



Star

NURTURING TODAY'S **YOUNG PEOPLE**,  
INSPIRING TOMORROW'S **LEADERS**

# Transition: English, Maths, Science

Eden Boys' School, Bolton

Summer 2020



# We can't wait to meet you....

The English, Maths and Science teams at Eden Boys' School, Bolton are looking forward to meeting you. Normally, we'd be able to meet you in person before you join us in September so we thought we'd introduce ourselves this way instead. In this booklet, you can read all about us and then you will be able to complete some challenges so we can help you prepare for September and we can also learn a little bit about you.



# Welcome to the English Department

## Meet some members of the English Team

**Mrs Garvey**

**Director of Learning -  
Communications**



Favourite book:  
**Thief by Markus Zusak**  
*This is a beautifully written book that describes the friendship between a German boy and a Jewish man set during the time that Hitler was in power. It shows the courage of doing the right thing when you know that you are putting yourself in danger.*

**Mrs A Patel**

**Teacher of English**



Favourite book:  
**Island Man by Grace Nicholls**  
*The author describes in a vivid fashion the splendour of the 'Emerald Isle' so we can appreciate its sheer beauty brought to life with expert guile and skill.*

**Miss C Mitchell**

**Teacher of English**



Favourite book:  
**Jabberwocky by Lewis Carol**  
*It is unique and is filled with weird and wonderful onomatopoeic words which mean absolutely nothing out of context but which somehow describe everything perfectly.*

**Miss S Yar**

**Teacher of English**



Favourite book:  
**A Thousand Splendid Suns by Khaled Hussein**  
*It taught me about how education can make a big difference in one's life. The author really triumphs in explaining different cultures. It really inspired me to pursue a career in teaching English.*



# Famous Authors



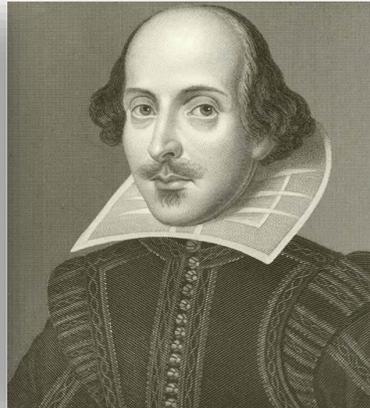
Can you name these famous authors/playwrights?

Hint: all of their names are on the literary timeline a few pages ahead.

Think



G\_\_f\_\_y  
C\_\_c\_\_



W\_\_l\_\_a\_\_  
\_h\_\_p\_\_e



C\_\_a\_\_ot\_\_  
B\_\_n\_\_e



Ar\_\_\_\_  
C\_\_n-D\_\_y\_\_



M\_\_y  
S\_\_ll\_\_



Find the name of a famous character each author has created.

