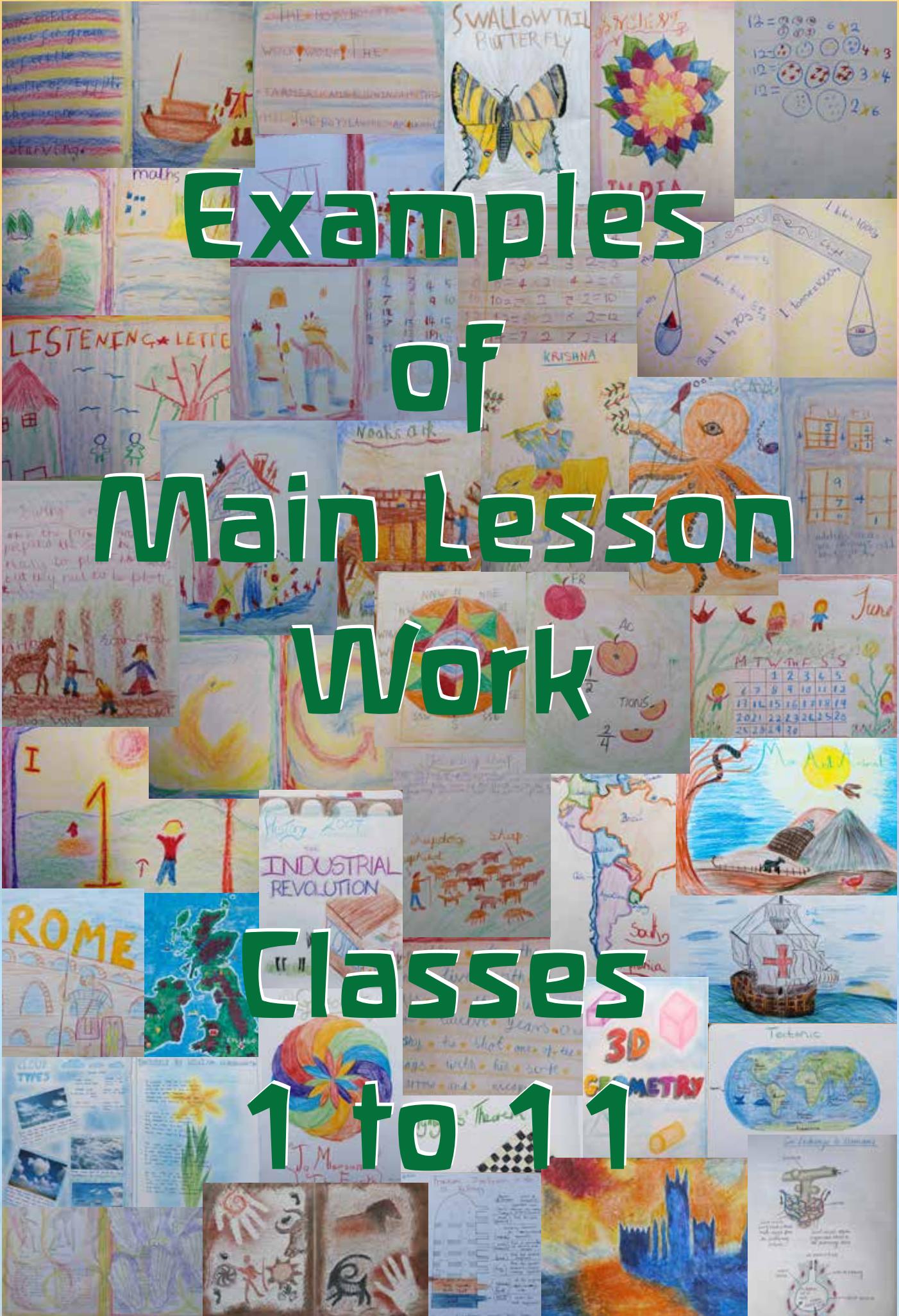
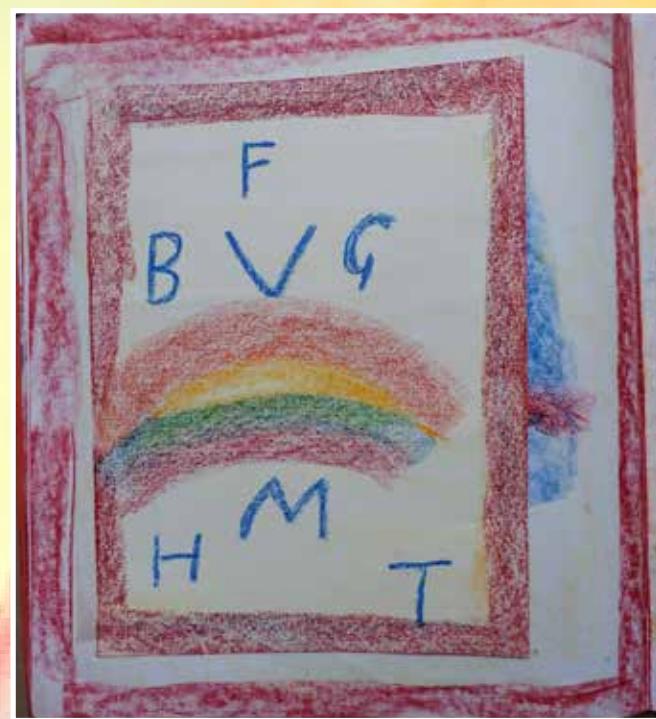


# Examples of Main Lesson Work Classes 1 to 11



# Class 1







A child's drawing of a house with a red roof and blue windows, surrounded by trees and a path.

+ + + + + +

$10 = 1 + 9$

$10 = 2 + 8$

$10 = 3 + 7$

$10 = 4 + 6$

$10 = 5 + 5$

A child's drawing of a house with a red roof and blue windows, surrounded by trees and a path.

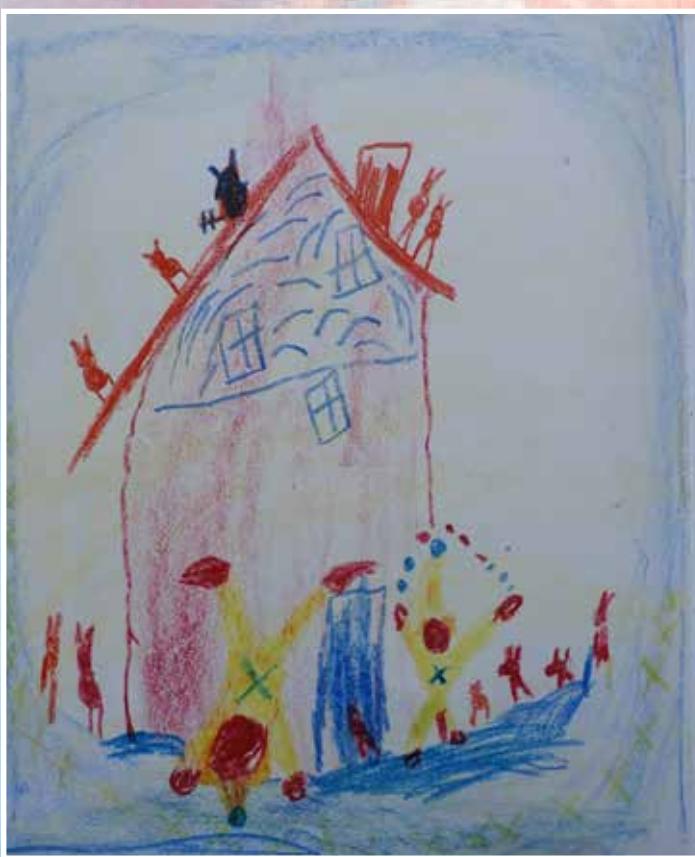
+ + + + + +

$12 = \text{circles with dots} \quad 6 \times 2$

$12 = \text{circles with dots} \quad 4 \times 3$

$12 = \text{circles with dots} \quad 3 \times 4$

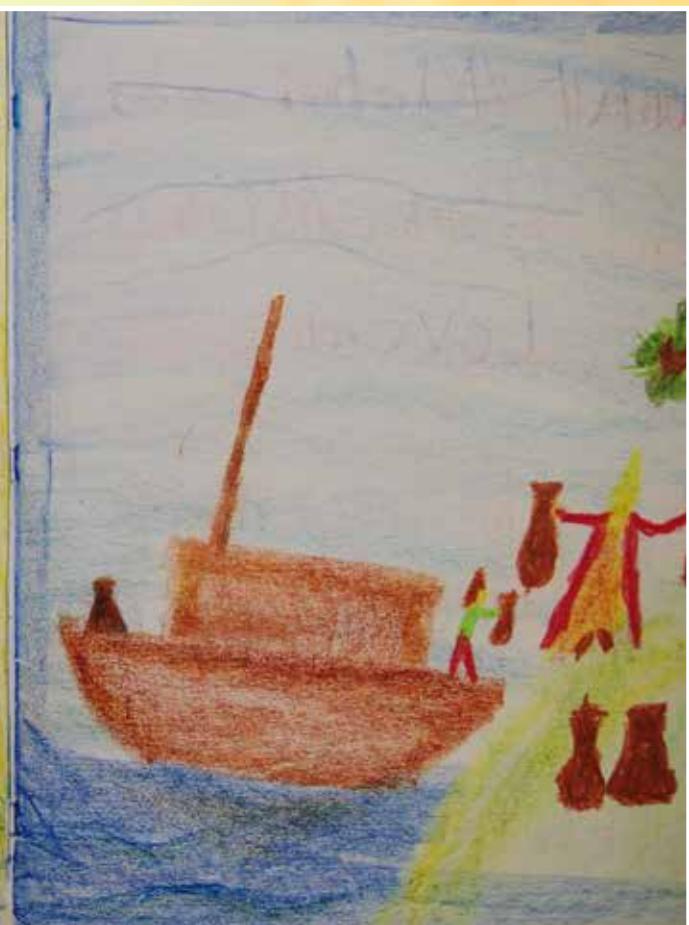
$12 = \text{circles with dots} \quad 2 \times 6$





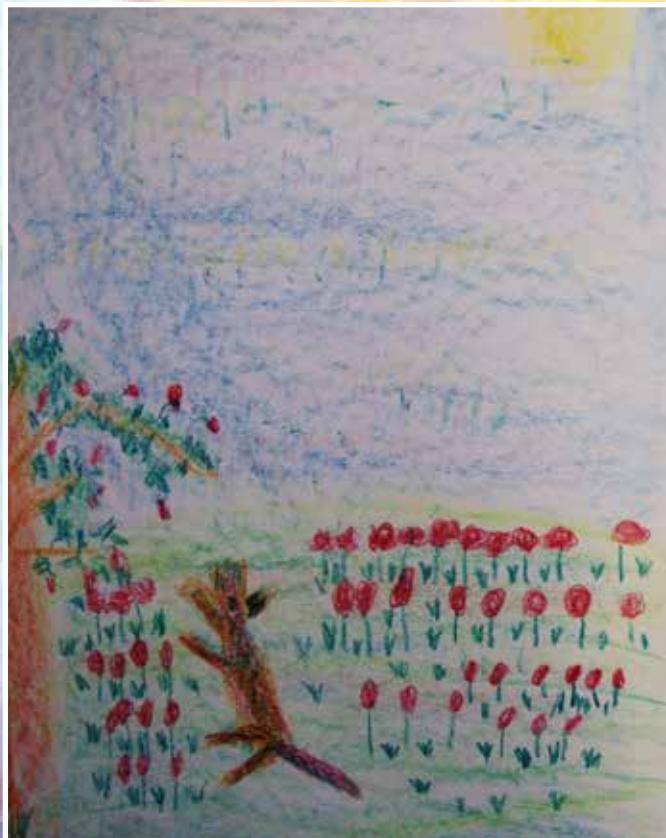
## Class 2

Saint Nicholas  
asked for grain  
to feed the  
People of Egypt.  
they were  
Starving.



# S+ THE 2 TIMES TABLE

|    |                |                |
|----|----------------|----------------|
| 2  | $2=1\times 2$  | $1\times 2=2$  |
| 4  | $4=2\times 2$  | $2\times 2=4$  |
| 6  | $6=3\times 2$  | $3\times 2=6$  |
| 8  | $8=4\times 2$  | $4\times 2=8$  |
| 10 | $10=5\times 2$ | $5\times 2=10$ |
| 12 | $12=6\times 2$ | $6\times 2=12$ |
| 14 | $14=7\times 2$ | $7\times 2=14$ |



The fox tried to jump to eat the grapes. He could not reach so he said that they were sour.

THE BOY SHOUTED \*

WOLF! WOLF! THE \*

FARMERS CAME RUNNING UP THE \*

HILL. THE BOY LAUGHED AND LAUGHED

cccccccccccccccc

ddddd dddd dddd

ffff fffff fffff fffff

addcdcdcdcdcd

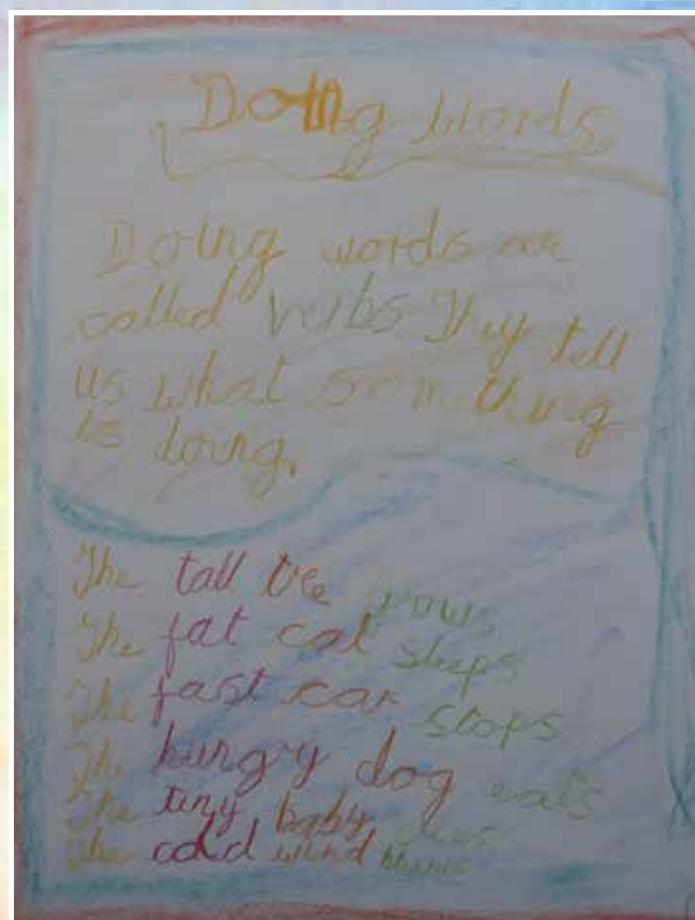
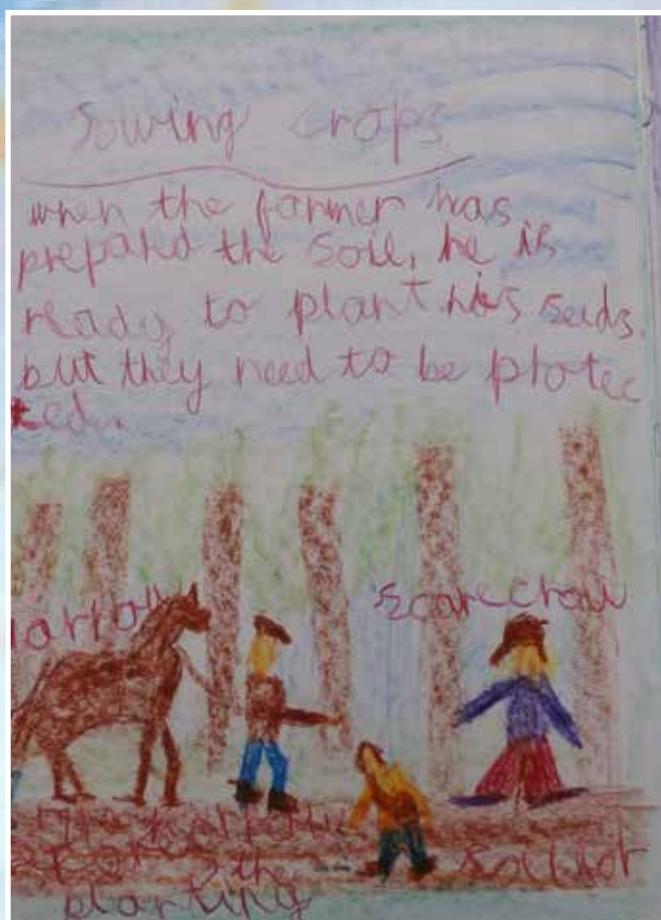


|               |               |
|---------------|---------------|
| $10 + 2 = 12$ | $10 + 2 = 12$ |
| $10 + 3 = 13$ | $10 + 3 = 13$ |
| $10 + 4 = 14$ | $10 - 4 = 14$ |
| $10 + 5 = 15$ | $10 - 5 = 15$ |



Gilly of the Goalsk  
in lived with three  
hags. He stayed in his trade  
for twelve Years. One  
day he shot one of the  
hags with his swift  
arrow and escaped.

