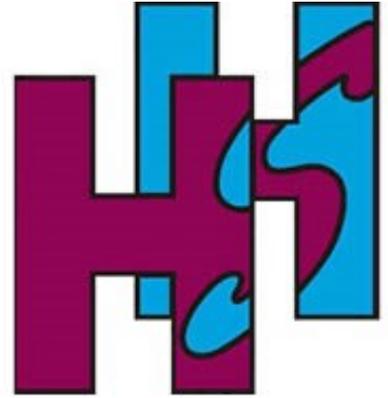


Welcome to Hellesdon
High School!



SCIENCE



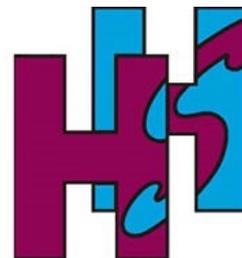
Year 6 to 7 summer project

Name:

Primary School:

Activity 1:

Cornflour slime!!

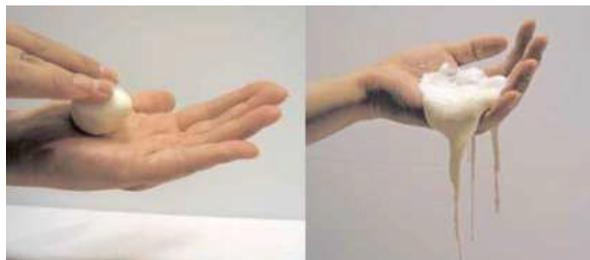


Remember if you are trying this at home to do this with a parent or carer!

Equipment:

- Cornflour
- Teaspoon
- Bowl
- Water
- Food colouring (optional)

No equipment, no problem; watch a video here:



<https://www.youtube.com/watch?v=XbWBkwM1WAI>

Instructions:

1. Add 4 teaspoons of cornflour to the bowl.
2. Add water slowly until the mixture becomes a thick liquid.
3. (Optional) add a few drops of food colouring.
4. See if you can roll it into a ball in your hands, then see what happens if you stop rolling it!

My observations:

When does the mixture act like a solid?

When does the mixture act like a liquid?

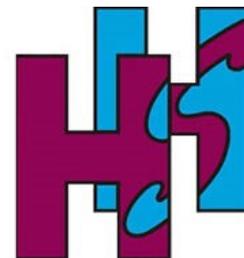
States of Matter:

Give 2 examples for each state of matter:

Solid	Liquid	Gas
E.g. brick	E.g. water	E.g. oxygen

Activity 2:

The disappearing egg shell!!



Remember if you are trying this at home to do this with a parent or carer!

Equipment:

- Egg
- Vinegar
- Cup / glass

No equipment, no problem; watch a video here:



<https://www.youtube.com/watch?v=khgOTDvG-4A>

Instructions:

1. Place the egg carefully in the cup or glass.
2. Pour vinegar over the egg so that it covers the egg completely.
3. Leave the egg for 24 hours.

My observations:

What can you see on the egg once it is in the vinegar?

What do you think has happened to the shell?

Acids:

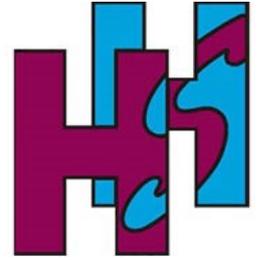
Give 2 examples of acids (taste sour):

Alkalis:

Give 2 examples (feel soapy):

Activity 3 :

Amazing growing gummy bears!!



Remember if you are trying this at home to do this with a parent or carer!

Equipment:

- 3 Gummy bears (no particular brand)
- 3 cups / glasses
- Salt
- Water
- Vinegar
- Optional—ruler

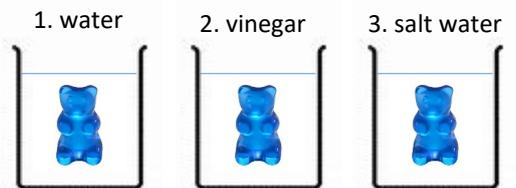
No equipment, no problem; watch a video here:



<https://www.youtube.com/watch?v=Eg3k9Tz8qaA>

Instructions:

1. In cup 1 pour water.
2. In cup 2 pour vinegar.
3. In cup 3 dissolve 2 teaspoons of salt in water.
4. Measure the length of gummy bears and place a gummy bear in each cup.
5. Leave the gummy bears for 24 hours and re-measure the length of the gummy bears.