Research



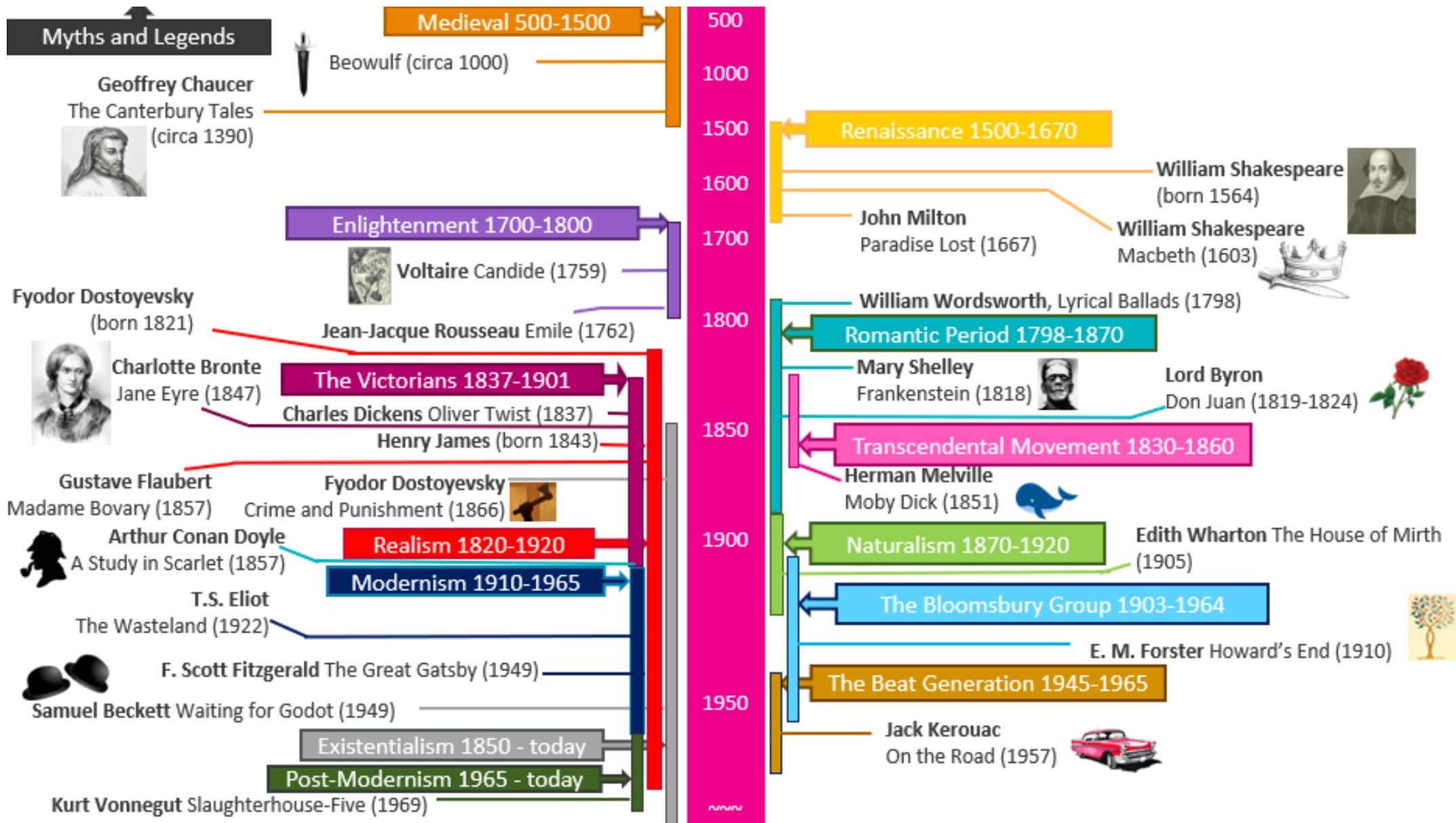
# Literary Timeline and Literary Canon

The **literary timeline** on the next page shows you the names of different periods or movements which group some writers together, for example, The Romantic Period. Writers in the same movement or period may use similar styles or form or share similar concerns in their writing – though they can also be very different.

The **literary canon** is a group of texts which are considered to be the most important from a particular period. Some of these are on the timeline, but the timeline does not contain every writer (there is just no room!)



# Literary Timeline





# Medieval: **Beowulf** (author unknown)

Medieval 500-1500 **Beowulf** (circa 1000) →



**Beowulf** is one of the most important texts in Old English. It was written between 975 and 1025 and is an epic poem which has 3,182 lines. An epic is a tale of extraordinary people doing extraordinary things often dealing with Gods or supernatural beings.



**Beowulf** is a **hero**. First of all, he fights and kills Grendel. Then he fights and kills Grendel's mother by lifting a sword that no mortal could lift.

Original poem in the British Museum





## Renaissance: **Macbeth** by William Shakespeare

Set in Scotland, Shakespeare created a character who was so ambitious that he murdered the King in order to become King himself. When this play was written and performed, people believed that God chose the king therefore Macbeth committed a terrible sin. The play is a tragedy.



### Watch

#### Activity 1:

Follow this link and watch the clips which tell the story of Shakespeare's Macbeth:  
<https://www.bbc.co.uk/teach/class-clips-video/english-ks2-macbeth/zdt42sg>



### Research

#### Activity 2:

The real King Macbeth was very different. Find out 3 pieces of information about the real Scottish King Macbeth which are different to how he is presented in the play. Why do you think Shakespeare changed his character?