# Class 3



T U + U + U

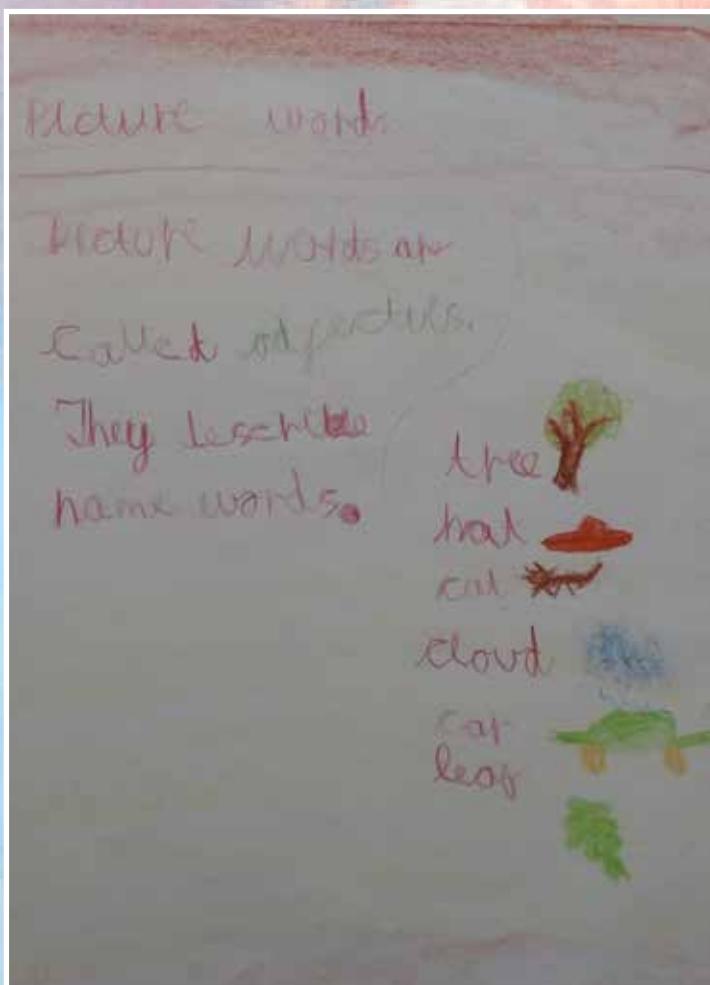
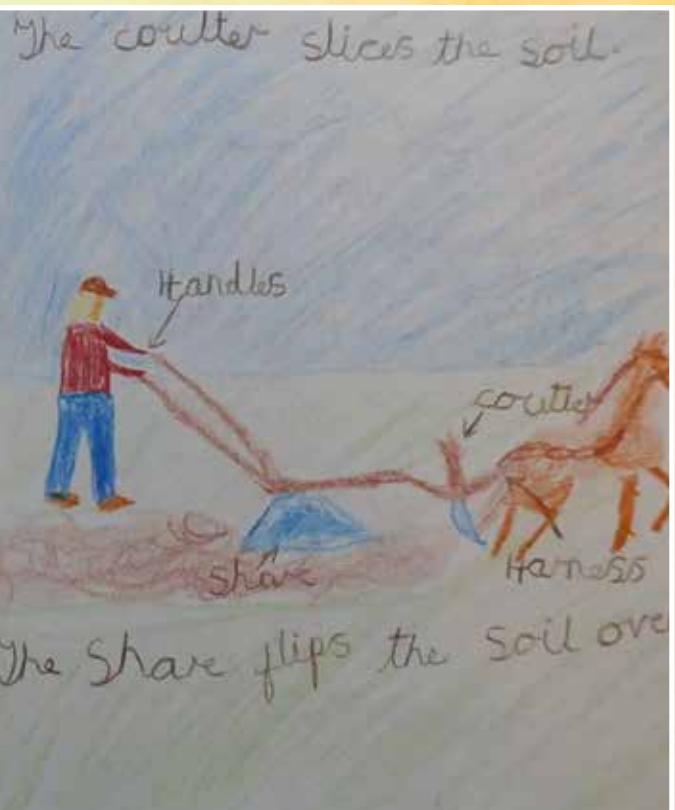
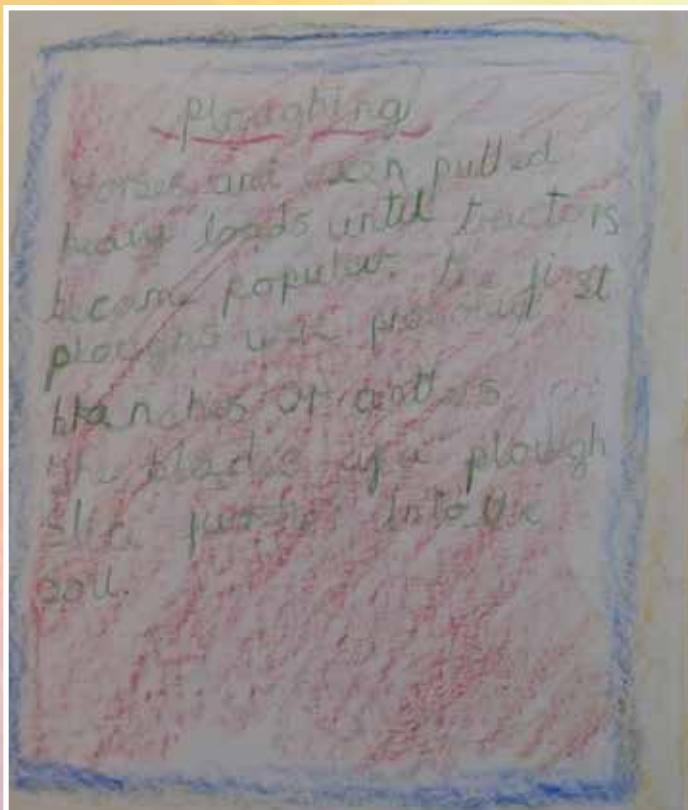
$$\begin{array}{|c|c|} \hline 5 & 2 \\ \hline 3 & 9 \\ \hline 6 & 1 \\ \hline \end{array} + \begin{array}{|c|c|} \hline 1 & 1 \\ \hline 1 & 1 \\ \hline \end{array} + \begin{array}{|c|c|} \hline 5 & 1 \\ \hline 7 & 5 \\ \hline 1 & 5 \\ \hline \end{array}$$

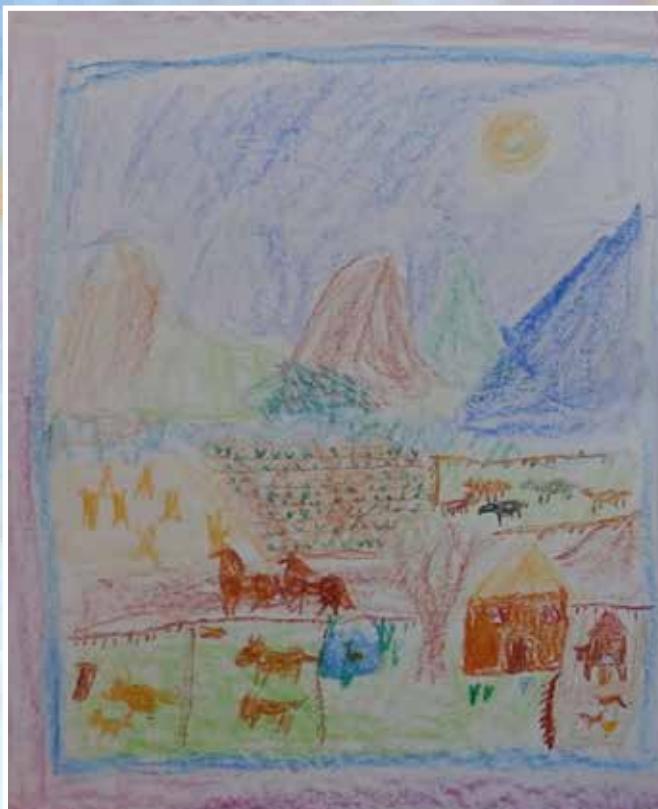
+ + +

$$\begin{array}{|c|c|} \hline 9 & 6 \\ \hline 7 & 6 \\ \hline 1 & 2 \\ \hline \end{array} + \begin{array}{|c|c|} \hline 4 & 8 \\ \hline 2 & 2 \\ \hline 1 & 2 \\ \hline \end{array} + \begin{array}{|c|c|} \hline 1 & 2 \\ \hline 1 & 2 \\ \hline \end{array}$$

Adding units we always add units first.

Two addition problems are shown using a base ten grid. The first problem adds 536, 111, and 575. The second problem adds 971, 462, and 121. The text "Adding units we always add units first." is written below the second problem.





## The first farmers

The first farmers discovered that certain grasses produced edible seeds which could be planted to produce a new crop. They learned to tame the cattle, goats and sheep that roamed wild across the land.



THE BAD SPIRITS MADE A DRAGON TO RIP THROUGH HEAVEN. MICHAEL DEFENDED HEAVEN AND DEFEATED THE DRAGON.



On the first day of the creation of the world, I created light.



| t | u |
|---|---|
| 8 | 2 |
| 6 |   |

| t | u |
|---|---|
| 9 | 3 |
| 6 |   |

| t | u |
|---|---|
| 7 | 3 |
| 4 |   |

| t | u |
|---|---|
| 4 |   |
| 1 |   |
| 3 |   |

| t | u |
|---|---|
| 6 |   |
| 5 |   |
| 1 |   |

| t | u |
|---|---|
| 2 |   |
| 2 |   |
| 0 |   |

Subtracting units  
We always subtract the  
units first.

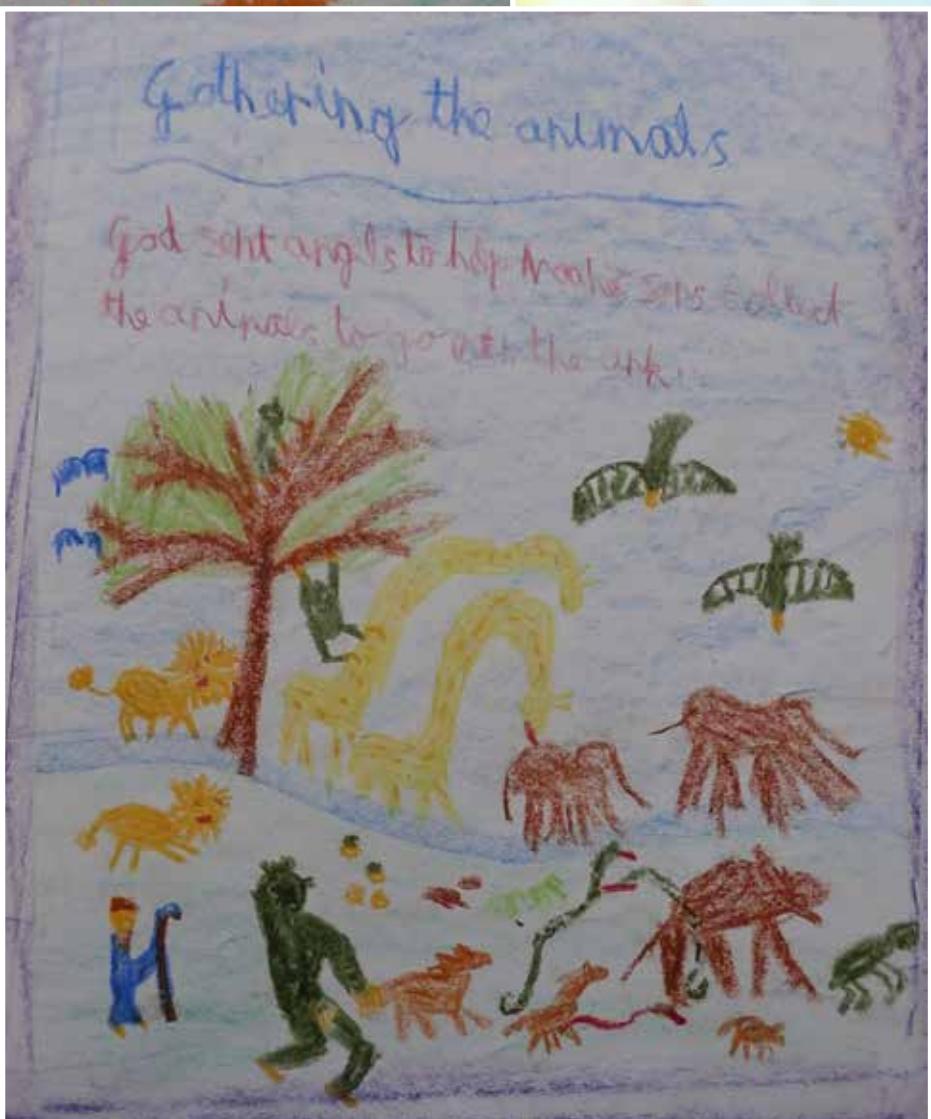
## Moving Sheep

Farmers keep sheep to provide wool, meat and milk. Sheep can be kept in fields and mountains. Shepherds take care of the flock with the help of a sheepdog. Shearers cut the wool from the sheep.

