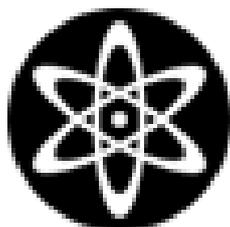


Eaton Bank Academy



Science Department

Eaton Bank's Summer Scientists

Name:

Form group:

Primary school:





Name: Miss L Ireland
Interests: genetics, radioactivity
Hobbies: horse-riding, spinning, baking
Task: *Spaghetti structures*

Name: Mr T Pearson
Interests: biochemistry, food biology, genetics
Hobbies: cats, cricket, baking, cooking
Task: *Stop apples from browning*

Name: Mr J Conheeny
Interests: forensics, practical work
Hobbies: football, films, music, theatre
Task: *Boat building*

Name: Mr M Quinn
Interests: understanding the universe
Hobbies: football, reading, puzzles, walking my dogs
Task: *Hovering paper*



Name: Mrs E Stone
Interests: biochemistry, plants and ecology.
Hobbies: reading, walking and being outdoors.
Task: *Flower pressing*

Name: Miss S Mullins
Interests: pharmaceuticals, drug discovery
Hobbies: netball, running, dancing, reading.
Task: *Puzzling puddles*

Name: Mr B Corscadden
Interests: astronomy, classical mechanics, cosmology
Hobbies: walking, reading, cooking
Task: *Create a sundial*



Name: Mrs H Hampton
Interests: microbiology, pathology, earth sciences, organic chemistry
Hobbies: DIY, photography, walking
Task: *Secret messages*



Name: Mrs L Mclaughlin
Interests: anatomy and physiology, evolution, genetics
Hobbies: reading, walking, Joe Wicks PE!
Task: *Interesting insects*



Name: Mrs P Leese
Interests: biochemistry, food science, flags and capital cities.
Hobbies: quizzing, cooking
Task: *Mentos volcano*



Name: Mrs J Barker (Technician)
Favourite demo/practical: northern lights demo
Interests: home crafting, animal behaviour,
Hobbies: walking my dogs, stitching and crochet, reading, gardening, baking from food I have grown
Task: *Making a lava lamp*



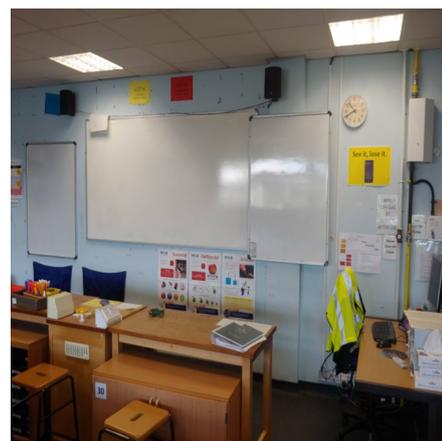
Name: Miss S Havelock (Technician)
Favourite demo/practical: The Blue Bottle Experiment
Interests: Forensic Science, Genetics
Hobbies: arts and crafts, creatively reducing waste, the paranormal, growing fruit and veg, puzzle books
Task: *Spotting shapes*



Name: Mrs H Goodwin (Technician)
Favourite demo/practical: methane mamba
Interests: horticulture, travel, anatomy, physiology, pilates
Hobbies: gardening, walking and playing with my Jack Russell, reading
Task: *Pepper and Soap trick*

Welcome to Eaton Bank's science department!

Below is a picture of the laboratories you could be in next year. We have **two blocks** spread across **two buildings**, with some newer laboratories and older laboratories that have been around for a few decades!



Above is a picture of the **equipment** you might expect to see at your desk. Gas taps provide us with flammable methane to use for our Bunsen burners. The plugs are for our electrical equipment and the water is used in experiments or for rinsing out non-hazardous liquid. We only use these for practical activities!

We also have a **science office** in the older block. This is often the best place to find your science teacher at break time, lunch time, or after-school if you are stuck on your homework or classwork.



Both science blocks have **toilets** that you may use during lesson time if you have permission from your teacher. You'll find it hard to get lost once you're here.



A very important room is the **prep room** (*below*). There is one in each block. Our **technicians** work in here to provide your teachers with the equipment you need for your lesson. They are very friendly and can help if you are collecting equipment, or if you're a bit lost!



Our challenges

Over the weeks before you start with us, have a go at as many of these challenges as you can! Some have links take you to further information and instructions. Show your science teacher how you got on with pictures, videos or written findings in September!