Renaissance 1500-1670

**William Shakespeare Macbeth (1603)**





## Romantic Period: **Frankenstein** by Mary Shelley

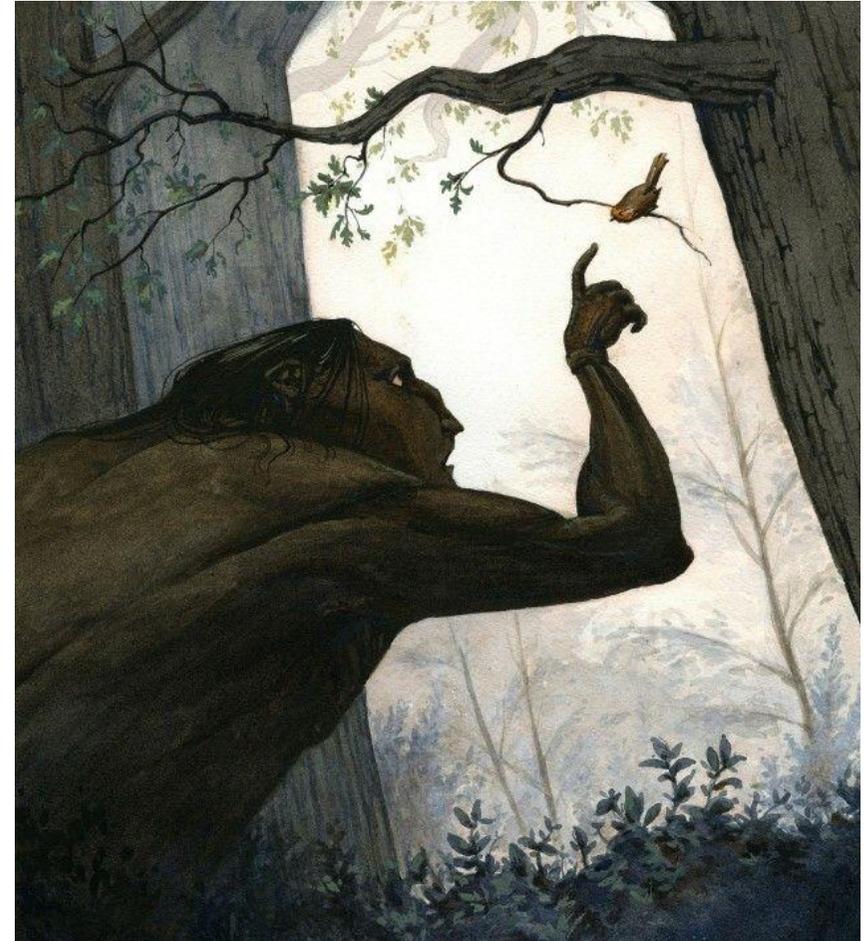
The Romantic Period is characterised by a love of nature and solitary places, the imagination, castles and mountains, beauty and power. It is not about the way we use the word 'romantic' today which means thoughts and feelings of love. Mary Shelley wrote *Frankenstein* after a stay near Lake Geneva with her husband and some friends.



### Research

#### Activity 1:

Can you find out who two of Mary Shelley's companions were?  
Which important literary texts did they write?  
What was the challenge that was set which led to Mary Shelley creating her novel?



← Romantic Period 1798-1870 **Frankenstein** by Mary Shelley (1818)



## Romantic Period: Frankenstein by Mary Shelley

Frankenstein is the name of the doctor who created the monster, not the monster itself as some people think. Mary Shelley gave the novel the longer title of: 'Frankenstein or *The Modern Prometheus*'.

### Plot Summary

When Victor Frankenstein's mother dies of fever before he goes to university, he is devastated. While at university, Victor becomes obsessed with aspects of science – both old and new. He wants to create life. He experiments on dead bodies and then uses body parts to create his creature/monster. He is successful in giving the creature life, but is immediately disgusted and abandons it. Victor's brother is murdered and a family servant is executed for it. Victor believes the creature is to blame after witnessing it at the scene of the murder.

The creature is left to fend for itself and everyone it meets is horrified by it and rejects it. The creature asks Victor to show some sympathy and he pleads with Victor to build him a female companion. Victor does this, but then tears it to pieces in disgust. The creature takes revenge.



### Research

#### Activity 2:

Prometheus is a character from Greek Mythology. What can you find out about him?



### Think

#### Activity 3:

Read the plot summary above. Why do you think Shelley gave her novel the longer title of 'The Modern Prometheus'?