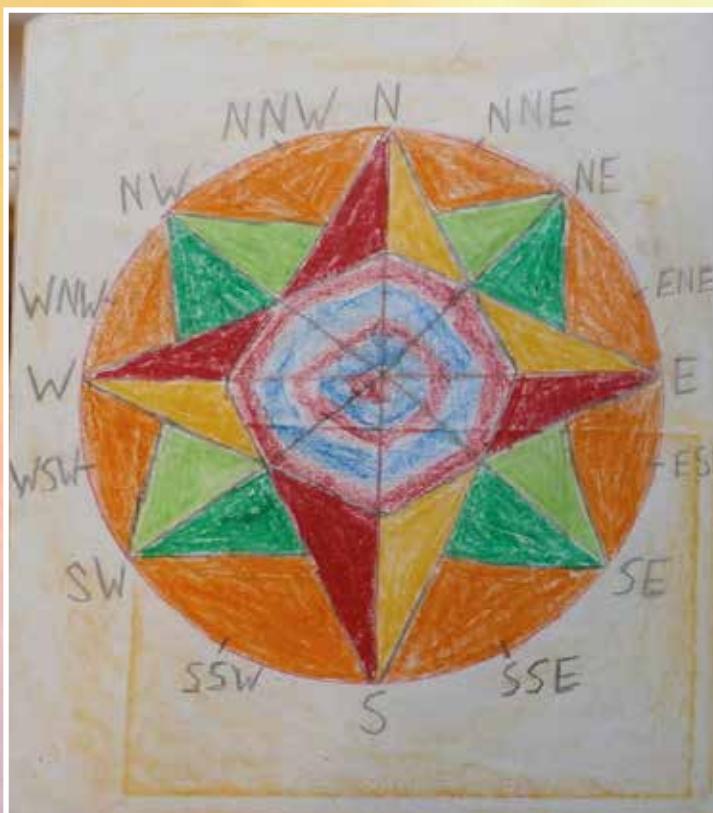


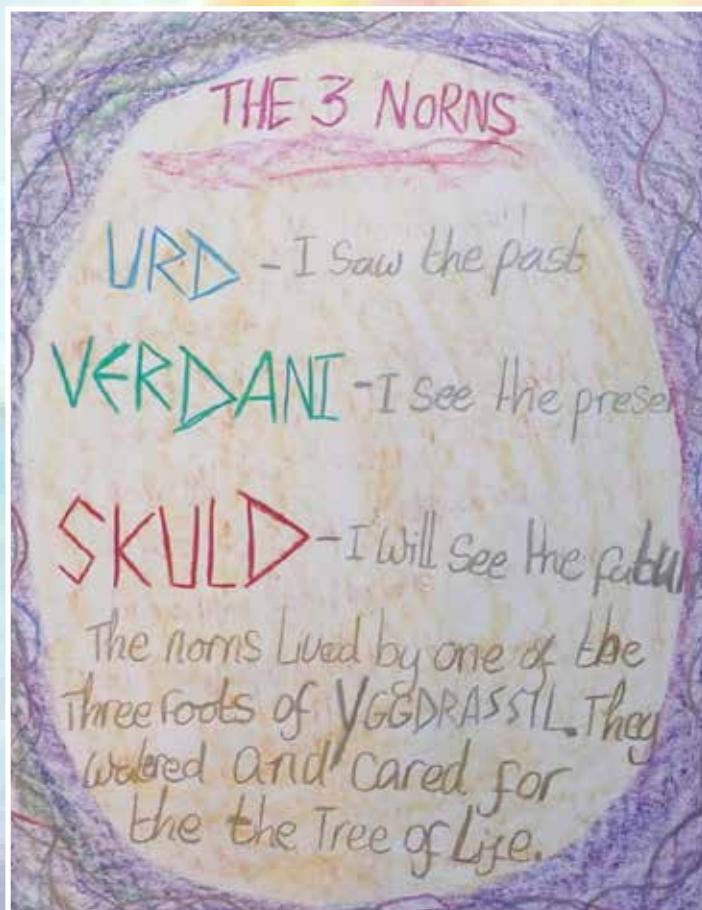
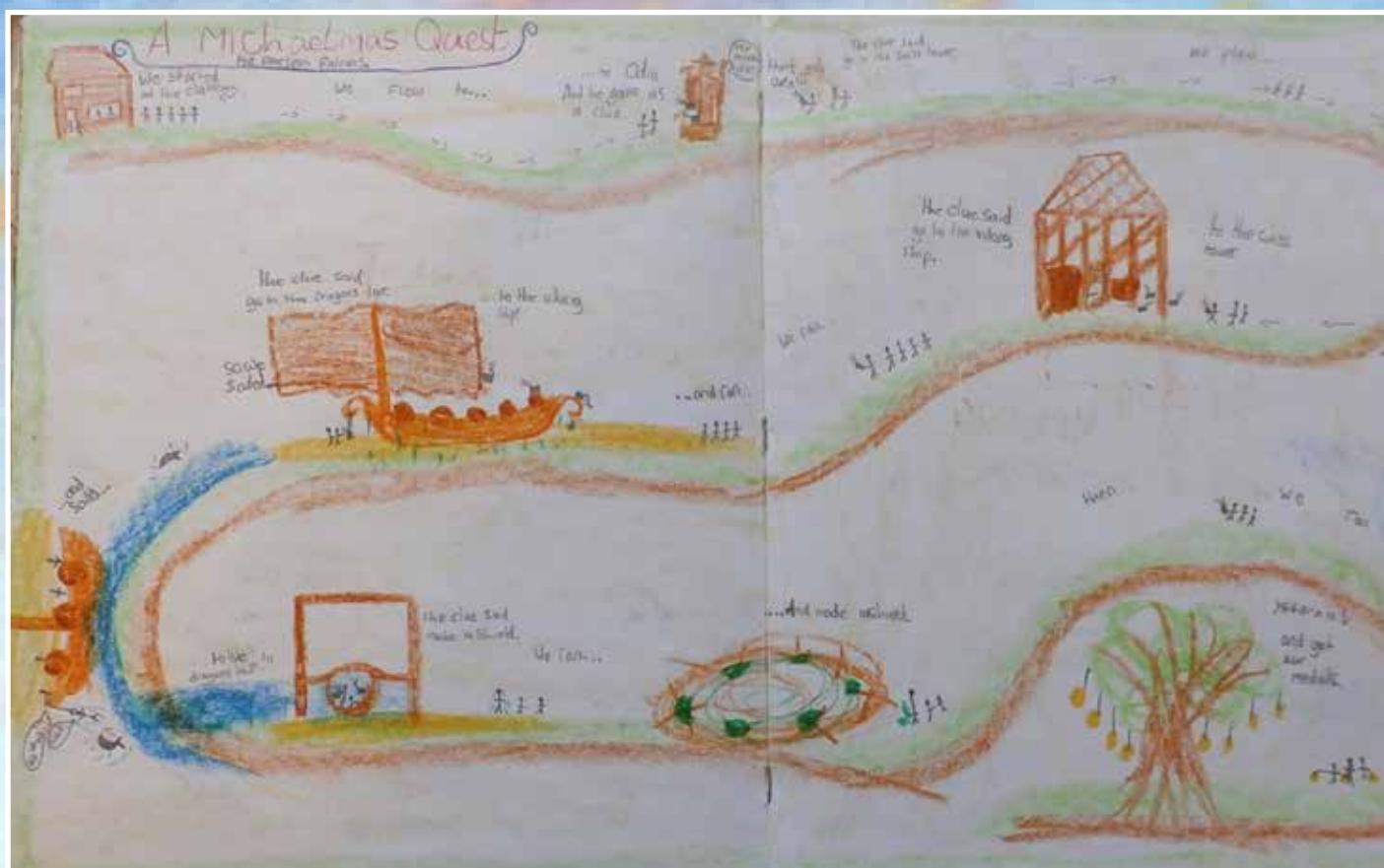
## Gathering the animals

God sent angels to help Noah. Angels collected the animals to go onto the ark.



# Class 4





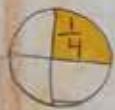
# Loki

Loki was a trickster, a shapeshifter, half giant half god. He liked to play tricks on people, and to see them upset. He was a real trouble maker. He was a mysterious character.



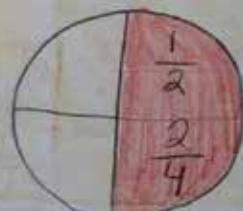
## FRACTIONS

Fractions are parts of whole numbers. If we take a pizza and share it equally between 4 people, each person will have  $\frac{1}{4}$  of the pizza.



If one person took 2 quarters of the pizza, they would

have  $\frac{2}{4}$  or  $\frac{1}{2}$ .



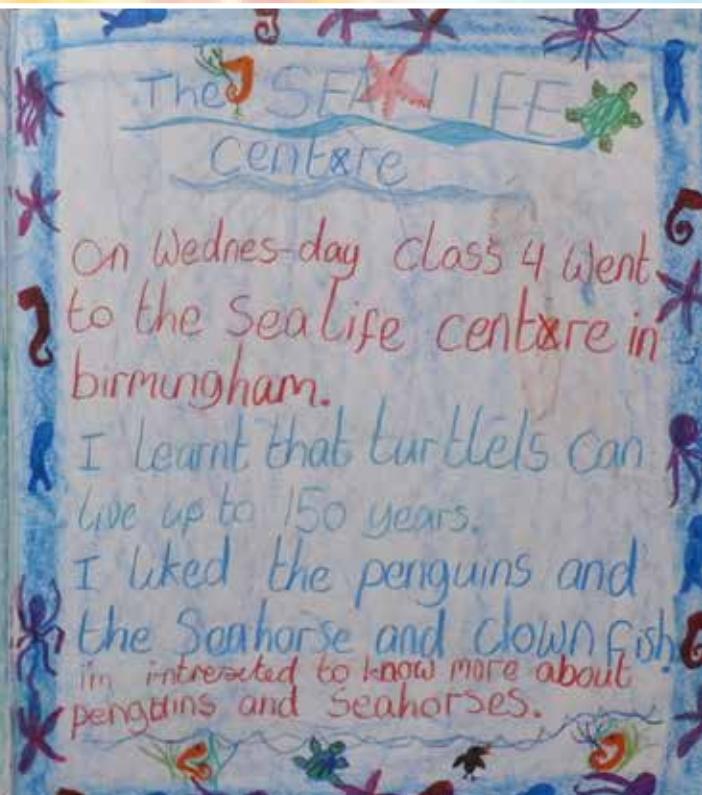
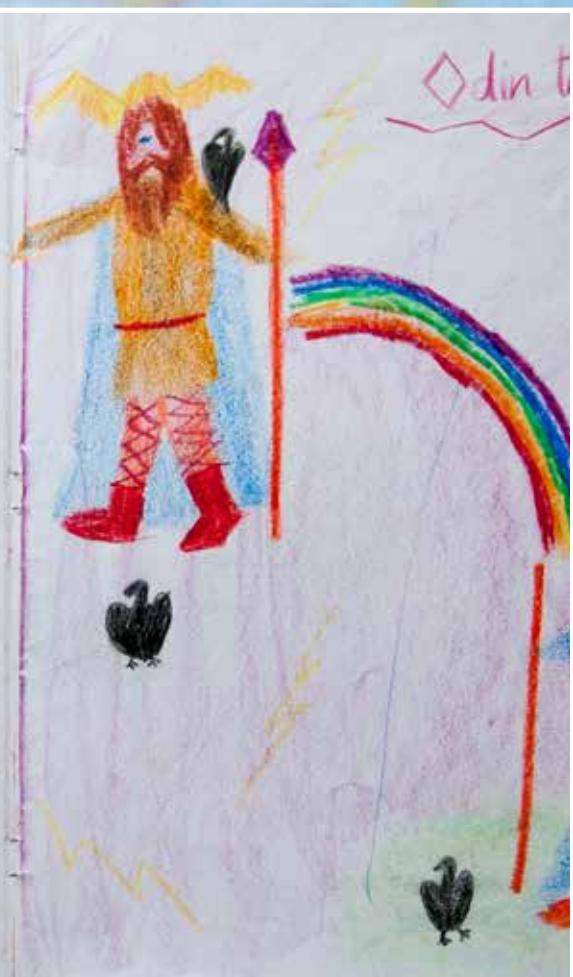
## PIZZA

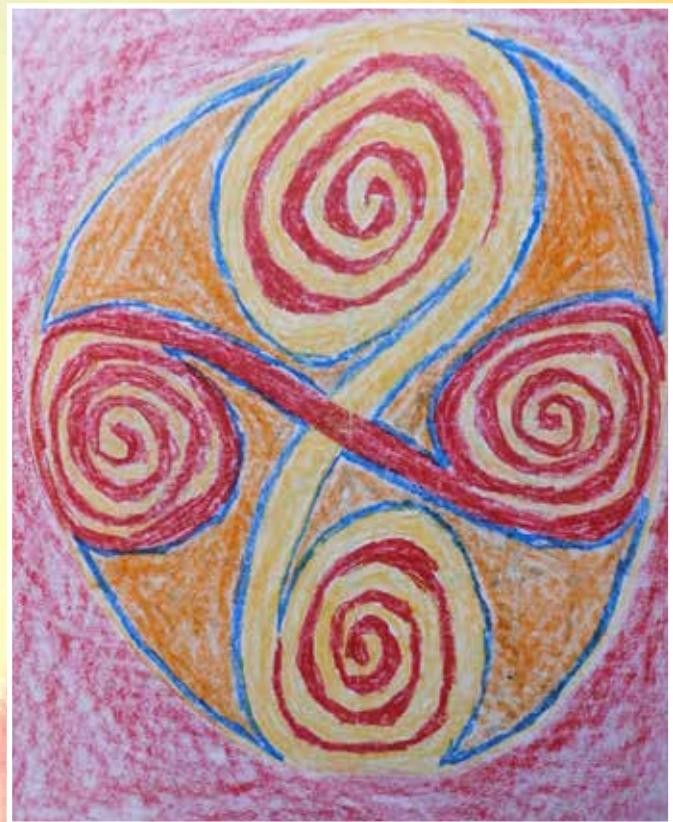
I designed my pizza then cut up the whole into a  $\frac{1}{2}$ , a  $\frac{1}{4}$  and two  $\frac{1}{8}$  pieces. I swapped my  $\frac{1}{4}$  piece with Leah, my  $2 \frac{1}{8}$  pieces with Gabriel and Hollie and I kept my  $\frac{1}{2}$  piece.



## Yggdrasil the World Ash Tree

A great tree grew in the midst of the nine realms. A hungry dragon grew at its root, while an mighty eagle lived in its crown. A grasping squirrel ran between them. At the base of the tree lived the three Norns, or destinies. URD spun the thread of a person's life. VERDANGE dyed the thread and measured it. SKULD cut the thread when the hour of death appeared.



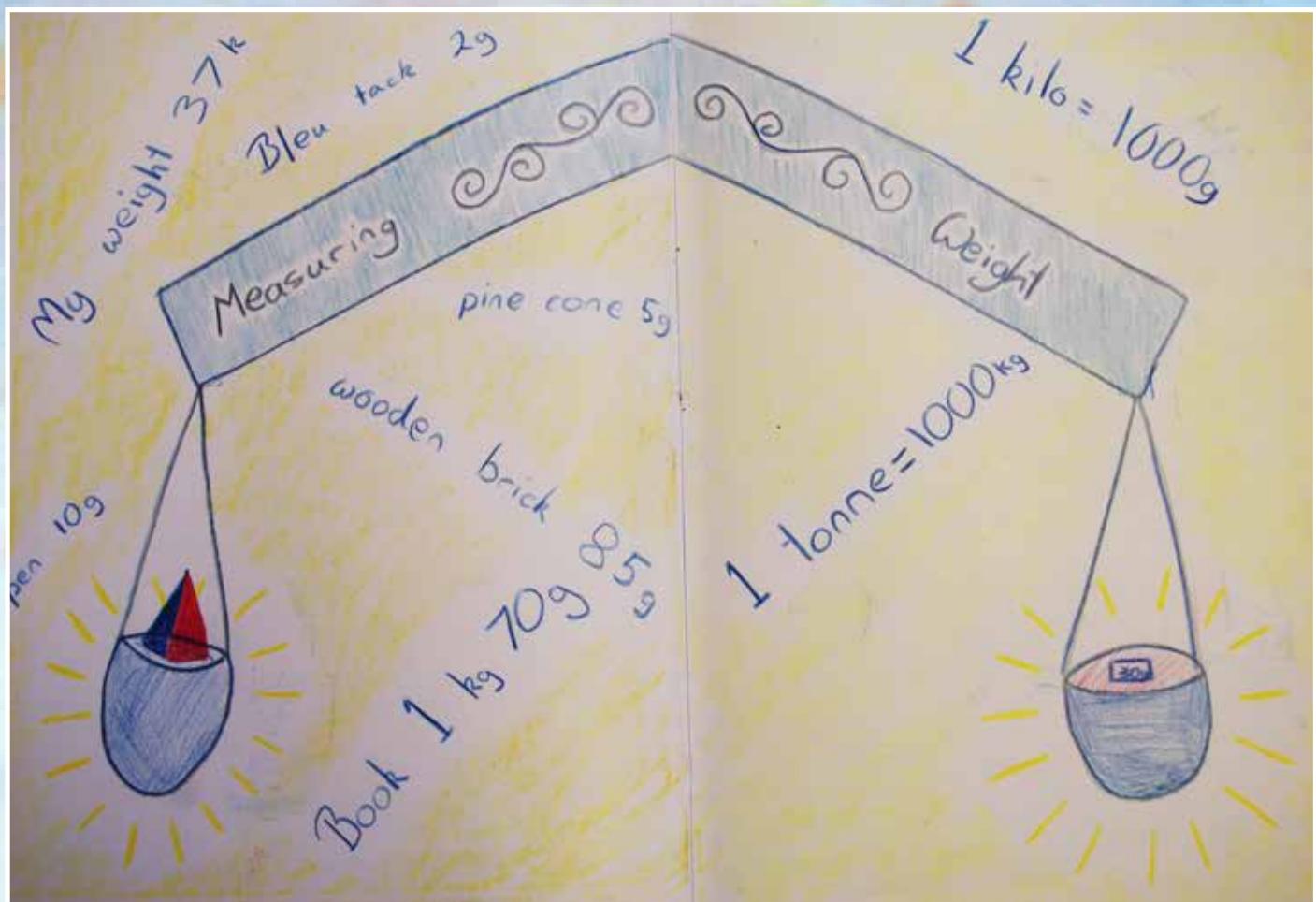


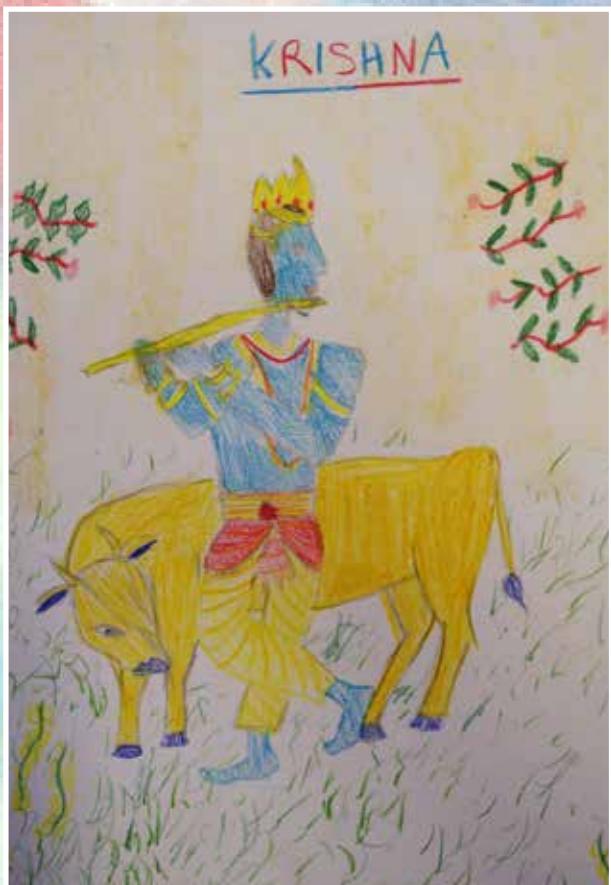
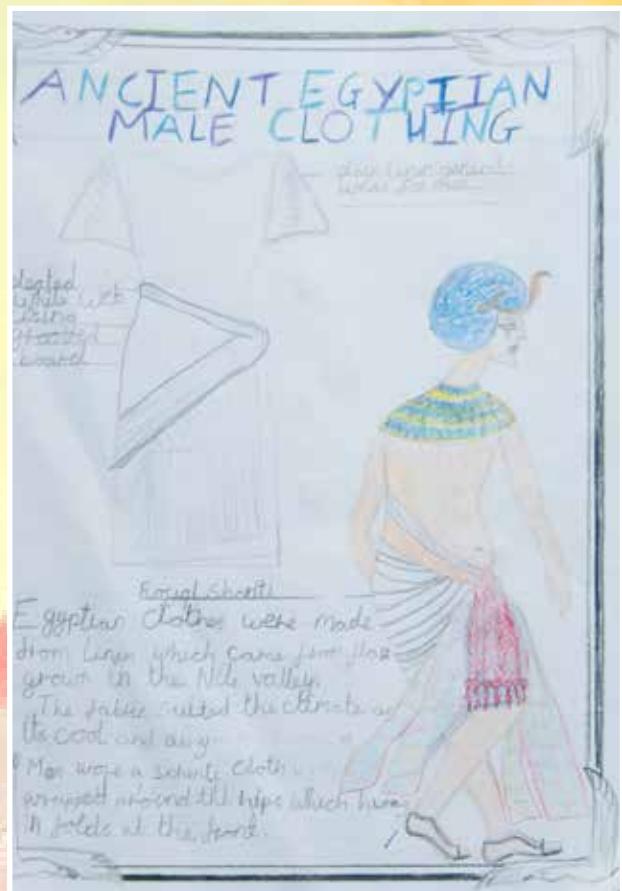
The North star

For thousands of years people have observed the stars. They have used the positions and movements to guide journeys across the oceans and lands. One group of stars is called 'the plough and points' - the way to the North Star. This star does not move and can usually be shining brightly.

