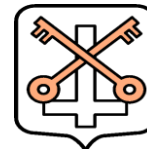


# We are scientists!



Fun science opportunities you can get involved with at home. We would love to see some photos of your work!



Send your photos or science work to: [science@st-peterscofe.lancs.sch.uk](mailto:science@st-peterscofe.lancs.sch.uk)



## Lancashire Science Festival

Saturday 20<sup>th</sup> May 2023 (10am – 4pm)

University of Central Lancashire

For children aged between 7 and 11.



University of  
Central Lancashire  
UCLan

Enjoy an unmissable programme of events, workshops and activities showcasing the wonders of science, technology, engineering and maths.

Booking opens on 19<sup>th</sup> April - <https://www.uclan.ac.uk/lancashire-science-festival/public-day>

### Featured scientist

[Gibbs Kuguru](#)

Shark scientist and geneticist

Can you create a fact file?



## Science Selfie Competition

Science is all around you and part of everyday life. Take a selfie of you completing any of these science activities or any science at home to have the opportunity to win a prize!

Do you have a science kit or game?

Maybe you have seen something in the natural world that has you asking questions like a scientist.

Send your selfies to: [science@st-peterscofe.lancs.sch.uk](mailto:science@st-peterscofe.lancs.sch.uk)



### The brief

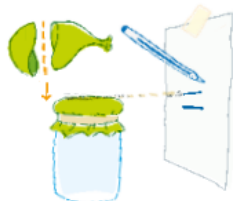
Make a barometer and predict the weather.

### The method

1. Cut the bottom half off the balloon.
2. Pull the top half of the balloon tight over the jar jar.
3. Use the elastic band to keep the balloon tight over the jar.
4. Fix the straw to the centre of the balloon skin using a piece of sticky tape.
5. Place the paper so that it is lined up against the straw. Draw a line at this position.
6. Above the line write the word "high" and below the line write "low".
7. Note down the pressures each day to see if you can notice a pattern between your air pressure readings and the weather outside.

### Materials

A glass jar  
A balloon  
A rubber band  
Scissors  
(with adult supervision)  
A straw  
Sticky tape  
Some paper  
A pen



## WEATHER BALLOON

### How does it work?

As the air is sealed inside the jar, any changes to the air pressure outside the jar will result in direct movement of the balloon rubber. As the outside air pressure increases, the rubber will be forced down into the jar. The straw pivoting on the glass will rise upward. The opposite is true when the pressure decreases.

THE  
JAMES  
DYSON  
FOUNDATION

### SCIENCE CHALLENGE

Designed by Chris,  
Design engineer at Dyson



### Design icons

Barometers are used by weather forecasters to help predict the weather.



# Confusing Cans

## Activity Card

It is lunchtime at Uncle Astro's house. They are going to have beans on toast. It is Cosmic's favourite.

Uncle Astro opens the cupboard doors and suddenly, CRASH, all the cans roll out. Cat food, soup, baked beans, tinned tomatoes all over the floor, and the labels have fallen off. What a disaster!

"How do we know which is the baked bean can?" asks Cosmic. "I don't want cat food or soup on toast!"

Gem picks up one of the cans. It has rolled much further than the others. Cosmic picks up another can. It is still close to the cupboard. "I wonder if the way they roll might help us to work out what is in each can?" says Gem. "Let's see if we can find out."

### Your challenge

See if rolling the cans will help Gem and Cosmic to find out what is inside.



Gem

I think a can of beans will roll the furthest.

I think a can of soup will roll the furthest.

I think that what is in side of the can does not make a difference to how it rolls.



Cosmic



Uncle Astro

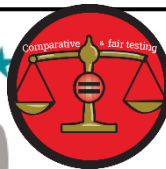


### Discuss

Have you ever dropped a can and seen it roll?  
What happened?

### Getting started

Roll each can down a slope and watch how they roll.  
How high will you make the slope?  
How will you make sure that you are rolling all the cans in the same way?  
How will you know how far they have rolled?  
Can you think of other ways to find out?



### Test your ideas

You might like to record your results in a table like this one:

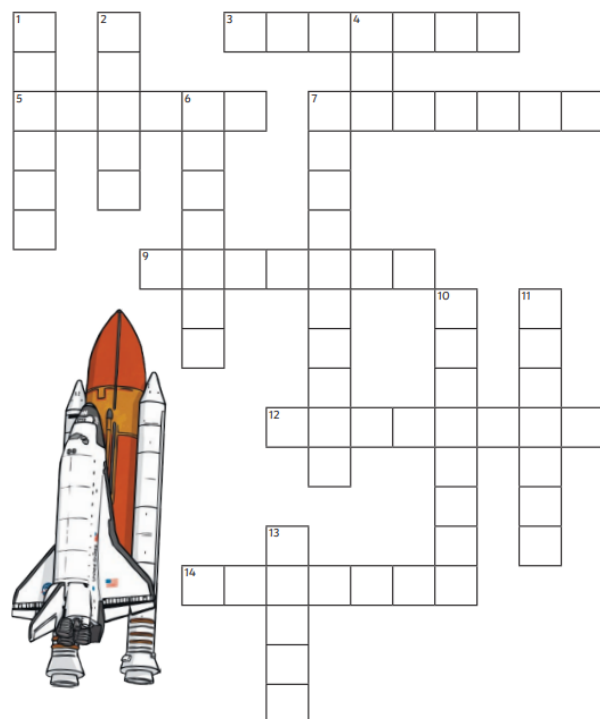
	Can 1	Can 2	Can 3
Distance rolled from a 30 cm high slope			
Distance rolled from a 50 cm high slope			
Distance rolled from a 1m high slope			

### Share your ideas

Talk about which can might have beans inside it and why. Compare your cans with ones with labels to help you to decide. Open the can and see what's inside!

### Extra things to do

Find out what happens if you roll cans or plastic bottles with different things inside. There are lots of things you could use e.g. dry sand, cotton wool, water, plastic beads.



### Across

- The name given to where something lives.
- This is formed when an object blocks the light.
- The name given to the process where heat makes a solid become a liquid.
- The force seen when something falls to the ground.
- Looking into something in great depth and detail.
- When you get involved with something to learn about it.

### Down

- Something that is formed over thousands of years, from dead plants and leaves.
- The organ that pumps blood.
- Water that is solid.
- To look carefully at what is happening.
- The kind of hand held glass which helps you see tiny things really closely.
- Plants and animals get this from food.
- The name given to the process when sugar seems to disappear into a liquid.
- How you would feel if you made a new discovery!
- Location of the Solar System.

For more fun science ideas visit [https://www.stem.org.uk/home-learning/family-activities?gclid=EAlaIqobChMlxaVu5qS-wIVF-3tCh3WMgfREAAAYASAAEgKWR\\_D\\_BwE](https://www.stem.org.uk/home-learning/family-activities?gclid=EAlaIqobChMlxaVu5qS-wIVF-3tCh3WMgfREAAAYASAAEgKWR_D_BwE)