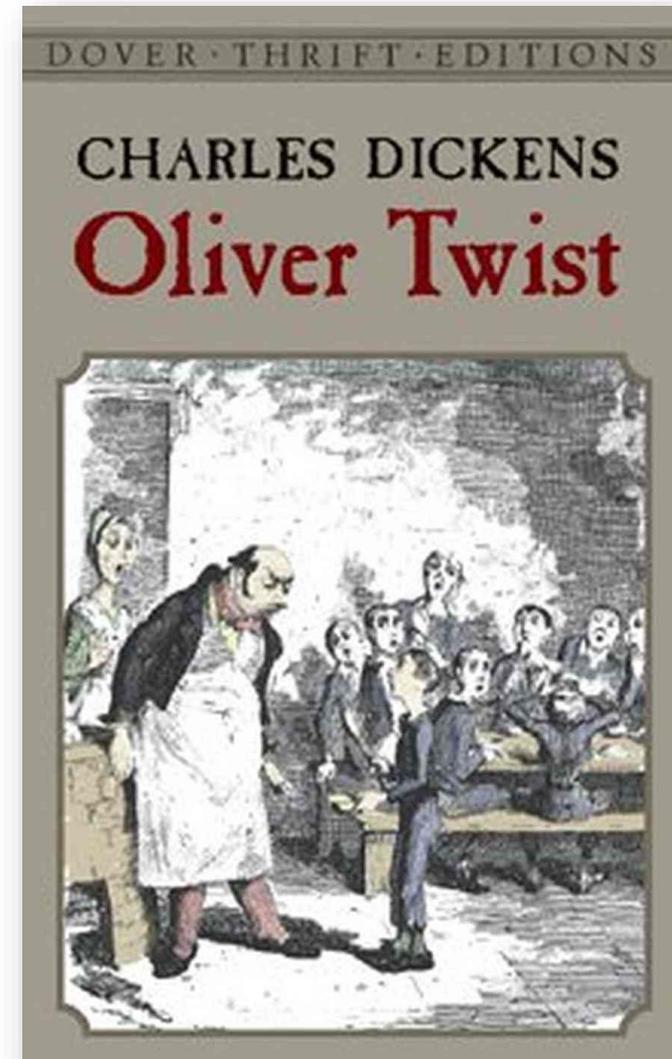
## The Victorians: **Oliver Twist** by Charles Dickens

Charles Dickens was one of the most prominent writers of the Victorian period. He wrote many novels and articles. His novels were originally published in weekly journals so readers would read weekly instalments of his stories.

Dickens was very concerned with the plight of the poor and many of his novels are about the struggles of the poor population or about the poor overcoming adversity. As a child, his father had been imprisoned and his own family suffered poverty. **He took an intense interest in education and charities that catered for poor children.**

In *Oliver Twist*, Dickens tells a tale of a young orphan boy who becomes embroiled in crime with pick pockets before eventually.... well, that would be telling – why not read the book to find out what happens to him yourself!

The Victorians **Charles Dickens, *Oliver Twist* (1837)** →







# Welcome to the Maths Department

## Meet the Director & Deputy Director of the Maths Team

**Mr M Patel**

**Director of Learning -  
Maths**



Favourite Mathematician?

**Srinavasa Ramanujan**

*He had no formal Mathematical training and was dismissed by many famous Mathematicians of his time but he went on to be invited to Cambridge University, created almost 3000 number theories, some of which Mathematicians struggle to prove even to this day!*

**Mr M Bhikha**

**Deputy Director of  
Learning - Maths**



Favourite Mathematician?

**Muhammad ibn Musa al-Khwarizmi**

*He was an Iranian scholar of the 9th century. He produced vastly popular works in mathematics, astronomy and geography. His contribution to Maths has had a great influence in the technologies that we use in our day to day lives today.*



## Getting ready to join us.

At **Eden Boys' School, Bolton** all of our students use the excellent online learning tool **Hegarty Maths**, when you join us in September we will set up with an Hegarty Maths account and teach you how to use it. We are delighted that the team behind Hegarty Maths have recently launched a free online program called '**Secondary Ready**' that you can access at home this summer.

Simply register at [numerise.com/secondary-ready](https://numerise.com/secondary-ready) and complete the course. Its only twelve lessons and if you complete them all, you will be super ready for your Year 7 maths lessons.