A hand-drawn map of the night sky showing the Plough and the North Star. The map includes the Big Dipper, the Little Dipper, and the North Star.

# Class 5







# Measuring Capacity

We measured how much water there was in five containers

$$1 \text{ litre} = 1000 \text{ ml}$$

$$1 \text{ litre} = 100 \text{ cl}$$

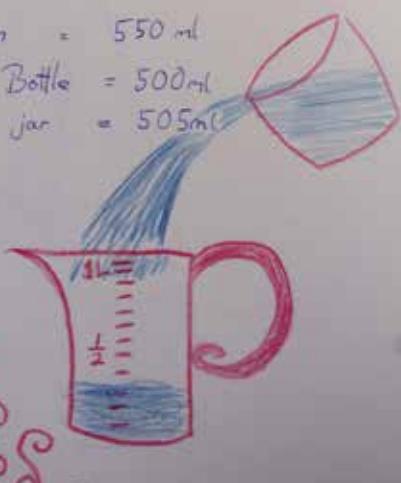
$$\text{Bucket 1} = 2 \text{L } 900 \text{ ml}$$

$$\text{Bucket 2} = 2 \text{L } 500 \text{ ml}$$

$$\text{watercan} = 550 \text{ ml}$$

$$\text{Water Bottle} = 500 \text{ ml}$$

$$\text{painting jar} = 50 \text{ ml}$$



# A MAP of EGYPT

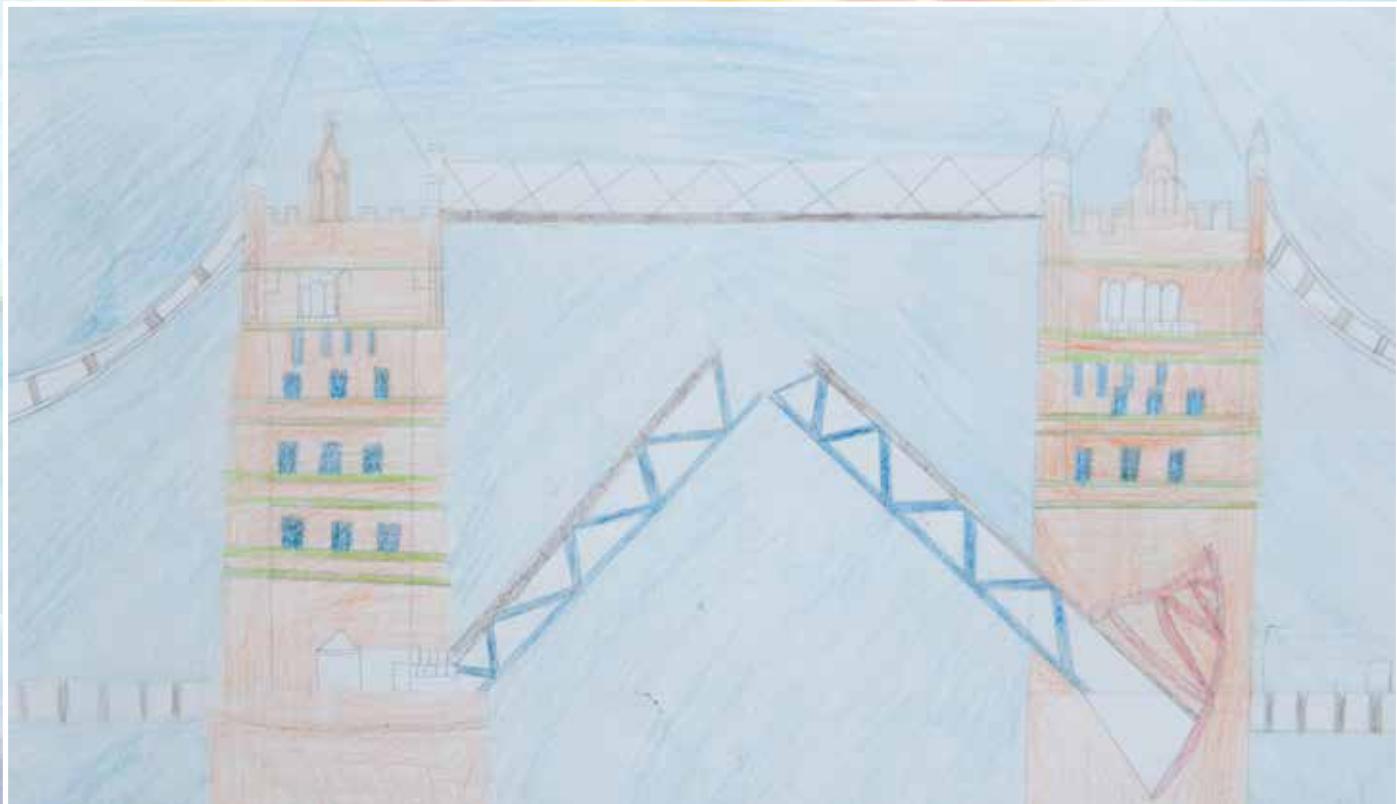
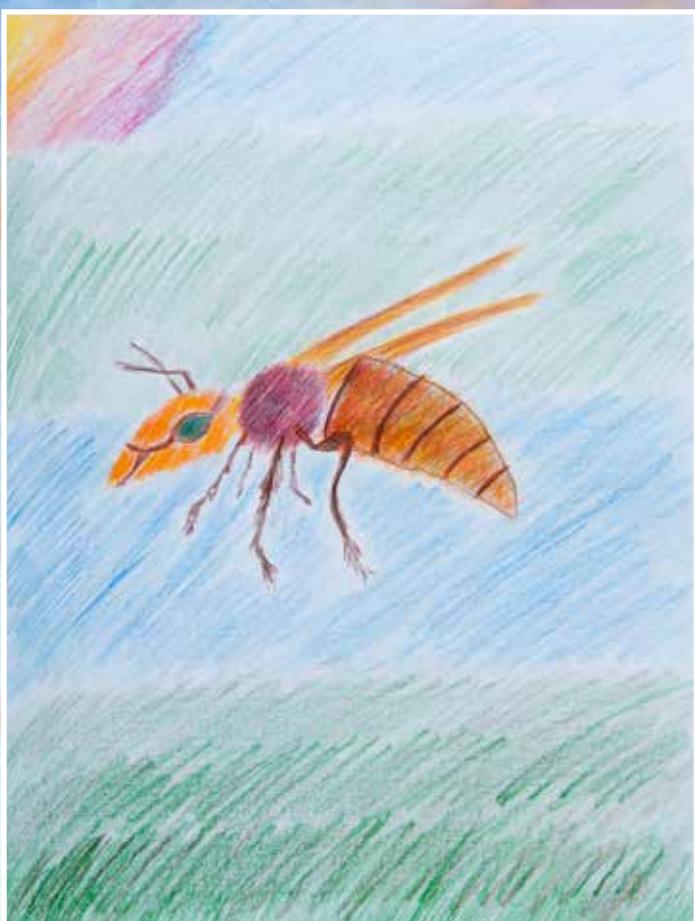


# Geometry

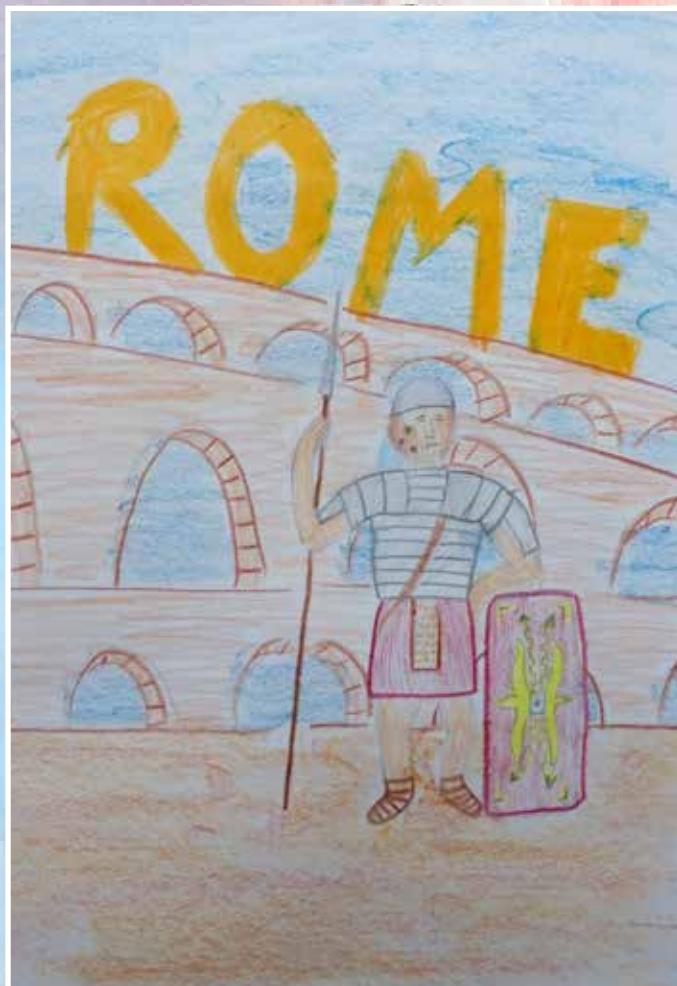
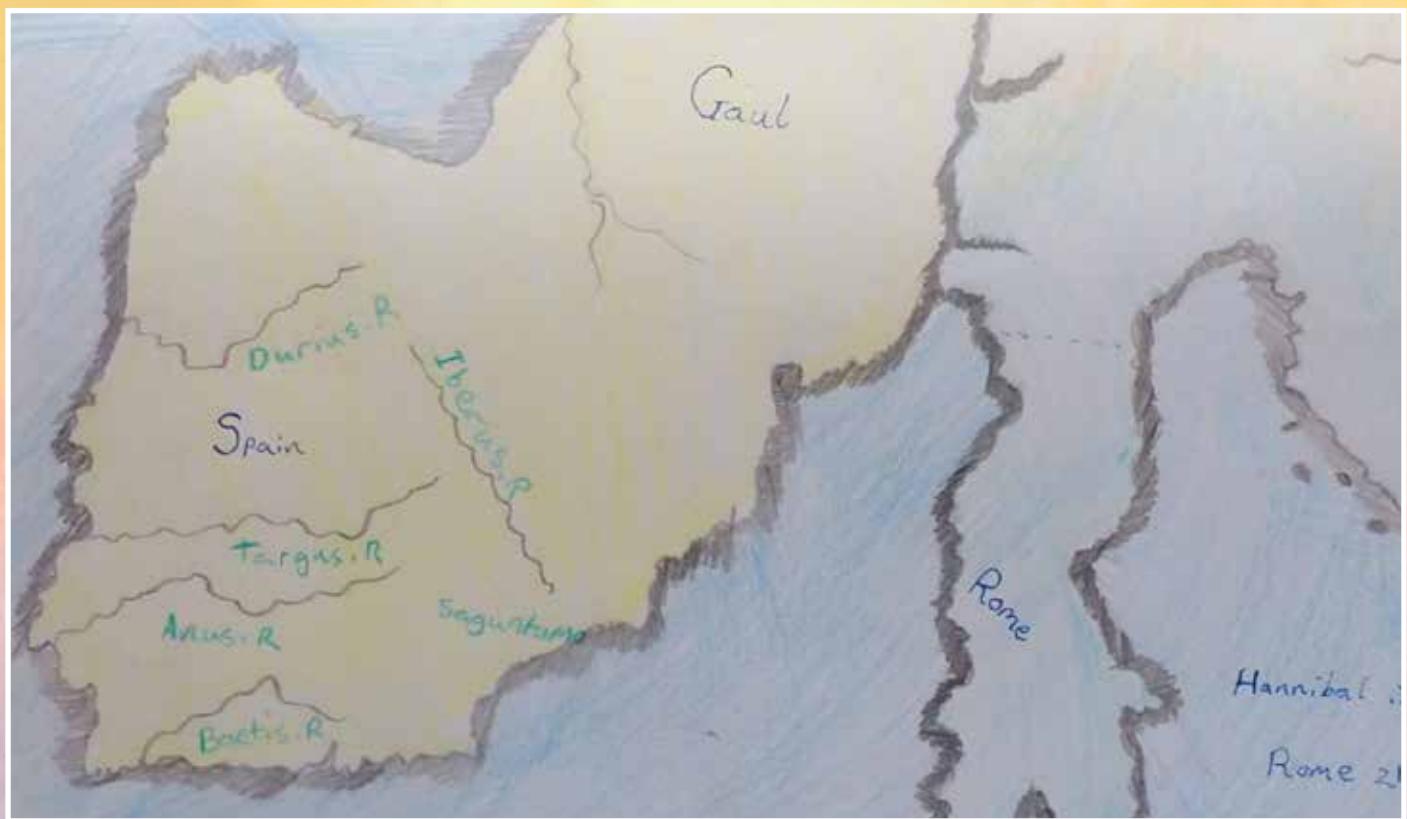
Geometry is the study of shapes, made of straight lines and curved lines. Sometimes we draw shapes using our hands and eyes to measure and sometimes we use compasses and rules.

All shapes have a name.





# Class 6



**HOW Sounds Are Made!**

Method

We requested us to bring in a instrument to school. Then we were asked to play all of our instruments at the same time and to hear which one stood out the most (the loudest).

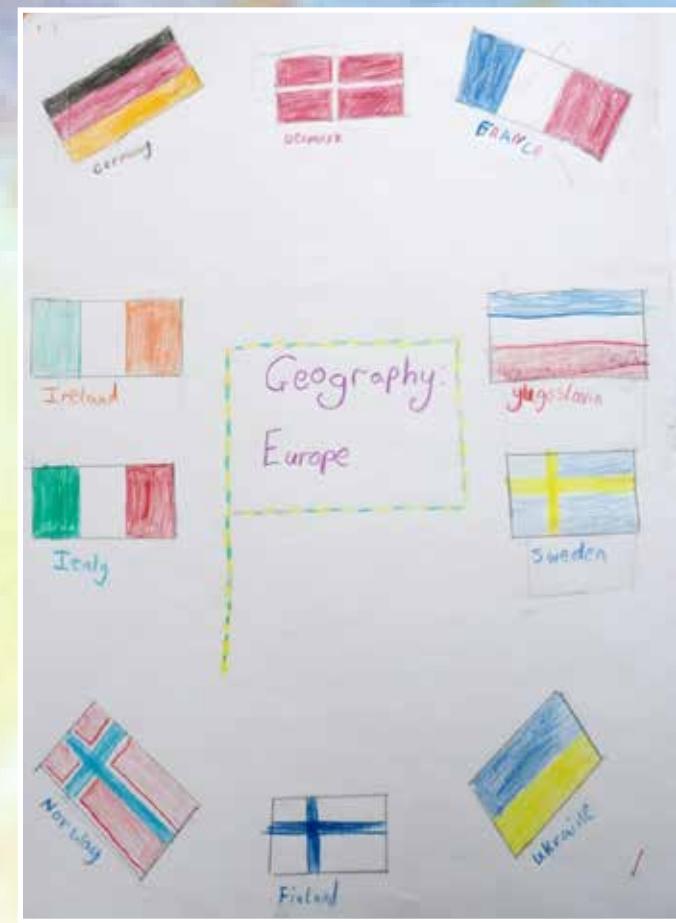
Results

There were a few that stood out one was Xylophone, horn, drums. We worked out which of the instruments we could hear and which had the highest pitch.