Results: Note you can write your own results in or use ours!

What was the gummy bear	Length at the start (cm)	Length after 24 hours (cm)	Change in length (cm)
Water	2.0	3.5	
Vinegar	2.0	3.2	
Salt Water	2.0	2.8	

Which gummy bear grew the most? (use the table on the left)

What did we have to keep the same in our experiment?

- _____
- _____

Activity 4: Colourful Celery!!



Remember if you are trying this at home to do this with a parent or carer!

Equipment:

- Celery (with leaves)
- Large cup / glass
- Knife
- Water
- Food colouring (red / blue work well)

No equipment, no problem; watch a video here:



<https://www.youtube.com/watch?v=Klug9Foou3s>

Instructions:

1. Add water and a few drops of food colouring to the cup
2. Cut the celery through the stem (get an adult to do this!)
3. Place the celery upright in the cup.
4. Leave the celery for 24 hours.



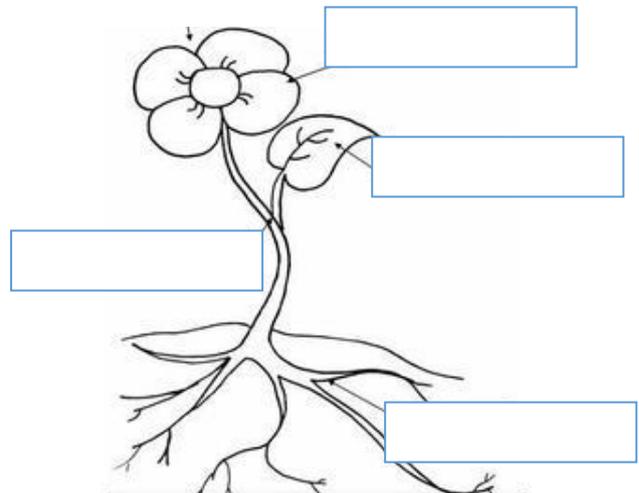
Observations:

What happened to the celery after 24 hours?

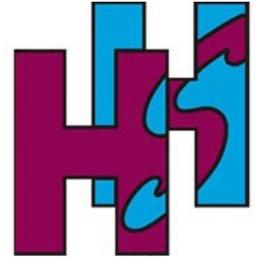
Suggest what has caused this? (where has the food colouring travelled?)

Plant Structure:

Label the leaf, flower, root and stem



Activity 5: Making Helicopters!!

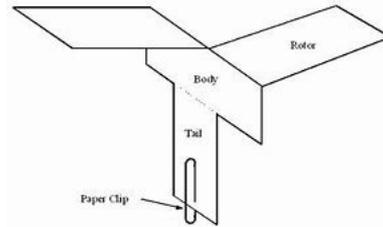


Remember if you are trying this at home to do this with a parent or carer!

Equipment:

- Helicopter template
- Scissors
- Paperclip
- Stopwatch

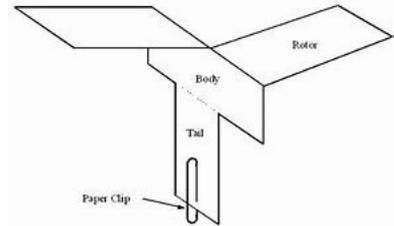
No equipment, no problem; watch a video here:



<https://www.youtube.com/watch?v=5Vk-gXwHDSM>

Instructions:

1. Cut out the helicopter template (on the next page).
2. Cut along the straight lines.
3. The dotted lines are for folding:
4. Fold part C and D inwards and attach a paperclip at the bottom.
5. Fold wing A in one direction and wing B in the opposite direction.
6. Hold the helicopter at shoulder height.
7. Drop the helicopter and time how long it takes to fall to the floor. Repeat this 3 times.
8. Optional—cut the wings so they are half of the length. Time how long it takes to fall.