Let us know if you finish it – we can't wait to hear how you get on.



**Secondary Ready**



**numerise**

The simple way to improve your child's maths at home

**Let's get Secondary Ready**

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# Totalines Challenge



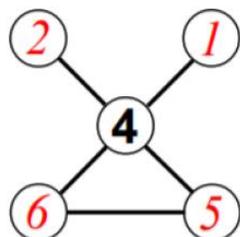
**Think**

## Try this number challenge!

Numbers have to be placed in empty circles. The numbers you should use are listed under each diagram; you cannot use any number twice.

The object is to place the numbers so that all those which lie along a straight line, as shown by the lines drawn, add up to the total given (the total is written under the diagram).

The one below has been done for you.



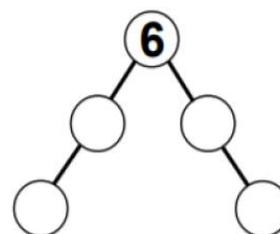
Use 1, 2, 5, 6  
Total 11

So:

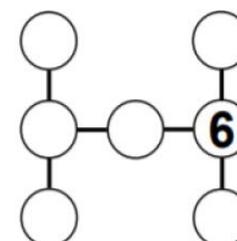
$$2+4+5=11$$

$$6+4+1=11$$

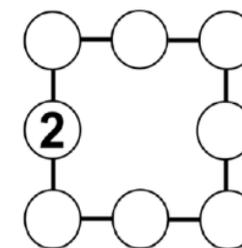
$$6+5 = 11$$



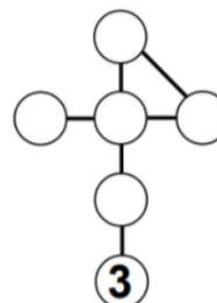
Use 2, 3, 4, 5  
Total 13



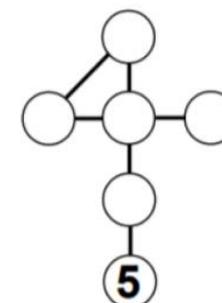
Use 0, 1, 2, 3, 4, 5  
Total 10



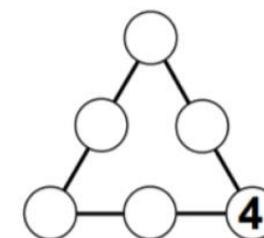
Use 3, 4, 5, 6, 7, 8, 9  
Total 18



Use 1, 2, 4, 5, 6  
Total 11



Use 0, 1, 3, 4, 6  
Total 10



Use 0, 1, 2, 3, 5  
Total 9



# Maths Equipment

Secondary school mathematics is so exciting!

In September you will need a **pen**, **pencil** and **ruler**.

In the Spring term you will need a **geometry set** with a **protractor** and a **pair of compasses**.

We use calculators throughout secondary school and a **Casio Scientific Calculator FX-83GTXBLACK** model is





## A Hexagon problem.

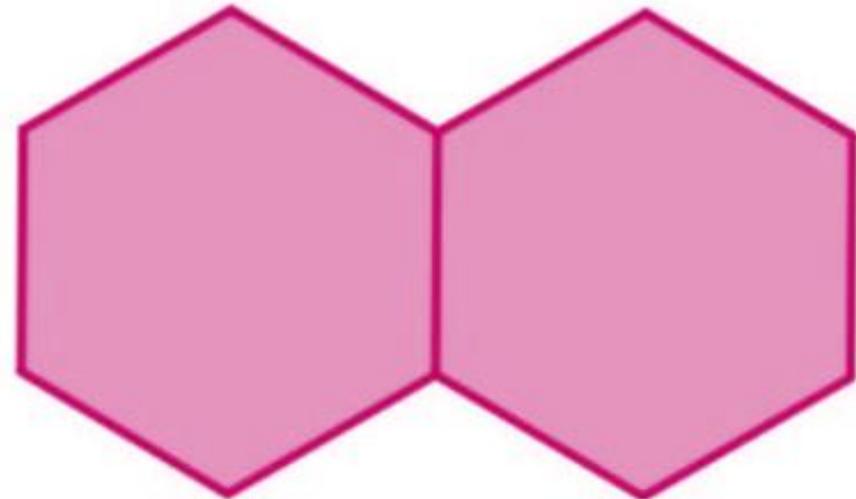


Think

**Try this hexagon puzzle!**

Heather can make two connected hexagons by drawing 11 lines.