Conclusion

The sounds I heard told me that they were either String, percussory or they were hit.

| Blowing | Plucking or Bowing | String   |
|---------|--------------------|----------|
|         |                    |          |
| Rubbing |                    |          |
|         |                    | Striking |



Making Light Visible

Method

we went into a dark room and Mr Gray turned the light off then he turned on a torch on through a tube. Mr Gray got two black band ribbons and hit them together, over the torch.

Result

From shining the torch through the tube the light only focused one point and from hitting the two ribbons in front of the torch you could see the stream of light going from the torch to the wall.

Conclusion

Light is invisible unless you put something small in the middle which then shines so then you can see the stream of light. Light only travels in straight lines.

### Method

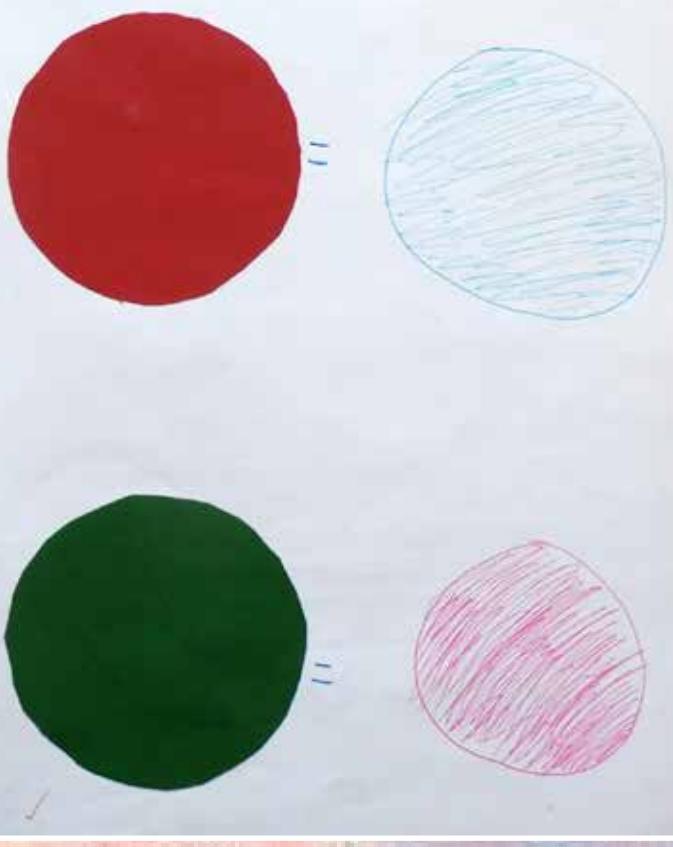
We were held a piece of paper and put a red blue and green circle we stared at them each for a minute and then....

### Results

and then we looked at a blank piece of paper and saw for the blue = yellow. Red = purple

### Conclusion

I conclude that primary colours turned into complementary colours.



### Ireland

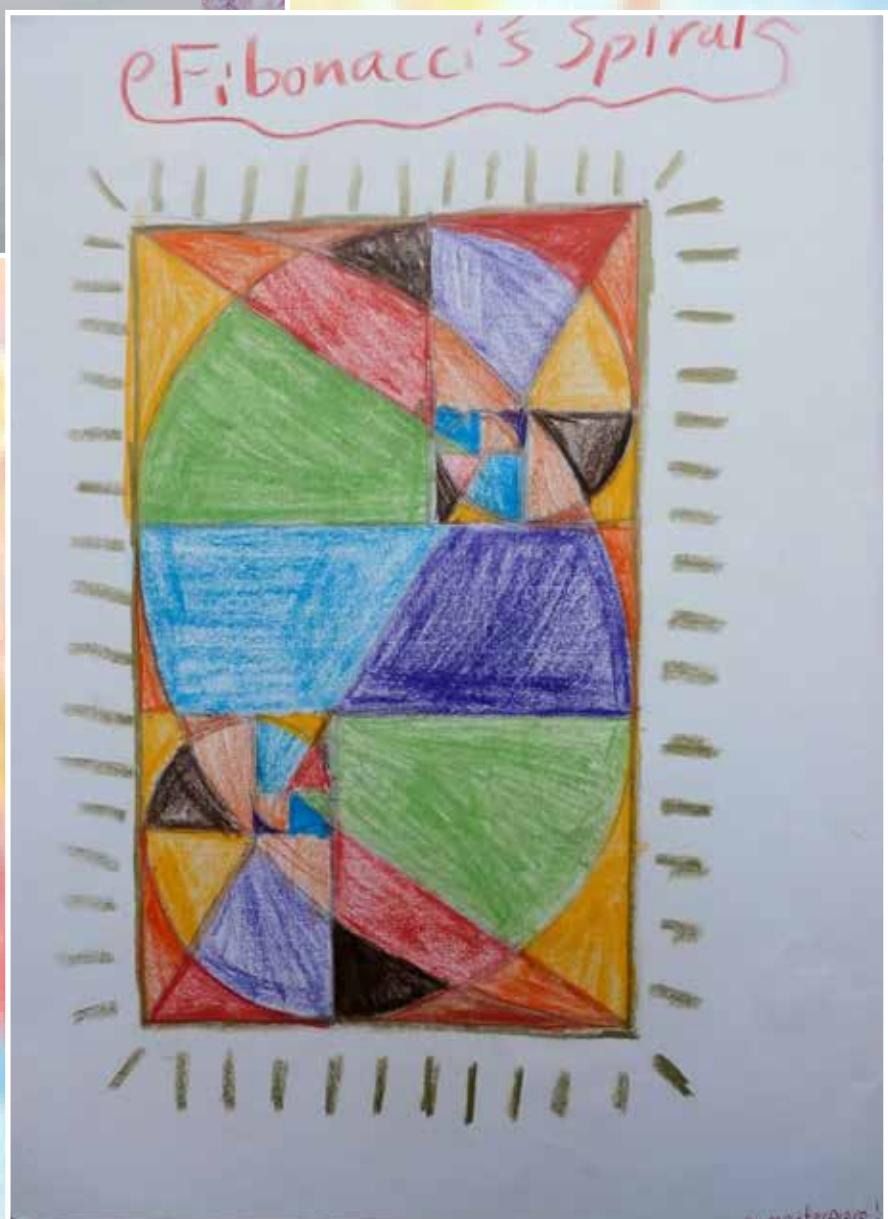
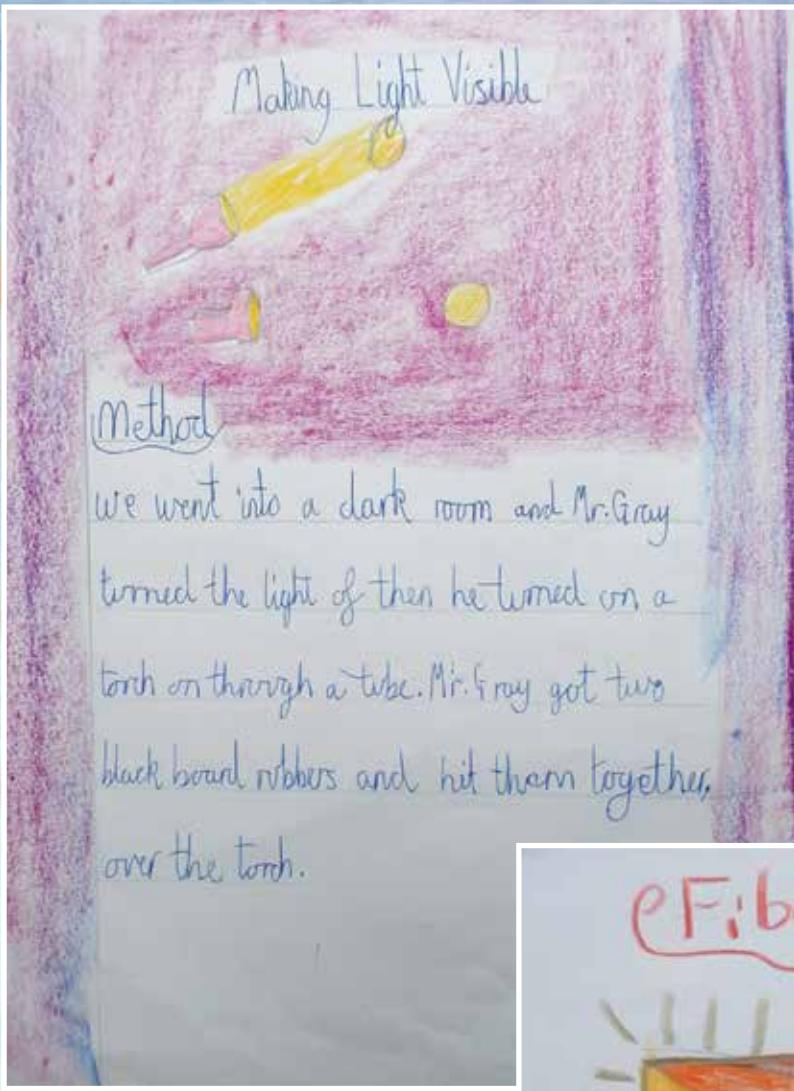


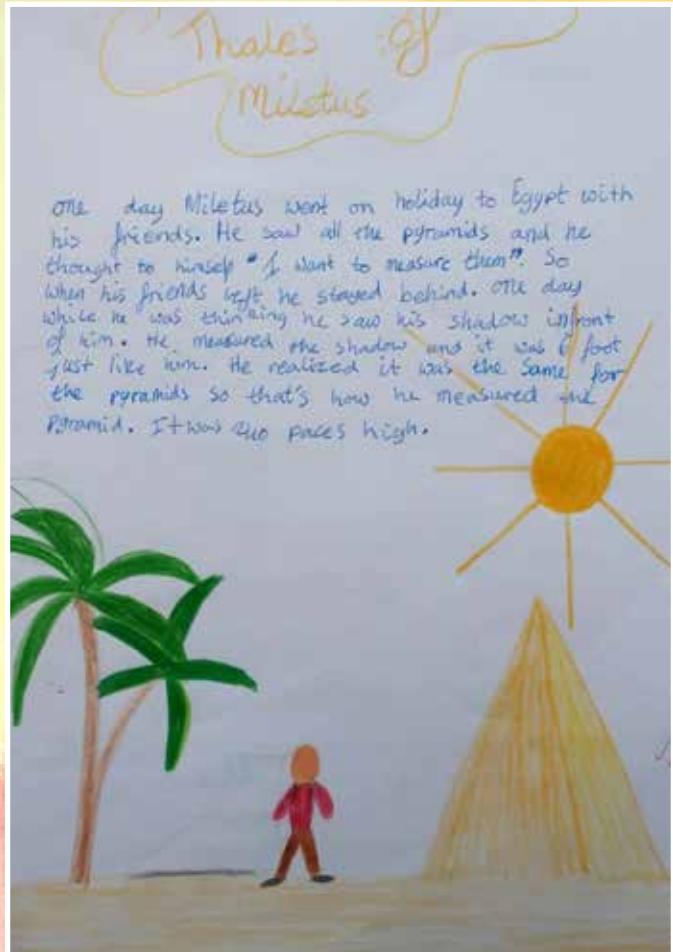
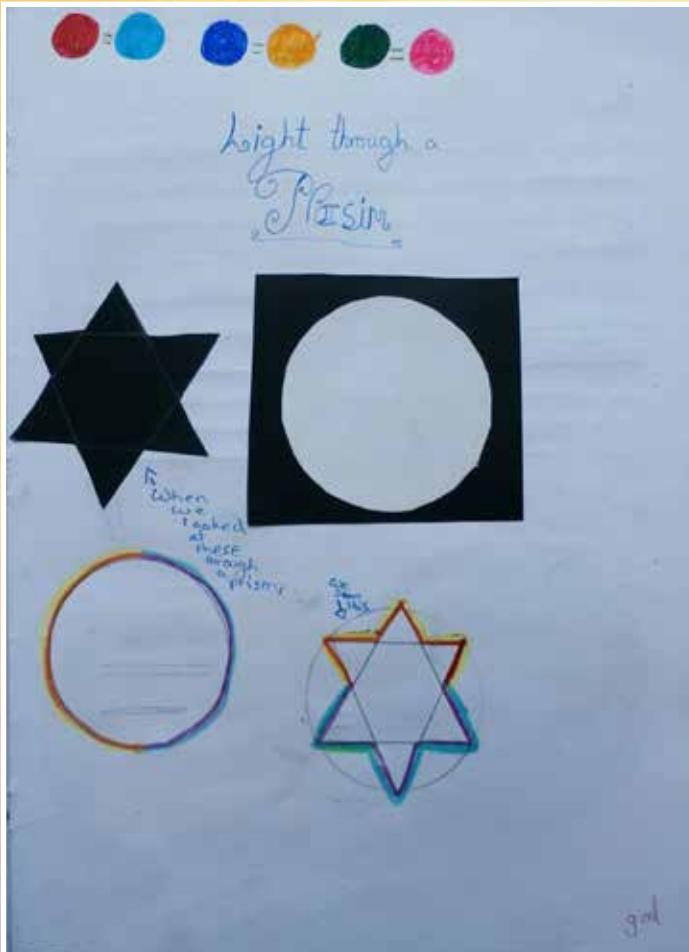
### Ireland

Great Britain is composed of England, Scotland and Wales. The United Kingdom is the union of what was once four separate countries: England, Scotland, Wales and Northern Ireland.

Ireland is in two parts: Northern Ireland and the Republic of Ireland. The principal river is the Shannon and other rivers are: Barrow and Blackwater. Lough Neagh is the largest lake.

The western coastline is very rugged with many islands and peninsulas.





21st April 75<sup>th</sup> CHRONICLE

price when sold 60p

### WOMEN PROTEST TO STOP WAR

The women of Rome held their children right to stop the great war. The Horatii says he only regrets capturing the women from the neighbouring village of Sabine and wishes he could change his past. He now questions a lot of the Sabine women to tell us what happened on that tragic day. They say the Romans invited them to a feast at home and to welcome them for the future. The Romans tricked them and along them into prison. At that time there were no women in Rome because it was populated by slaves and men. The Sabine women were forced to marry the Romans and leave children in the city would die in a year. The Sabine men were angry so they had two years to prepare for war. The Sabines got out of the city by using a bridge, but because they did not like Romans they threw stones at them and crushed them. The battle ranged on but the women stopped the war by holding their babies above their heads and demanding safety by Noah's Ark.