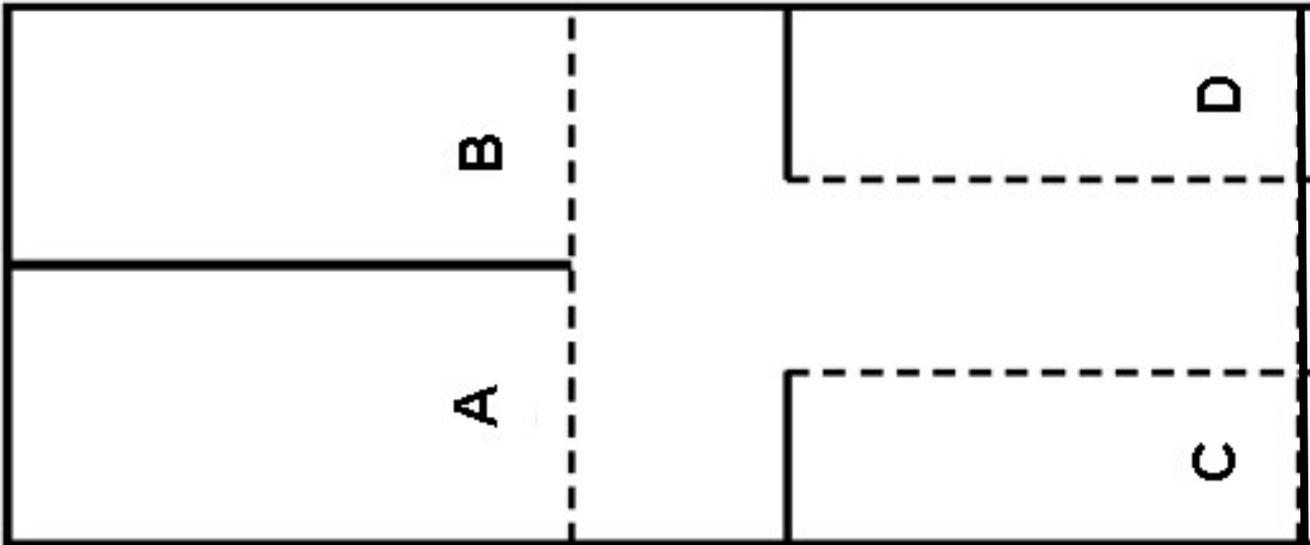
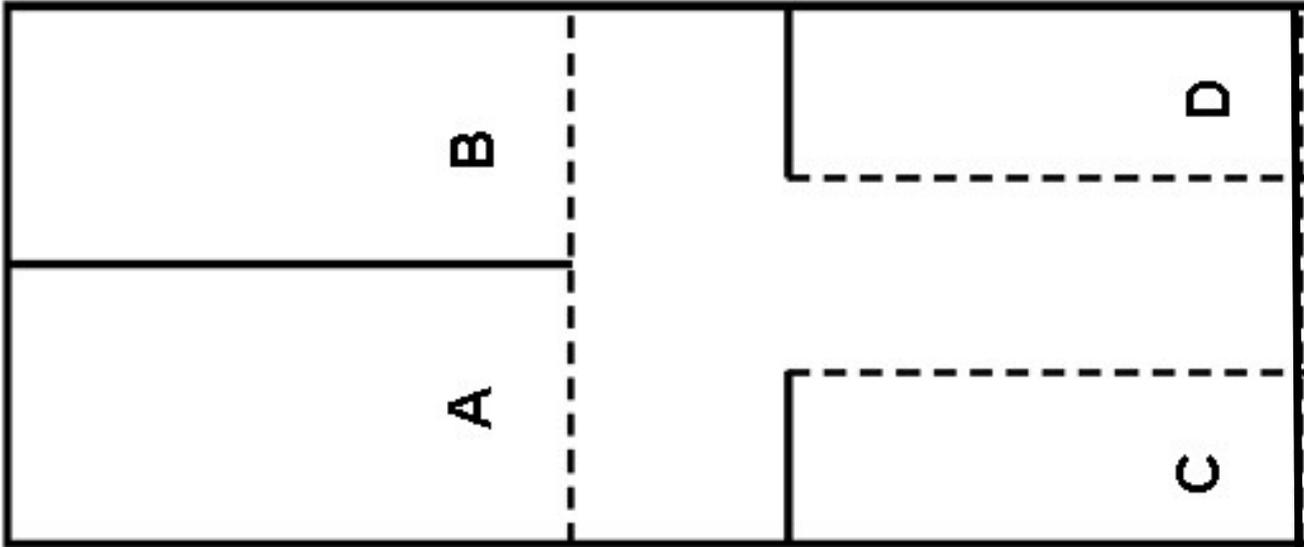