**What is the minimum number of lines Heather needs to use to draw 12 hexagons?**



**Extension:** What number of hexagons are the most efficient to draw and why?

*This problem is taken from [puzzleoftheweek.com](http://puzzleoftheweek.com). If you enjoy doing puzzles then have a go at the weekly problems on this website*



## Target 42 Challenge



Think

Your aim is to write down a calculation that gives an answer of 42.

- You can only use the following digits once:

0 1 2 3 4 5 6 7 8 9

- You can use these symbols as many times as you like:

( ) x ÷ + -

- Make sure your calculation obeys the rules for the order of operations.
- How complicated can you make your calculation?
- Remember to check your calculations.





# Famous Mathematicians

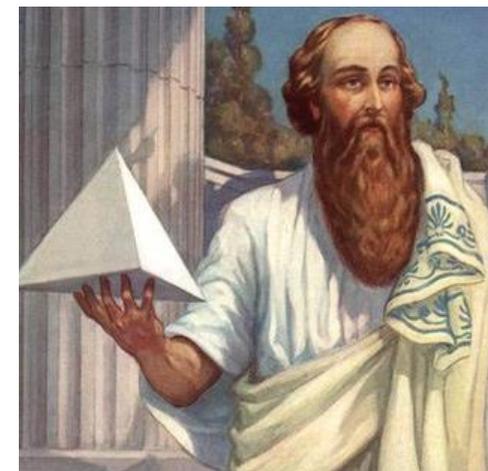
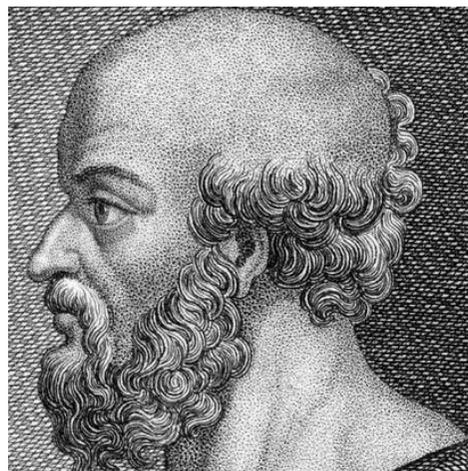
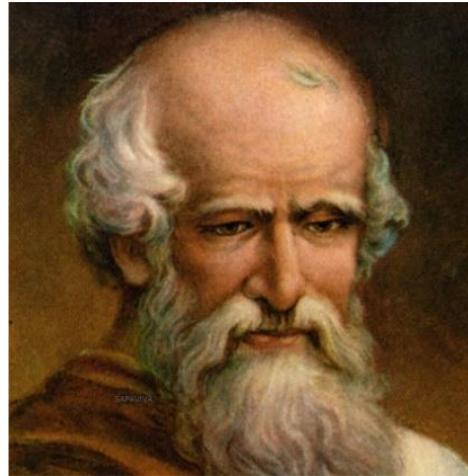
Here are some famous mathematicians:  
**Fibonacci, Archimedes, Eratosthenes, Pythagoras.**

Can you discover:



**Research**

- when each mathematician lived?
- where each mathematician lived?
- their contribution to maths?





# Shape Up!



**Try this shape times shape challenge!**

**Think**

The coloured shapes stand for eleven of the numbers from 0 to 12.

Can you work out what each shape stands for from the multiplications?

$$\square \times \square \times \square = \text{Crescent}$$

$$\text{Rectangle} \times \text{Rectangle} = \text{Star}$$

$$\square \times \text{Oval} = \text{Crescent}$$

$$\square \times \text{Star} = \text{Hexagon}$$

$$\text{Rectangle} \times \text{Oval} = \text{Circle}$$

$$\text{Rectangle} \times \text{Diamond} = \text{Rectangle}$$

$$\text{Rectangle} \times \square = \text{Triangle}$$

$$\text{Diamond} \times \text{Hexagon} = \text{Hexagon}$$

$$\text{Triangle} \times \square = \text{Circle}$$

$$\square \times \text{Inverted Triangle} = \text{Inverted Triangle}$$

$$\square \times \square = \text{Oval}$$

$$\text{Inverted Triangle} \times \text{Crescent} = \text{Inverted Triangle}$$



# Welcome to the Science Department

## Meet some members of the Science Team

**Dr C Barker**

**Assistant Principal –  
Teaching & Learning**



Favourite scientist?

