



The most important thing about **Science** is being curious

We observe

We question

We hypothesise and investigate

And we gain knowledge of the workings of the world around us

But the most important thing about **Science** is being curious

[Science Subject Leader Impact Form](#)

[EYFS skills and progression map](#)

[Yr 1 skills and progression map](#)

[Yr 2 skills and progression map](#)

[Yr 3 skills and progression map](#)

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[Yr 6 skills and progression map](#)

Science Being Curious



Upit groups

We provide challenge and support for all children to enable them to access and mentally develop mastery of all aspects of the Science curriculum.

SHINE BRIGHT REACH FOR THE STARS Approach

The National Curriculum is taught from Y4/6 with the skills of writing seen officially progressing each year. SAs provide learning opportunities writing towards the ELA: The National Curriculum.

Examples of work:

EYFS

3.20

Benjami
The water in the tray
is cold - At night it
could get warmer or
hotter or change to
ice.

Prediction

Yr 3

Friday 29th November 2019
LO: to investigate which surfaces reflect light

Use the template and word bank to complete the Material Activity, draw and label the material you chose and explain why you chose it.	Use the template to draw where your reflective strip should be. Remember to label it to show which material you have chosen and explain why you chose the material. Explain what happened when you tested it and what it looks and feels like, telling me how it would keep a child safe.	Also explain what you notice about the things the most reflective materials had in common. How are they similar? Make a conclusion about what all reflective materials are like in your book.
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observing

Light travels in a straight line from a light source. It reflects on the surface of an object into our eyes.

The foil was shiny and smooth before it was scrunched up, I could see my face but now it is blurry. It's flat and smooth before it was scrunched up.

The foil was still shiny after it had been scrunched up, but the light was reflected in different directions.

In the smooth foil my face looked clear and in the scrunched foil it was difficult to see in.

Smooth Bumpy

On a smooth surface the light goes in one direction, and on a bumpy surface the light is reflected in lots of different directions.

planning

The materials I will test are:

- Bubble wrap
- Orange crepe paper
- Glittery paper
- Green shiny paper
- White crepe paper

The material I think will be the most reflective is Glittery paper because it is shiny and smooth. So light will easily reflect.

predicting

Results

- 1st Glittery and white crepe paper
- 2nd green shiny paper
- 3rd orange crepe paper
- 4th Bubble wrap

6th November 2019

explaining

The most effective materials made the beam of light reflect back brightly. The glittery paper reflected the light in different directions but the white paper reflected in one direction.

They all reflect but except Bubble wrap because you can only see some shadow. The bubble wrap's bubbles are blocking most of the reflection.

Lots of materials reflect beaming light like green shiny paper, crepe paper or glittery paper.

Well explained, lively.
I think you did **Very Well Done**

4r5

Understand the different variables in a fair test experiment. I can write a good conclusion. Wednesday 25th September 2021 I know in a fair test there is a variable you change, measure and using that you keep the same. I can pick out which variable is which in an experiment.

1. With Max Thomas I can write down my prediction. I can write my list of equipment. I can draw a diagram of the experiment. With Max Thomas I can write a conclusion for the dancing raisin experiment using the PEEI format.	2. I can write up my experiment by writing down the variables. Writing a list of equipment. Writing a prediction using what I think will happen when you add more bicarb of soda to the cup. I can use scientific language. Drawing a diagram of the experiment and annotating it. I can write a conclusion for the dancing raisin experiment using the PEEI format.	3. I can write up my experiment by writing down the variables. Writing a list of equipment. Writing a prediction using what I think will happen when you add more bicarb of soda to the cup. I can use scientific language. Drawing a diagram of the experiment and annotating it. I can write a conclusion for the dancing raisin experiment using the PEEI format. I can write down an alternative experiment that we could do with dancing raisins. I can write down the change, measure and keep the same. It must be different to the experiment.
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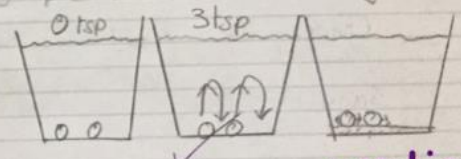
Change - the amount of bicarb.
 Keep the same - the amount of water.
 Measure - How much the raisins dance.

- Equipment
- Water
 - Raisins
 - Bicarb of soda
 - Cider or vinegar
 - Cup

I predict that the more the bicarb of soda the more the raisins because the bicarb will make a chemical reaction which will produce CO₂. This will stick to the raisins and cause them to rise. When it reaches the surface, it will release the CO₂ and the raisin will sink.

3 table spoons
 The cup with the most bicarb danced the most. The cup with the least bicarb danced least. I know this because we did an experiment and tilted the cup with three table spoons of bicarb danced more than ones with less soda. However the one with six table spoons only moved one side to side. The bicarb of soda made CO₂ which made the raisins float. The one with too much bicarb didn't float because it had too much soda. My prediction was wrong.

Observe + Compare



reporting + presenting

4r6

Monday 23 February 2020

LO: to identify and understand the parts of the human circulatory system and plan experiments using variables

1 star	2 star	3 star
Using the planning sheet, plan your investigation. Be sure to set up a clear table. I can write my conclusion using PEEI.	I can say what I am changing, measuring and keeping the same in this experiment. I can write an equipment list. I can write a prediction making sure I am using all the correct scientific language. I can write my PEEI conclusion using scientific language to explain why my heart rate sped up linking it to the circulatory system. I can write my PEEI conclusion using scientific language to explain why my heart rate sped up linking it to the circulatory system.	I can say what I am changing, measuring and keeping the same in this experiment. I can write an equipment list. I can write a prediction making sure I am using all the correct scientific language. I can write my PEEI conclusion using scientific language to explain why my heart rate sped up linking it to the circulatory system. I can write a short paragraph explaining why the heart rate should continue to slow for a period of time after the exercise and then reach a steady rate.

breath travel breathe pump breathing needed heart rate increase speed decrease blood oxygen circulatory system

Key Question: Does the amount of exercise affect the heart rate?

Hypothesis: I think that not physically fit people will have a lower heart rate because their heart is more efficient and slow heart rate will slow down faster. I also think that their heart rate will slow down faster. I think exercise will affect your heart rate because when you exercise you need more oxygen so your heart needs to pump faster.

Planning: I will test my heart rate then do some exercise and see if my heart rate has changed.

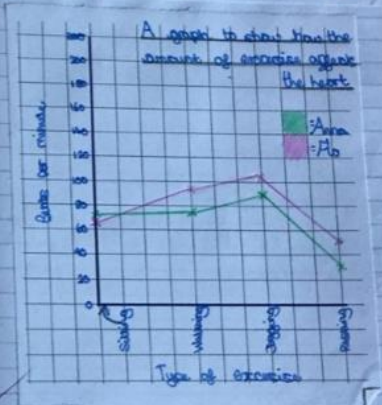
Variables: My independent variable is the amount of exercise.

- To make it a fair test, I will be keeping these things the same (constants):
- The person doing the test.
 - The temperature in the room.
 - The day/time of the test.

the room where you do it.

Activity	Person 1, Aca		Person 2, Eo	
	Beats in 30 seconds	Beats per minute	Beats in 30 seconds	Beats per minute
Sitting	37	74	36	72
Walking	38	76	44	88
Jogging	45	90	51	102
After 5 minutes rest	25	70	28	86

recording data



Altho In our investigation, we discovered that exercise does affect your heart rate. This is shown in our results table when we were just sitting, my heart was 74 beats per minute (BPM) whereas when I was jogging, my heart rate was 90 BPM. This is because when you are exercising, your body needs more oxygen. The oxygen is carried in