



BIG SCIENCE HALF TERM



For this summer half term, we have decided to launch a 'Big Science Project' in place of the usual project grids.

We are asking pupils to carry out a science enquiry of their choice. Once the enquiry has been completed, we would then like each pupil who takes part to record a short video (1m 30s max) outlining what they have investigated and what they have found out and post the video on Flipgrid.

We have provided some examples of scientific enquiry questions for each of the 5 types of scientific enquiry in the table below. You are welcome to choose one of these or one of your own, but no matter what science enquiry you decide to undertake, we would like you to follow the proposed steps:

- Make a **prediction** of what you think before you begin and why.
- **Carry out** your enquiry.
- **Record** your findings.
- Make a video of your enquiry and post it on Flipgrid.

Flipgrid access:

1. Before you decide what to enquire about, watch Mr Mussa's Flipgrid video by scanning the QR code or using this link flipgrid.com/scienceenquiry



2. Once you have carried out your enquiry, post your own video by clicking the Flipgrid icon:



We hope that by the end of the project we will have a collection of videos from pupils throughout the school as fantastic evidence of our school collaborating remotely.

Enjoy enquiring scientifically!!

Please do not hesitate to contact Mr Mussa for any further assistance:

Mussal@hwbcymru.net

Science enquiry ideas		
Type of enquiry	Examples of what you could enquire about	Things to consider
Fair testing /Comparative tests	How does the length of the carnation stem affect how long it takes for the food colouring to dye the petals?	• <i>Recognising and understanding that one thing (a variable) influences another</i> • <i>If you are comparing, how will you make sure the comparisons are fair?</i> • <i>How will you record and present your findings?</i>
	How does the distance between the shadow puppet and the screen affect the size of the shadow?	
	How does the surface area of an object affect the time it takes to sink?	
	How does age affect a human's reaction time?	
	What is the best sun cream to use?	
Identifying and classifying	Which materials are magnetic?	• <i>What characteristics are you going to use to sort and classify?</i> • <i>What features or characteristics will you use to compare and contrast?</i> • <i>How will you record and present your findings?</i>
	How would you make a classification key for vertebrates/invertebrates or microorganisms?	
	Can you use a classification key to identify all of the organisms caught when pond dipping/bug collection in the garden?	
	How would you group plants and animals based on what habitat you would find them in?	
Observing over time	What happens to celery when it is left in a glass of coloured water?	• <i>How long do you need to carry out the observation for?</i> • <i>What changes are you going to look for?</i> • <i>Are you going to make a prediction about the process over time, or the outcome at the end, or both?</i> • <i>How will you record changes?</i> • <i>How do you make sure the information (data) you collect is accurate and reliable?</i>
	How does an eggshell change when it is left in a glass of coke/milk?	
	How does the level of water change when it is left on a windowsill?	
	How does your heart rate change over the course of the day?	
	How does your shadow change over the day?	
Pattern seeking	How do our skeletons change over time (birth-old age)?	• <i>How long do you need to carry out the observation for?</i> • <i>What changes are you going to look for?</i> • <i>Are you going to make a prediction about the process over time, or the outcome at the end, or both?</i> • <i>How will you record changes?</i> • <i>How do you make sure the information (data) you collect is accurate and reliable?</i>
	What colour flowers do bees and butterflies prefer?	
	Are foods that are high in energy always high in sugar?	
	How does the amount of bicarbonate of soda, washing up liquid and vinegar affect the reaction?	
	Does the temperature of a light bulb go up the longer it remains on?	
	Is there a pattern between the size of a bird's beak and the food it eats?	
Research	Is there a relationship between a mammal's size and its gestation period?	• <i>How will you know if the variables can't be easily controlled?</i> • <i>How many examples should you look at to ensure reliable results?</i> • <i>Can you draw accurate conclusions from the patterns you see?</i> • <i>What is the best way to present your findings?</i>
	How do dentists fix broken teeth?	
	Why are people cutting down the rainforest and what effect does it have?	
	How does a light bulb work?	
	How do submarines sink if they are full of air?	
	How do our eyes adapt to different conditions?	
	Why do people get grey/white hair when they get older?	
	Do boys and girls reach puberty at the same age?	
	What are drugs and how can they be used to heal/harm?	