### **Rosalind Franklin**

*She was an English chemist who is most famously known for producing X-ray images and calculations that led to our understanding of the double helix structure of DNA. In addition to this, she led ground-breaking work on the structure of viruses before she sadly died in 1958 at the young age of 37. Following her death, her work in both areas contributed to her colleagues being awarded Nobel Prizes in both Medicine and Chemistry. Unfortunately, due to the rules of the Nobel Assembly, she was recognised on either of these awards.*

**Mr K Hussain**

**Director of Learning -  
Science**



Favourite scientist?

### **Ibn Al – Haytham**

*He was a physicist, astronomer and a mathematician, who lived in the golden age of Islam. He is also known as the father of optics as he was the first to demonstrate that vision occurs in the brain and not in the eyes.*

**Mr R Arden**

**Teacher of Science**



Favourite scientist?

### **Galileo Galilei**

*He is my favourite scientist because he created modern astronomy and developed theories about the sun being the center of the solar system.*

**Mr S Khan**

**Teacher of Science**



Favourite scientist?

### **Sir Alexander Fleming**

*His groundbreaking discoveries such as the Enzyme lysozyme which is a pivotal part of the human immune system. Following on, he also performed research with mould which led to the discovery of penicillin, this antibiotic is still used to this day.*



## Getting ready to join us

**At Eden Boys' School, Bolton we are all really looking forward to meeting you and exploring together in Science. Let's get started with some activities and investigations!**



### Think

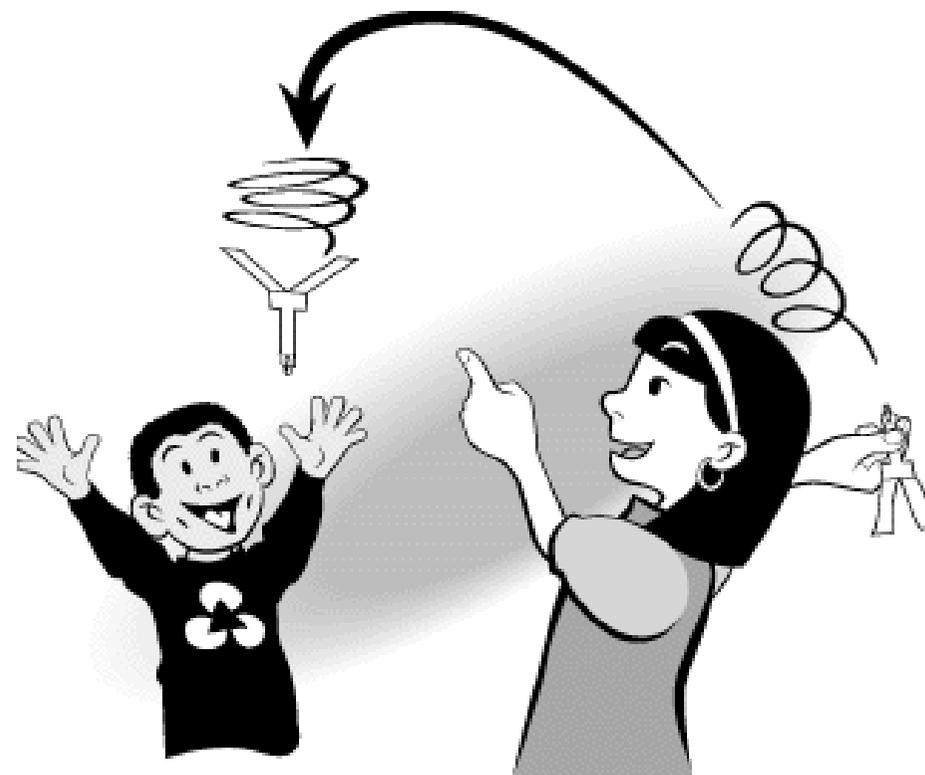
Do you know the names of any living scientists and what they do? This may include members of your family or friends.



### Research

What can you find out about the following scientists and their areas of expertise?