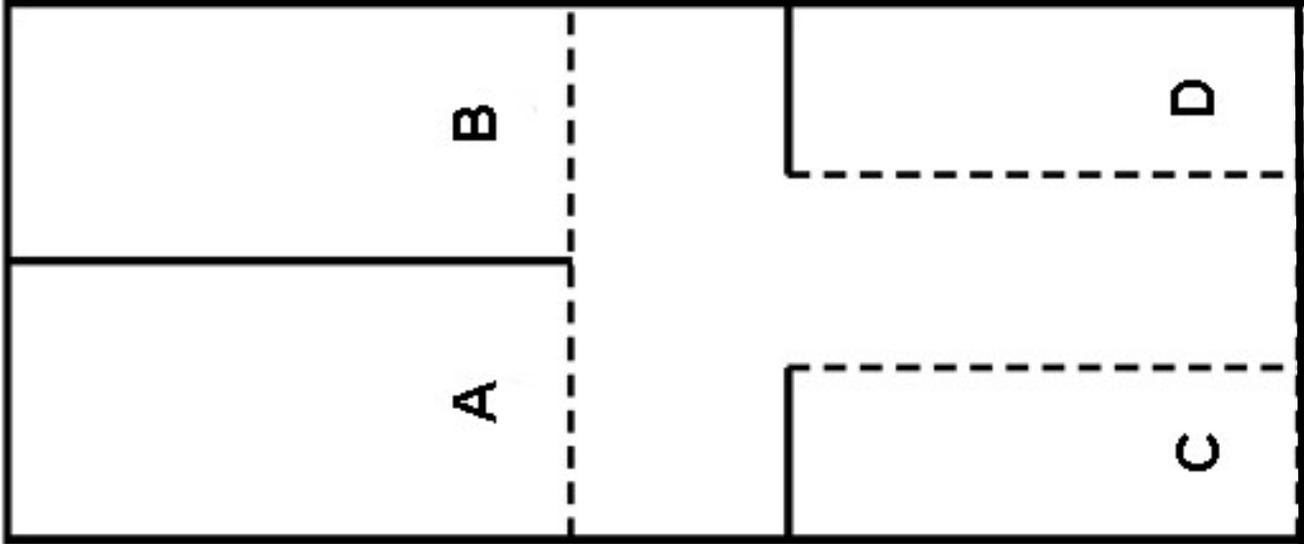
Results:

