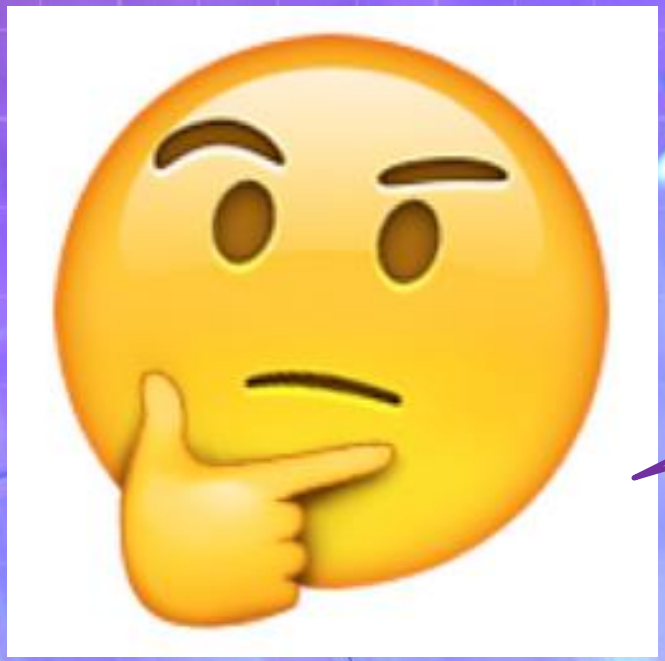
Classifying – sorting things into groups based on their features.

These were the three types of experiments we looked at.

Observing over time – looking at how something changes over time.

Changing variables – testing something by changing how we are testing it.

Today we are looking at what all experiments need.



Hmmm. I wonder what the first thing is that I will need to start my experiment?

All experiments start with a question that you want to answer.

I wonder if plants can grow without sunlight?

I wonder how tall my sunflower will grow in one month?

I wonder how many animals I can find that have fur?

I wonder if all the people in my family can touch their toes?

I wonder how many bricks I can put in my boat before it sinks?

It is important that your question has these things…

- It is something YOU can investigate.
(You can't do an experiment to see how long it would take your teddy to get to the moon, for example. Make sure it's realistic!)
- Make sure it has limits.
(You can't investigate every single person in the world to see if they can touch their toes.)
- It has to be something you can get an answer from
(Experiments should give you an answer to the question you asked.)

All experiments need to have a method.

A method is like the instructions for your experiment. It tells you how you are going to carry out your experiment. You have to follow them carefully to make sure you get an accurate answer.

All experiments need to have variables.

Don't be scared by this tricky sounding word! The variables in an experiment are simply the things you change to prove your theory. Some experiments need different kinds of variables that others, for instance...

This experiment needs you to measure, so the amount of water is the variable, because it will change.

This experiment needs you to plant two lots of seeds and change where you keep them. The light is the variable here.

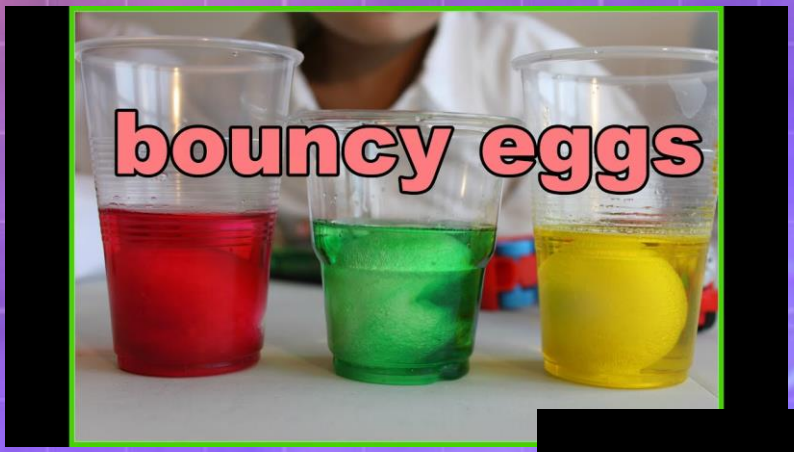
All experiments need to be fair.

If we don't make sure the test is fair, our results would not be accurate. For example, using different plant seeds or moving your water collection jug.

If you move the collection jug, you might not have as much rain fall in that part of your garden.

Some seeds might grow better than others in the dark, so it wouldn't be a fair test.

Plenary: Research what kind of experiment you would like to do this week!



Wednesday

L.O. To plan our own experiment.

Today we are writing up our plan for our own experiment!

Make sure you have decided what experiment you would like to do! It will be very tricky to plan if you have not got an experiment you would like to try!

First we need our aim.

Our aim is the question we want to find the answer to.

Aim: To find out whether plants can grow without sunlight.

Can you write your aim on a piece of paper?

Next we need our prediction

Our prediction is what we think will happen.

Aim: To find out whether plants can grow without sunlight.
Prediction: I think the plant in the dark will not grow.

What do you think will happen in your experiment?

Now we need to think about our variables.

Our variables are the things that will change.

Prediction: I think the plant in the dark will not grow.

Variables: One plant will be in the sunlight and one will be put in a cupboard.

What will change in your experiment?

Now we need to think about how to keep the test fair.

Which parts will you not change?

Variables: One plant will be in the sunlight and one will be put in a cupboard.

Fair Test: Both plants will be using the same seeds, soil and pots.

How will you make sure the experiment is fair?

Lastly, we need to write our method!

How will you do this experiment?

Method:

1. Plant two lots of seeds in two different pots.
2. Place one on the window sill and one in the cupboard under the sink.
3. Water the plants every day.
4. Check back after 1 week to see if both plants have grown.

Plenary: Now it's time to do your experiment!

Make sure you get an grown up to help you and that you record your findings ready for the last part of the lesson. Don't worry if you can't record your findings this week! Just do it when your experiment is over! We would love to see what you get up to, so please email any pictures to our Year 1 email address!

Thursday

L.O. To write about our findings and evaluate our experiment.

We hope your experiments went well!

Today we are writing up what we have found and evaluating our experiment (that means thinking about what went well and what we could have done to make the experiment even better.)

Underneath our method, let's write our findings!

What did you find out?

Results: The plant in the light grew really well and had big, green leaves on it. The plant in the dark grew too, but it was not as tall and the leaves were yellow.

Now let's write our evaluation.

What went well? Did your question get answered? Would you do anything differently next time?

Evaluation: I found out the answer to my question, but it wasn't what I had predicted. Next time I would have more plants so I could see what difference watering them makes.

We hope you enjoyed your experiment!

Maybe you could try changing some variables to your experiment and see how it changes the results?