### ROMULUS DISAPPEARS

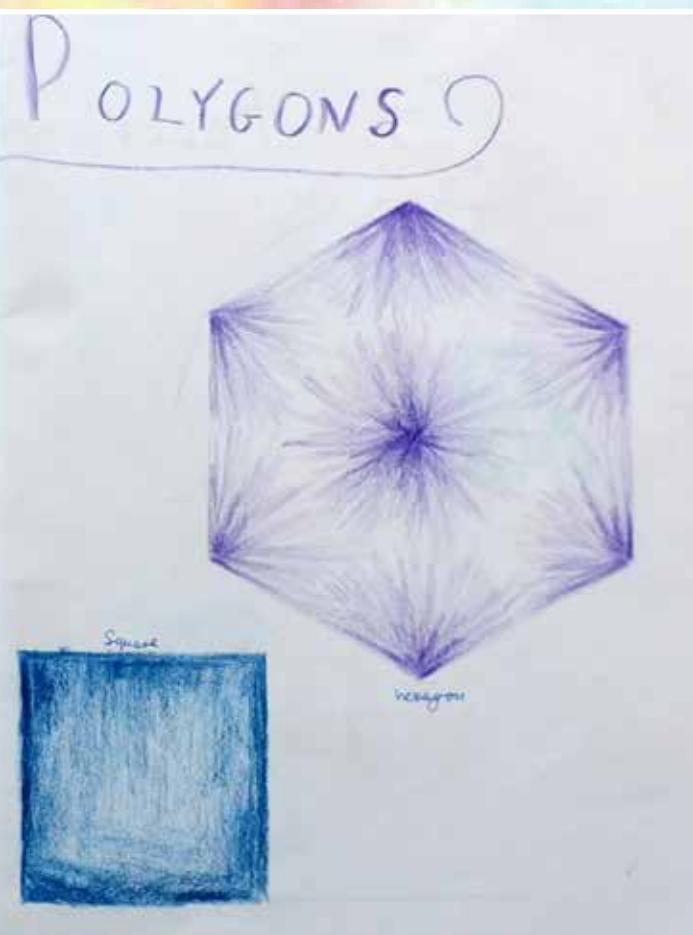
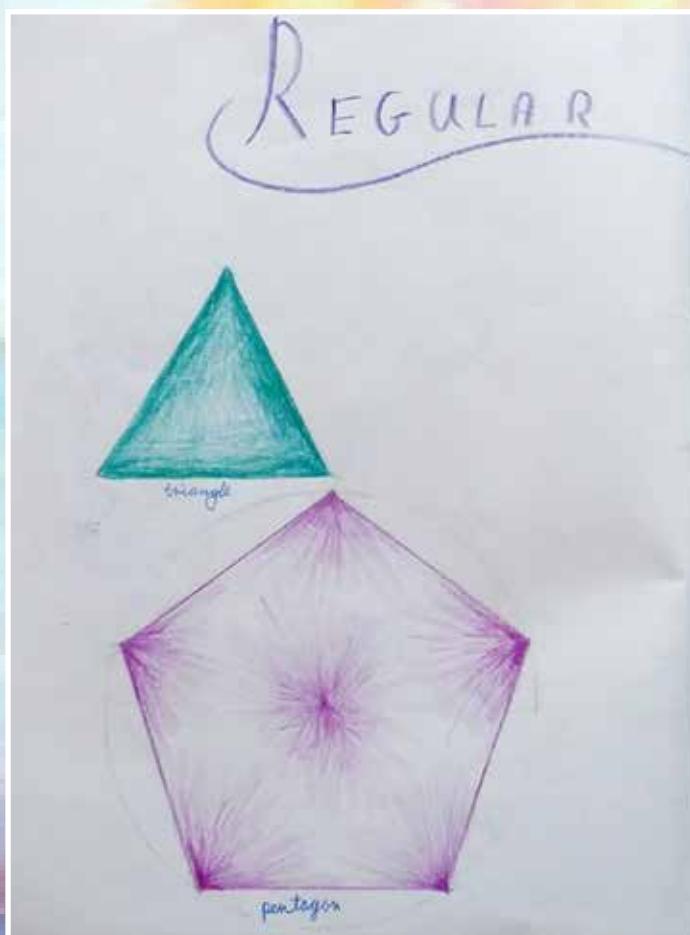
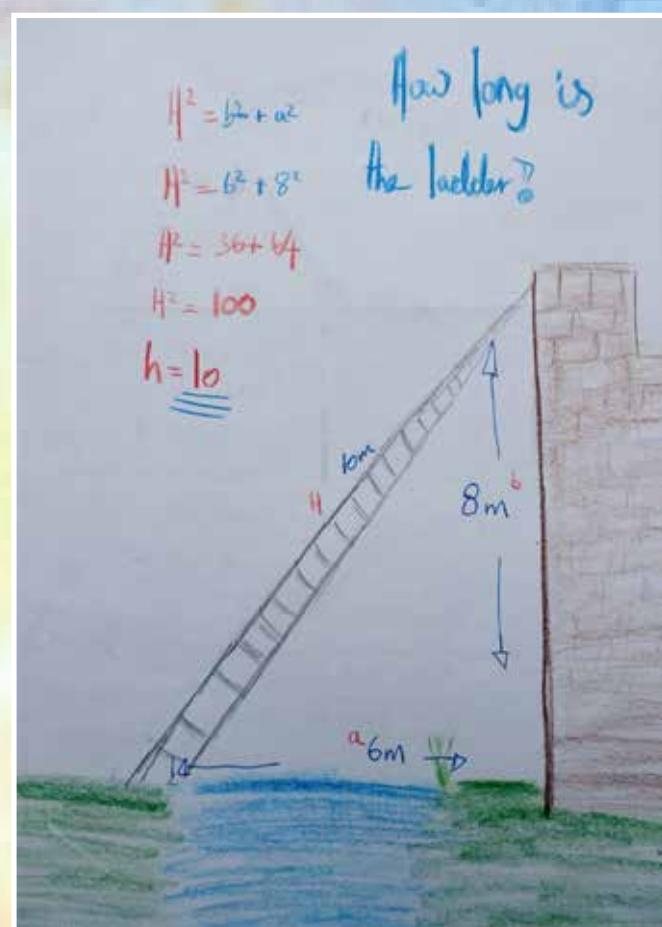
Do you remember how we your children and you are killing those fathers and grandfathers? So the war was stopped and peace became at the Roman camp. Romulus had a party on a big field to celebrate their coming together and along some of his wives and every one was inside, but Romulus was never seen again.

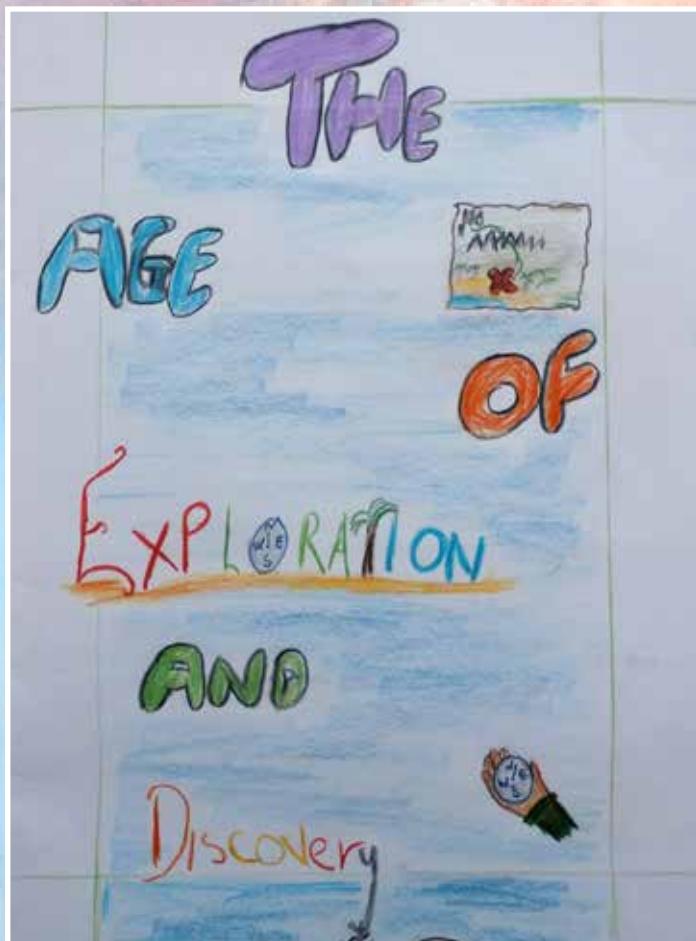
### FLASH SALE !!!

50% off all apparel



# Class 7





## CHRISTOPHER COLUMBUS

Many people wanted a new route to the Indies. Christopher Columbus had the idea that if you sailed West you would come all the way round to China. He got the funding from Queen Isabelle of Spain, and set out on his first journey in 1492.

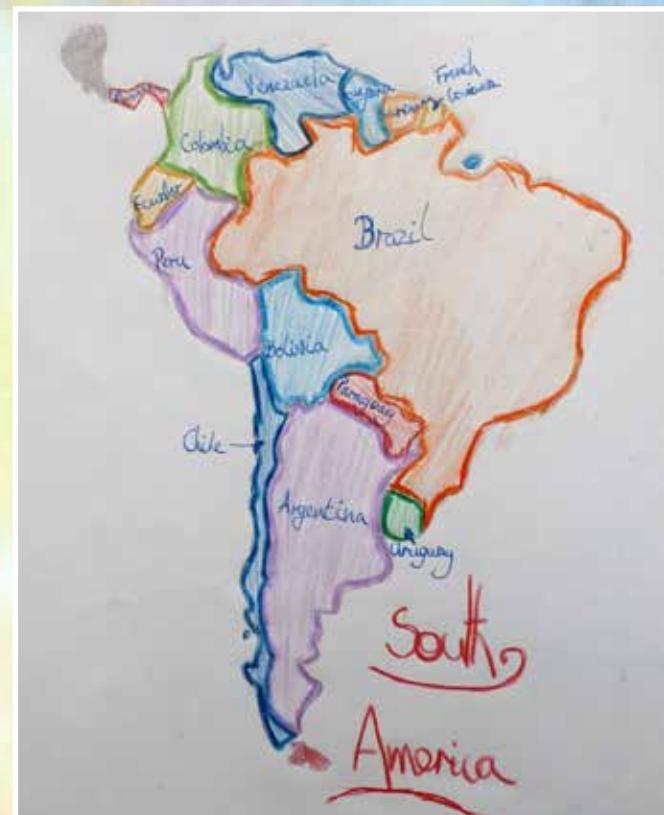
After weeks/months of sailing at sea his crew were growing mutinous, he asked them to give him 3 days and if they didn't sight land they'd turn around. At the break of dawn on the 3rd day he spotted four twinkling lights all in a row in the distance. Columbus celebrated and later that morning he and some of the crew rowed towards the shore in a small boat. He had discovered a small island which he called San Salvador off the coast of Mexico. Columbus however was convinced he was at one of the spice islands. He exchanged goods with the natives, and set sail again. The next island he found was bigger and he named it Hispaniola. He left 300 men to build a fort, and travelled back to Spain where he displayed his findings to the Queen. COLUMBIAN

Columbus thought he had found a new route to China.

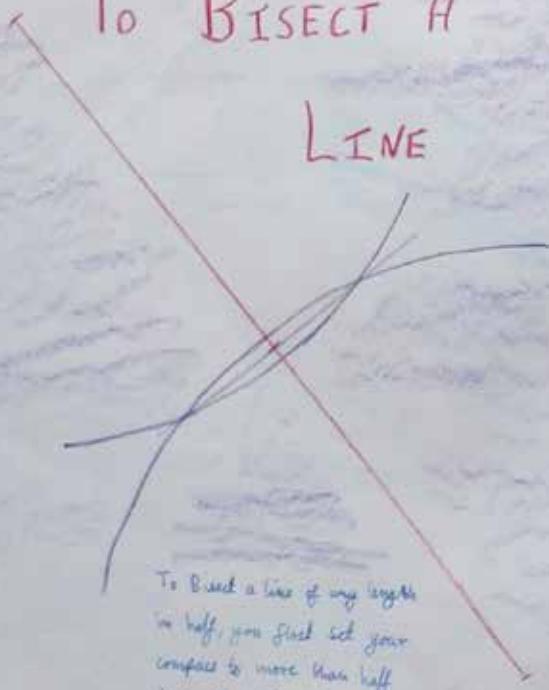
Geometry and



Algebra



To BISECT A  
LINE

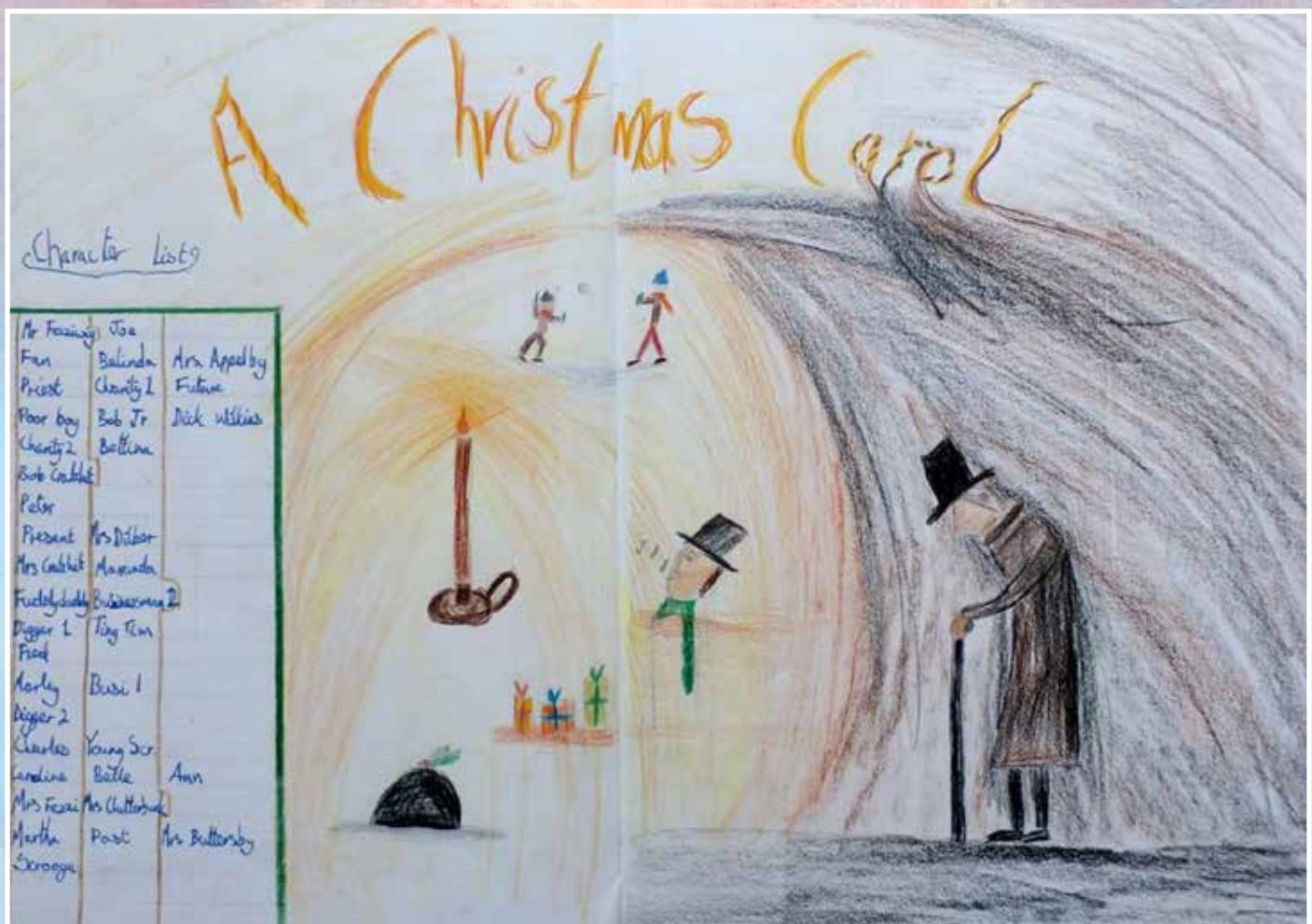
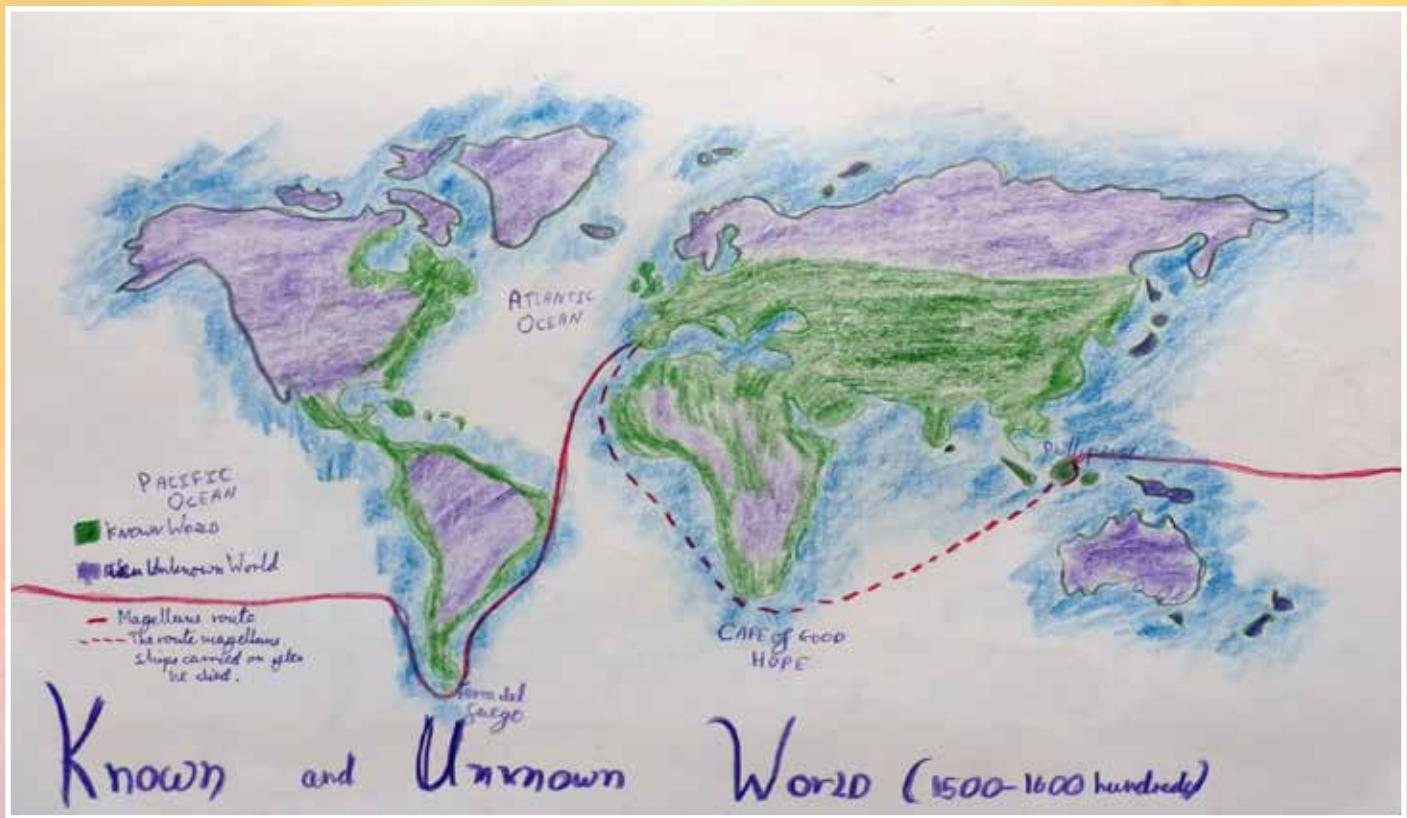


To Bisect a line of any length in half, you first set your compass to more than half its length. Next put the point at the end of the line and draw an arc to the same on the opposite end so that they cross. Draw a line through the middle of the original line and that is the

To BISECT A  
ANGLE



To Bisect a given angle first place the point of the compass at the vertex of the angle and make an arc across both lines. Place the compass where each line crosses the arc. Make 2 more arcs and draw a line from the cross to the point.