- Polly Matzinger (immune system)
- CV Raman (spectroscopy and cancer detection)
- Alan Turing (artificial intelligence)





# Scientific investigations

In Science we investigate ideas. Try your own investigation and you can tell us all about it when we meet.



Choose one of the following ideas:

**Think**

- > How can we make jelly dissolve fastest?
- > What will make the best bubbles?

Plan your investigation and capture your results on the page provided later in this book.

Title Add in investigation title		
<b>Summary</b> Say what you were asked to investigate	<b>Results</b> Data/photographs/graphs	<b>What we did</b> Equipment/diagram/photos Describe how you carried out the investigation
<b>Questions/problems</b>		
<b>Hypothesis/prediction</b>		
<b>Variables</b> What did you change? What did you keep the same?	<b>Add in your names here</b>	<b>What we found out</b>



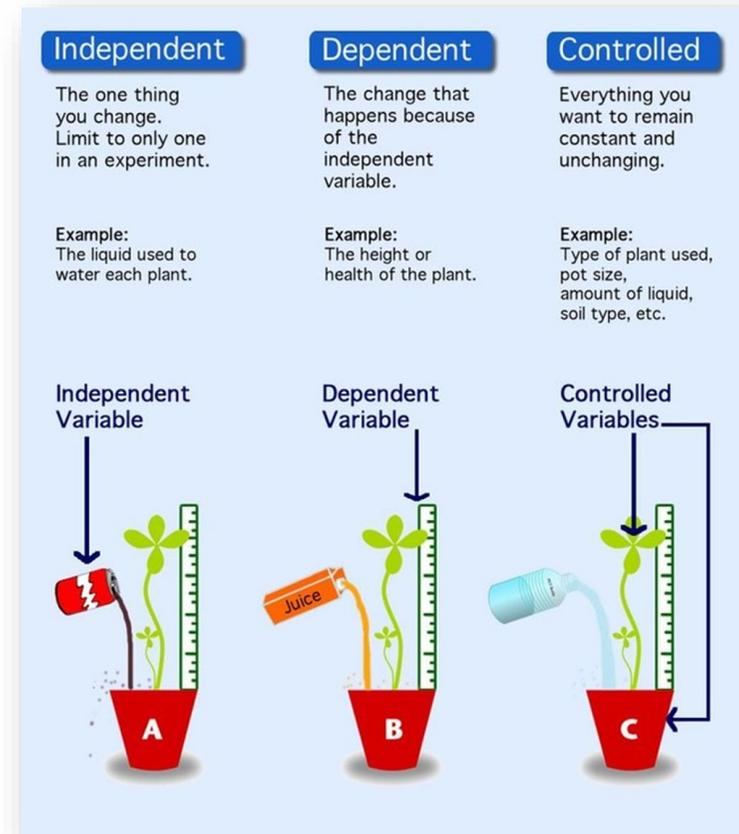
# Planning your investigation - some things that may help ...

Use the questions below to help you plan the investigation you chose.



**Write**

- > What are your variables (see diagram for explanation of variables)?
- > How will you measure accurately?
- > What do you need to do to keep you and others safe?
- > How will you record your results? A table/a graph?
- > Make sure you present your findings in a conclusion and identify any improvements you would make if you carried out your investigation again.





# Your Investigation

**Investigation Title:**

<p><b>Summary</b> Say what you were asked to investigate</p>	<p><b>Results</b> Data/Photography/graphs</p>	<p><b>What I did</b> Equipment/Diagram/Photos  Describe how you carried out the investigation</p>
<p><b>Questions/Problems</b></p>		
<p><b>Hypothesis/Prediction</b></p>		
<p><b>Variables</b> What did you change?/ What did you keep the same?</p>	<p><b>What I found out</b></p>	



# What can you remember?

Try this quick quiz to see if you can remember some of the information in this booklet.  
Answers are written upside down at the bottom of this page so you can check!



**Think**

1. What is the literary canon?
2. In which literary period was Beowulf written?
3. What characterises the Romantic period?
4. Which shape is linked to Pythagoras?
5. Which online learning tool does our school use?
6. Name two pieces of maths equipment needed for geometry?
7. What scientific work is Polly Matzinger known for?
8. What is an independent variable?
9. Why might Mary Shelley's *Frankenstein* be considered a science fiction novel and a horror novel?



**We look forward to welcoming  
you to our school in September.**

**Enjoy the summer holiday.**