1. **Spaghetti structures:** bit.ly/2DhK0a9
—*Miss Ireland*
2. **Stop apples from browning:** slice an apple, soak in different liquids (e.g. lemon juice, honey water, milk, water). Check the brownness every couple of minutes for twenty minutes.—*Mr Pearson*
3. **Boat building:** build a boat from **one** sheet of paper and maximum 10 paper clips. Get it to hold as much mass as possible (such as pennies or blu-tack) and float without tipping —*Mr Conheaney*
4. **Hovering paper:** Fold or cut just **one sheet** of A4 paper into a design that takes the **least** time to fall to the ground.—*Mr Quinn*
5. **Flower pressing:** Press flowers from an area where you have permission.
bit.ly/2AxlReu— *Mrs Stone*
6. **Puzzling puddles:** draw around a puddle with chalk and observe how it changes over time.—*Miss Mullins*
7. **Create a sundial:** Stand a stick up with blu-tack in the middle of a paper plate. Mark the position of the shadow at different times. Check your accuracy the following day! - *Mr Corscadden*
8. **Secret messages:** use a cotton bud dipped in lemon juice to write on paper. Let it dry, then heat with a hairdryer and watch your message appear! - *Mrs Hampton*
9. **Interesting insects:** Find, name and draw insects in your area!
bit.ly/2O19fPQ—*Mrs Mclaughlin*
10. **Mentos volcano:** using mentos and a carbonated drink of your choice, observe rapid fizzing! (do this one outside!) - bit.ly/31MVfRT—*Miss Leese*
11. **Making a lava lamp:** Produce an interesting effect with some common supermarket ingredients!
bit.ly/2VSdba9—*Mrs Barker*
12. **Spotting shapes:** when you are out walking, see what shapes you can spot.. Can you spot three circles, three triangles and three rectangles? - *Miss Havelock*
13. **Pepper and soap trick:** put water in a bowl. Sprinkle pepper flakes on top. Put a little dish soap on your finger and dip into the bowl. What happens? - *Mrs Goodwin*

What is the difference between the three sciences?

Biology is the study of the living world, from the smallest micro-organisms to some of the largest ecosystems on Earth.

Chemistry is the study of the elemental particles of the universe, how they are arranged and how they can be rearranged in chemical reactions.

Physics consists of the nature and properties of matter (or as you'd call it now, stuff!) and energy. You will learn about interactions between objects on the largest scale (our Solar System) and the smallest scale (particles vibrating when hearing sound).

What subjects do we do with each teacher?

This will depend on who teaches you, sometimes biology chemistry and physics are split between three teachers, sometimes you might have two teachers sharing the three subjects. You may even have one teacher do all three! Either way, you won't miss out!

What kind of things do we do in lessons?

Your teachers will prepare interesting, challenging lessons with a mixture of practical activities, performing experiments and recording results, and writing explanations to key science knowledge. You will use a varied range of equipment but sometimes all you will need is some stationery and your exercise book!

Do we get to do practical?

In short, yes! We will provide you with that opportunity wherever we can. However not every topic you will complete has an appropriate practical activity.

Will there still be written work?

Yes. Even the practical activities you do need to do require you to record results or observations and be explain what has happened. This helps you to better understand your science curriculum.

Will I have one book for science?

You will have one book per science teacher unless told otherwise. You will need to look after this in your lessons and when it needs to be taken home.

How often do we have homework?

Roughly once a fortnight but this can naturally vary. Your teachers are the best judge on how and when to give homework tasks. But we are always happy to help if you're stuck!

Do we have sets for science?

Science is taught in mixed-ability groups in year 7.

Activity tracker

Use the table below to keep track of what you've done. Remember, you can do as many as you like with whatever equipment you have! We will all be happy to see whatever you have done and can talk to you about the science of what you found...

Task	Staff member	Tick here when done!
1. Spaghetti structures	LIR	
2. Stop apples from browning	TPE	
3. Boat building	JCO	
4. Hovering paper	MQU	
5. Flower pressing	EST	
6. Puzzling puddles	SMU	
7. Create a sundial	BCO	
8. Secret messages	HHA	
9. Interesting insects	LMC	
10. Mentos volcano	PLE	
11. Making a lava lamp	JBA	
12. Spotting shapes	SHA	
13. Pepper and soap trick	HGO	