# Algebra Rules

1. Terms which use the same letter are called **like terms**. These can be added together.

$$2x + 3x = 5x \quad a + b + 2a + 2b = 3a + 3b$$

3. To **expand brackets**, multiply each term inside the brackets by the term on the outside.

$$3(3p+q) = 9p + 3q \quad 5(2x+3) = 10x + 15$$

2.

To **multiply** terms together, multiply the number, then the letters.

$$2y \times 5x \times 2 = 10xy^2$$

$$3ab \times 4c = 12abc$$

Factorizing is the reverse process to

4. removing brackets

$$9p + 3q = 3(3p+q) \quad 10x + 15 = 5(2x+3)$$

## The United States of America

The U.S.A is the largest country in the world, after Russia and Canada. It is a global superpower and the richest country in the world. There are 50 states. Forty eight of them lie in the middle of the North American continent, but Alaska lies to the west of Canada and Hawaii lies in the Pacific Ocean.

**Landscape** - The USA shares borders with Canada in the north and Mexico in the south. The great Mississippi river runs down through the middle of the country. To the east lie the temperate forests of the Midwest and the Appalachian mountain range. To the West lie the Great Plains and the

Rocky Mountains which stretch from Alaska all the way down to Mexico.

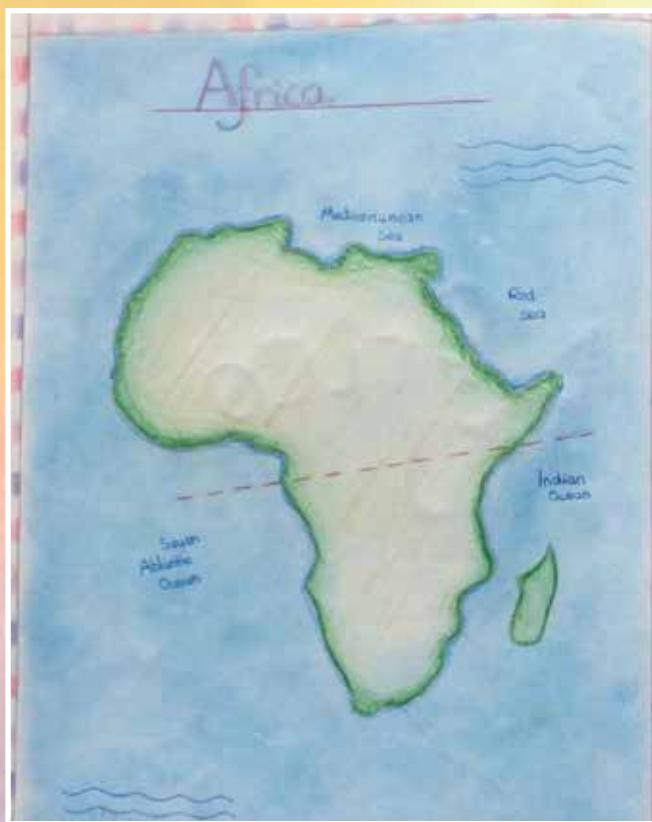
The Grand Canyon is a huge natural feature carved out of rock by the Colorado river.

To the north lie the Great Lakes which are the largest freshwater lakes in the world. Lake Superior is the biggest.



, can be written as an equation,

# Class 8



Africa

Africa is the second largest continent in the world. It has 54 countries. Civilization is known to have started in Africa from Sankore. From thousands and thousands of years ago, the continent is surrounded by the Mediterranean sea to the north, Red sea going to the northeast, the Indian Ocean to the southeast, and the Atlantic Ocean to the west. Africa's largest country by area is Algeria, and by population, Nigeria. The longest river in Africa is Nile. It is also known as the River Niger, Nile, Congo, Zambezi, and numerous others. The equator goes right through the middle of Africa.



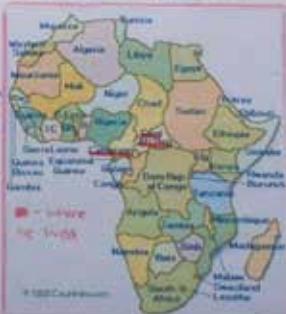
Samuel Fosso - African Photographer



Samuel Fosso is an African photographer who was born in Kumba, Cameroon in 1962. When he was young, he had to leave Cameroon to live in Bangui, in the Central African Republic because of the Nigerian Civil War. He lived with his Uncle there and helps him as a shoemaker.

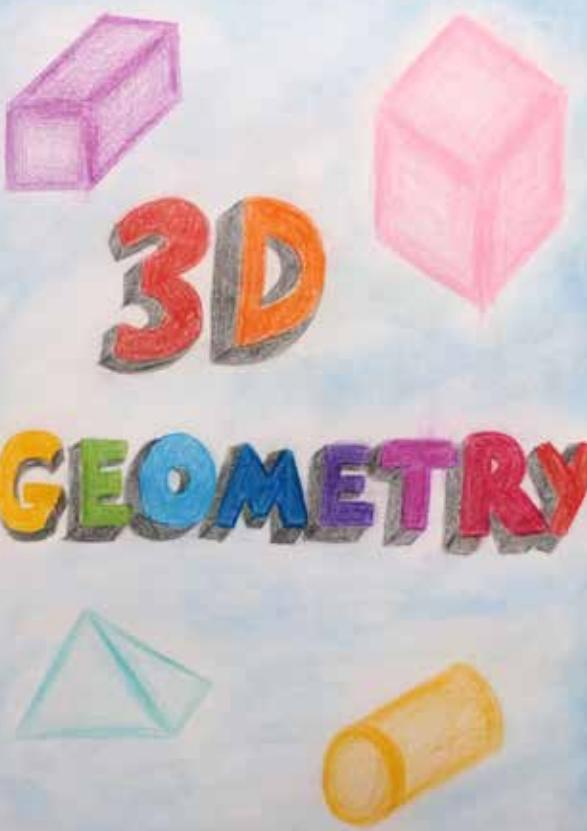
He began his magazine photography by a accident and set up his own studio to make portraits when he was only 12.

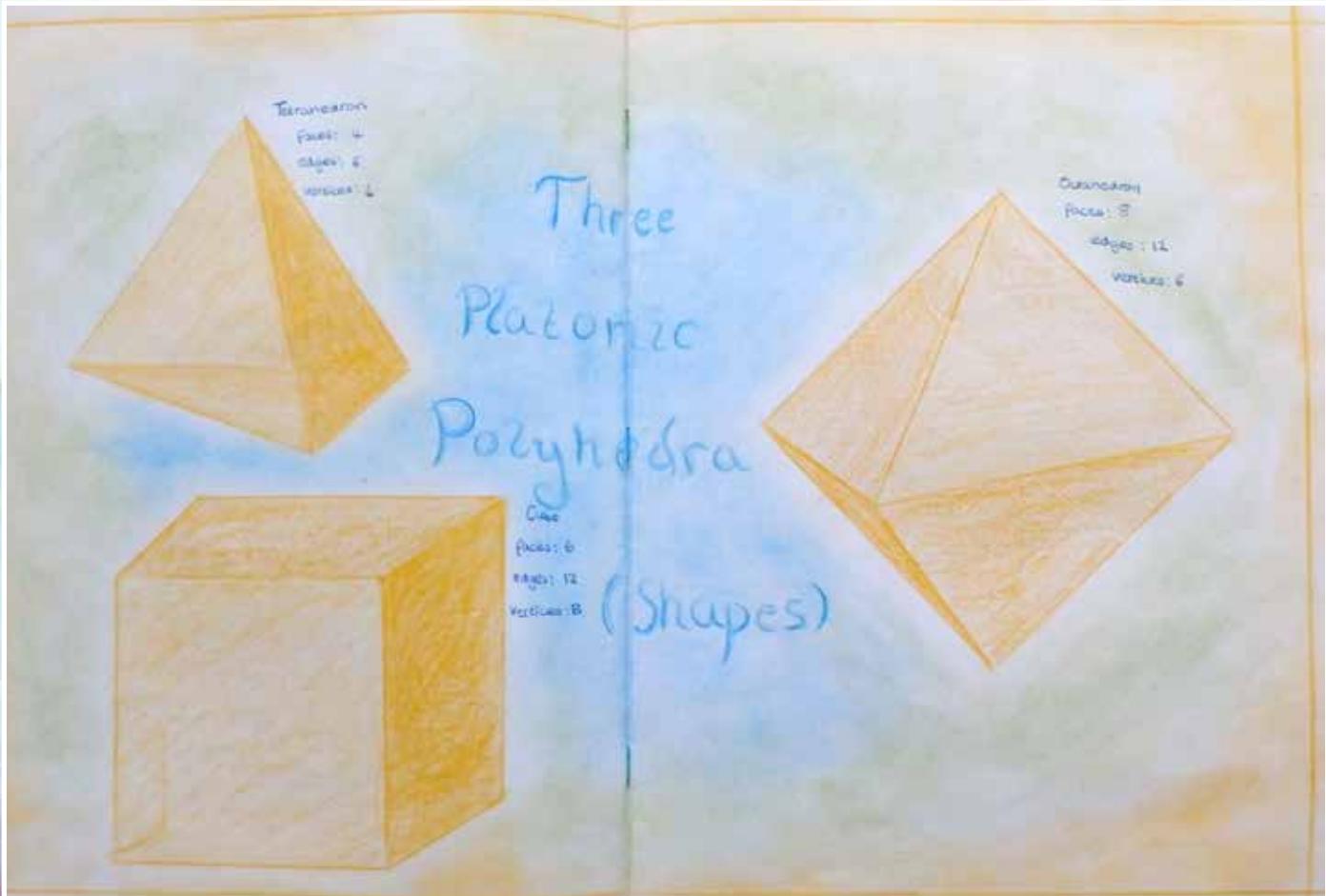
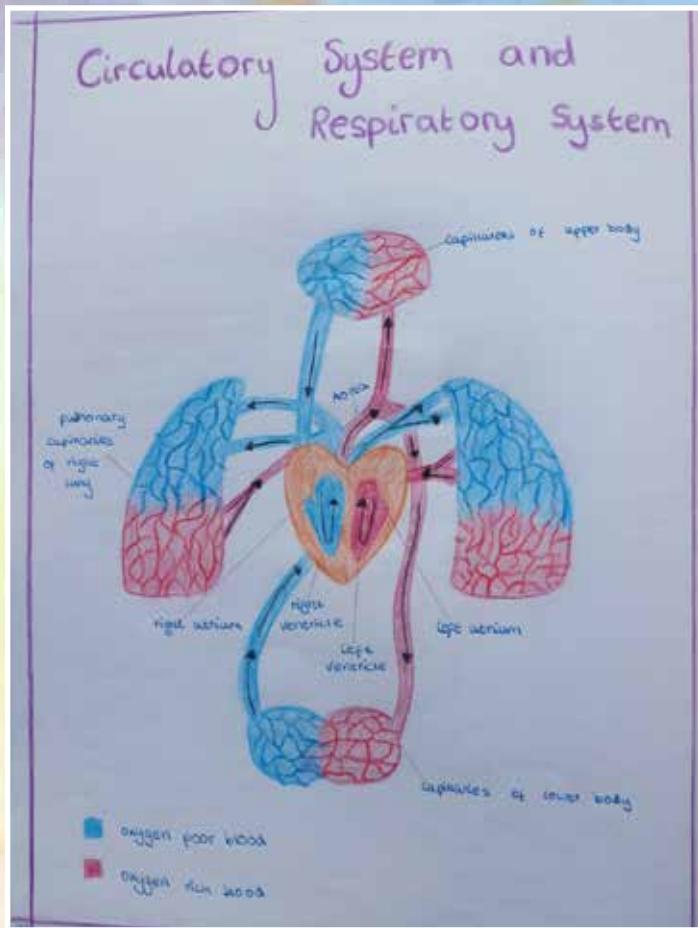
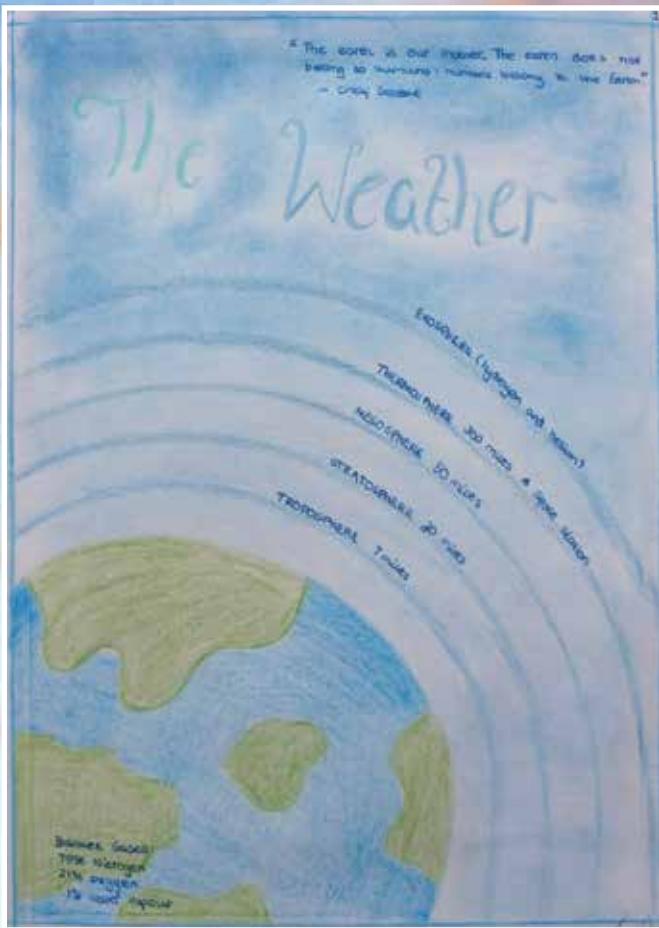
He is now 53 and still lives in the Central African Republic. He is most famous for his portraits where he dresses up the politicians and people from popular culture.