Drop time 1 (seconds)	Drop time 2 (seconds)	Drop time 3 (seconds)	Average drop time (seconds)

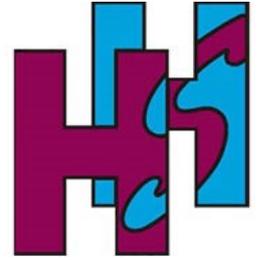
To work this out add up all three drop times.
Then divide by 3.

Why did we repeat our experiment 3 times?

Activity 5: Making Helicopters Template



Activity 6: Paper drop!!

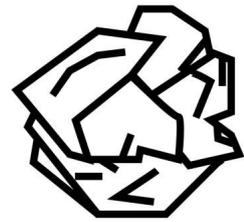
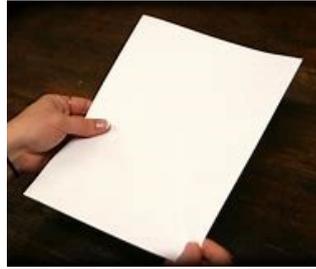


Remember if you are trying this at home to do this with a parent or carer!

Equipment:

- 2 pieces of paper
- Stopwatch
- Optional—scissors
- Optional—tape

No equipment, no problem; watch a video here:



<https://www.youtube.com/watch?v=O-KYLXp2MG4>

Instructions:

1. Crumple up a piece of paper
2. Hold the piece of paper at shoulder height
3. Drop the paper and time it takes to fall to the floor. Repeat this 3 times.
4. Repeat steps 2 and 3 for flat paper.
5. Optional—repeat steps 2 and 3 for other shapes e.g. folded / cone

Results:

Type of paper	Drop time 1 (seconds)	Drop time 2 (seconds)	Drop time 3 (seconds)
Crumpled			
Flat			

What did **we change** in our experiment?

What is the name of the **force** that causes the paper to fall?

The _____ paper fell the slowest because _____

The Science Department at Hellesdon High School

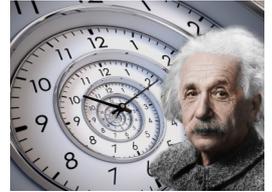


Miss Quackenbush

Pretty much all mammals over 1kg can empty their bladder in an average 21 seconds! So an elephant can empty several bathtubs of urine in the same amount of time that a large dog can empty their bladder to fill a small water bottle. Not weeing for too long helps survival!

Mr Brand

One of my favourite science facts is that time goes faster or slower depending on how fast you travel.



Mrs Nickerson

I absolutely love wildlife and my favourite Science fact is...a blue whale's blood vessels are so big, you could swim through them! I'm looking forward to meeting you all soon and sharing more amazing facts with you about our world.

Mr Primal

My favourite Science fact is that our star, the Sun, is not really that big compared to other stars. The largest star yet discovered is UY Scuti and to fly around it once in a jet plane would take more than 1000 YEARS.



Mrs Nichols

Did you know that diamonds, the hardest material on Earth which are shiny and graphite, used as lead in pencils which is dark and dull are both made from particles of carbon which are just arranged differently?

Mr Orton

My favourite science fact is that in the average human being there is enough DNA to stretch from the sun to Pluto 17 times!



Mr Earl

My favourite science fact is that the human body contains enough carbon in it to make 9000 pencils!

Mr Wortley

My favourite science fact is that purple is not a real colour, it doesn't exist in the rainbow. Our brains create the colour for us, so it is entirely possible that everyone sees purple differently!



The Science Department at Hellesdon High School



Mx Male

Scientists only understand what makes up 5% of our universe. The other 95% is we think made up of dark matter and dark energy. But no one has yet seen it, touched it or interacted with it at all and we know next to nothing about it!



Mrs McNulty

Your tongue can only taste whether foods are sweet, salty, sour, bitter or savoury. Our sense of smell is responsible for other 'flavours' e.g. strawberry which is why when our nose is blocked we can't taste food properly.

Mrs Baxter

My favourite science fact is that every hydrogen atom (the smallest part of matter) the in your body is likely to be 13.5 billion years old as it was created at the birth of the universe.

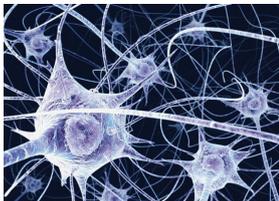


Mr Gardiner

My favourite science fact is... if atoms (the smallest part of matter) were the size of a marble, all the atoms in your fist, would make your fist the size of THE WORLD.

Dr Martino

One of my favourite science facts is that the clouds made over the Southern Ocean (the ocean around Antarctica) are caused by gases and particles made by the smallest of all marine plants.



Dr Cousins

One of my favourite science facts is that there are so many nerve cells in the human brain that it would take almost 3,000 years to count them all!

What is **your** favourite Science fact (it can be one of ours or your own!)