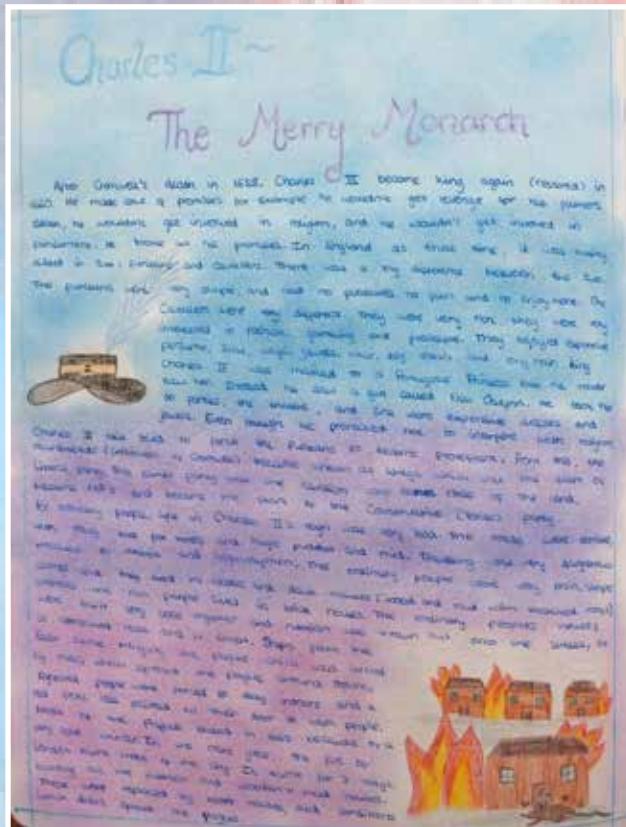
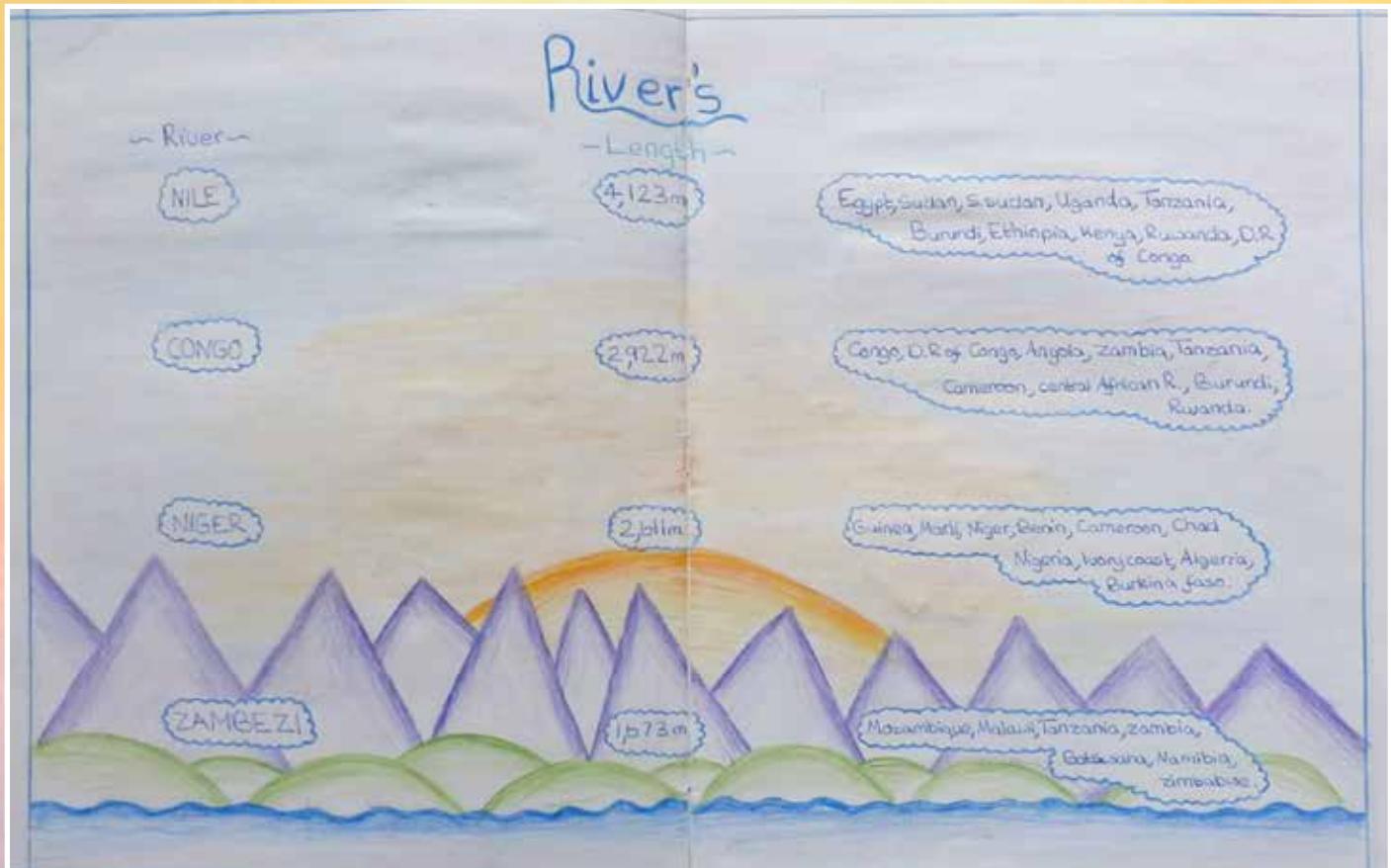



These pictures are some of his work.

**3D GEOMETRY**







## JOINTS

Joints can give several movements, adduction, abduction and circumduction.

**Flexion:** is where there is a decrease in angle between the moving bones.

**Extension:** is the increase in angle between moving bones.

**Hyperextension:** is the increase in extension beyond the normal position of the body.

**Abduction:** the movement of a limb away from the mid line of the body. (abutment is the line that we imagine goes through the middle of the torso and body and splits everything in half).

**Adduction:** movement of a limb towards the midline.

**Circumduction:** moving a distant body part in a circle. (moving the joint in a circle which moves the body part e.g. arm in a circle)

**Synovia:**

A diagram showing the structure of a synovial joint. This shows what it looks like the cut in half.



**Synovial cavity:** it contains synovial fluid which helps lubricate joints. It also supplies the joint with nutrients, and heats waste away.

# Malawi

Malawi is in South East Africa. It is a landlocked country (it doesn't touch the sea). The countries surrounding it are Zambia, Tanzania and Mozambique. The official language is English. But the two main languages are English and Chichewa. Malawi used to be a British colony, then on the 6<sup>th</sup> July 1964 they became independent and changed their name from Nyasaland to Malawi. The capital of Malawi is Lilongwe, and the language they speak is Chichewa. It is a common name because there was a famous captain called David Livingstone who died in Malawi and his home town was called Blantyre so they named it after him. Malawi is also known as the warm heart of Africa because the people are very friendly, and it is in the top 10 friendliest countries in the world. The largest lake in Malawi is Lake Malawi, which is like 500 different species of fish in it, so fishing is very important for the people. They generally live off the land and farming so the people can be very poor when there is heavy rain and floods because so there isn't enough food. This is very hard because the most important thing for them is the land. In Malawi, there are 15 million inhabitants and most of the life of the people live

the main river in Malawi is the Shire River which is full of hippo crocodiles and elephants. Malawi is like heaven, so the season is from November to May.

The main exports (like to other countries) in Malawi are tea, and cotton. They are also exploiting the百姓 to get the money into the country, and are starting to export coal because for natural resources. Malawi has been importing coal since 2007 when they changed the flag from the rising sun to the new flag where the sun has risen.



## CLOUD TYPES



### Cloud Chart

|   |                                   |
|---|-----------------------------------|
| High Cloud<br>(above 18,000 feet)           | Clouds with 'cirrus' in the name  |
| Middle Cloud<br>(6,500 feet to 18,000 feet) | Clouds with 'cumulus' in the name |
| Low Cloud<br>(up to 6,500 feet)             | Clouds with 'stratus' in the name |



These are the most common high clouds. They often form in front of pressure systems moving in from the interior in the morning or evening. These last for 12 hours.

### ALTO CUMULUS



These clouds form in groups. It means 'mountains in the sky'.

### COMMON CLOUDS



White fluffy clouds with grey and greyish bottoms. These are the most common clouds.

## DAFFODILS BY WILLIAM WORDSWORTH

I wonder'd Monday at a cloud  
That rose on high over hills and dales,  
When first I saw a cloud,  
A host of golden daffodils,  
Beside the lake, beneath the trees  
Fluttering and dancing in the breeze.

Continuous as the stars that shine  
And twinkle on the Milky Way,  
They seemed to roll their yellow hue  
Along the margin of a bay  
Ten thousand lawns and I on a bank  
Tossing my head in sprightly glee,

The waves beside them dashed too  
All the sparkling spray; we dash'd  
A poor soul's hat out by the side  
For such a gentle tempest,  
I gazed - and gazed - till I grew dim;  
Like weather-beaten sail on the ocean;

For oft, when on me these bursts of joy  
Did vibrate, or in pleasure swell,  
They soon wear their radiant hue  
With the heat of sunshine,  
And when my spirit with exultation  
And狂喜充满了 the bosom,

It was as though the sun did dim.

# Beaufort Scale

| BEAUFORT NUMBER | WIND SPEED, SEAMAN'S TERM | SYMBOL | EFFECTS ON LAND  |
|-----------------|---------------------------|--------|--|
| 1               | 1 - 3 light air           |        | Smoke drift indicates wind can be felt on face. Leaves rustle. |
| 2               | 4 - 7 light breeze        |        | Leaves and twigs in motion.                                    |
| 3               | 8 - 12 gentle breeze      |        | Dust, leaves, and loose paper raised.                          |
| 4               | 13 - 18 moderate breeze   |        | Small trees sway.  |
| 5               | 19 - 24 fresh breeze      |        | Large branches move.   |
| 6               | 25 - 31 strong breeze     |        | Whole tree moves.  |
| 7               | 32 - 39 moderate gale     |        | Twigs and small branches break off.                            |
| 8               | 39 - 46 fresh gale        |        | Slight structural damage for example leaves fall off roofs.    |
| 9               | 47 - 54 strong gale       |        | Trees broken. Structural damage.                               |
|                 |                           |        | Widespread damage.   |

## Guy Fawkes and Thanksgiving

Initially King James I of England and II of Scotland was more moderate towards Catholics than Queen Elizabeth had been. But he still did not end their disappointment turned into hate. There were several plots by Catholic noblemen and priests to kill the King. The Gunpowder plot in 1605 was a failed attempt to kill the King James I by blowing up the House of Commons. Guy Fawkes was one of the Catholic conspirators who were executed for Gunpowder Plot.

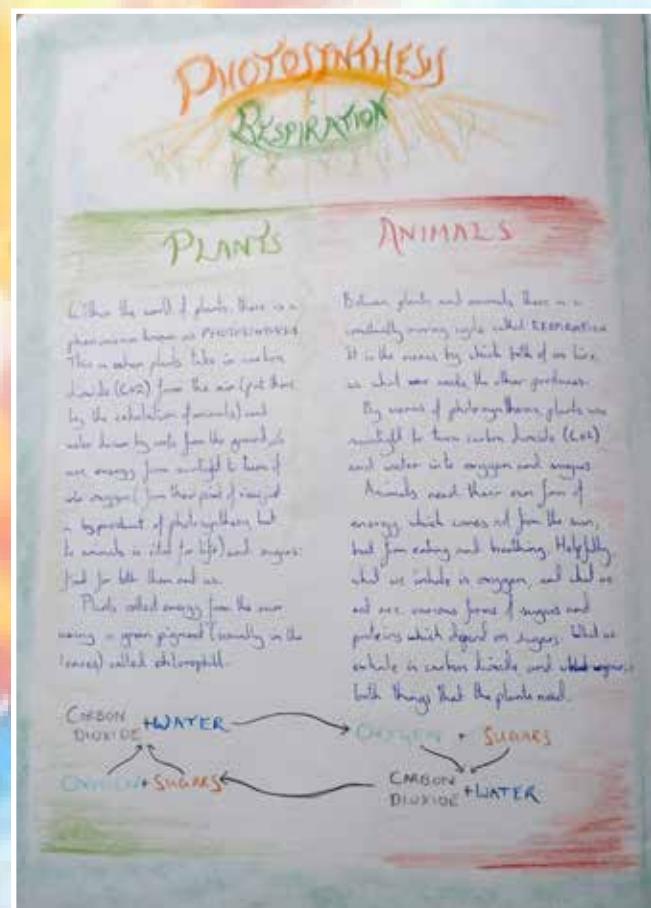
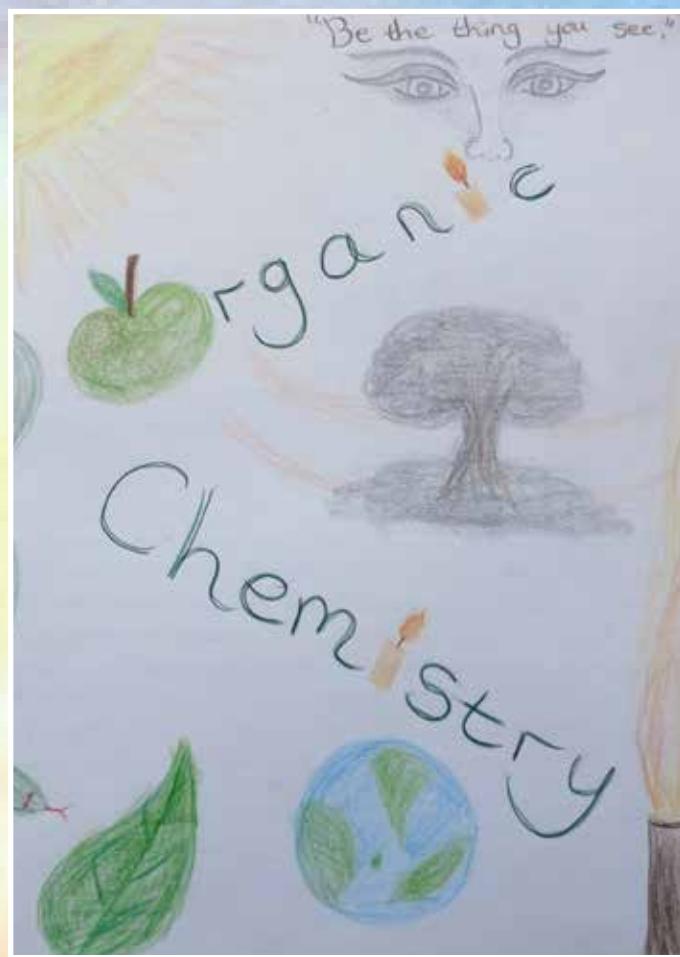
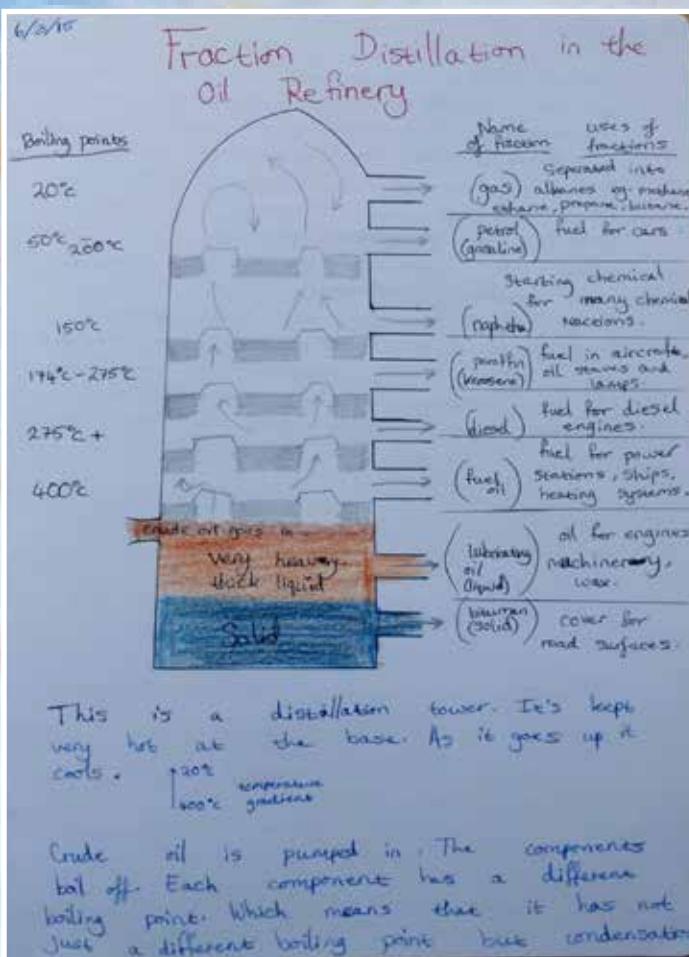
Many people fled from the religious violence in England. Some of them fled to America where they hoped they would have more freedom.

In 1620 the ship Mayflower transported 102 passengers to America. The <sup>day</sup> thanksgiving for the harvest. This tradition started in America soon after 1620.

\* of giving thanks

✓ very well  
visible.

# Class 9

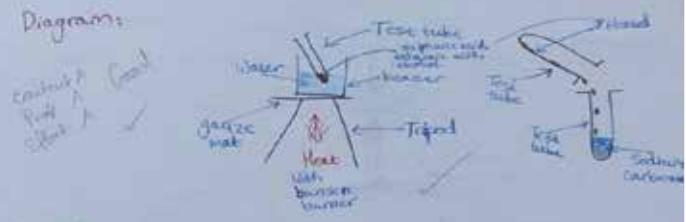


# Esters & Carboxylic Acids



## Production Of Esters

Diagram:



Method:

Get a beaker and fill it  $\frac{1}{3}$  full with cold water. Heat with a bunsen burner until its boiling. Then, in a test tube pipette 10 drops of concentrated sulphuric acid, 10 drops of organic acid (ethanoic acid) and 10 drops of ethanol.

Place the test tube into the concentrated boiling water for a minute with the wooden pegs. Then take it out and leave to cool until its touchable in a rock. Pour that into another test tube  $\frac{1}{3}$  full of sodium carbonate. Smell it by waving, with your hand, in front of your nose.

1st time, the alcohol we used was hexan-1-ol. This stuck to the bottom of the sodium carbonate. It cleared the carbonate and it started bubbling. It smells like nail varnish.

2nd time, we didn't use any alcohol. It fizzes and bubbles and goes form cloudy to clear when mixed with sodium carbonate. It smells of Fish and chips.

3rd time, we used heptanol and it was lighter than the

## The Hopi People

### SNAKE DANCE

The Hopi people who live in South America in the deserts, also have rituals who like performances as we know Hopi mean 'people of peace', which these people are very kind for nature and all life.

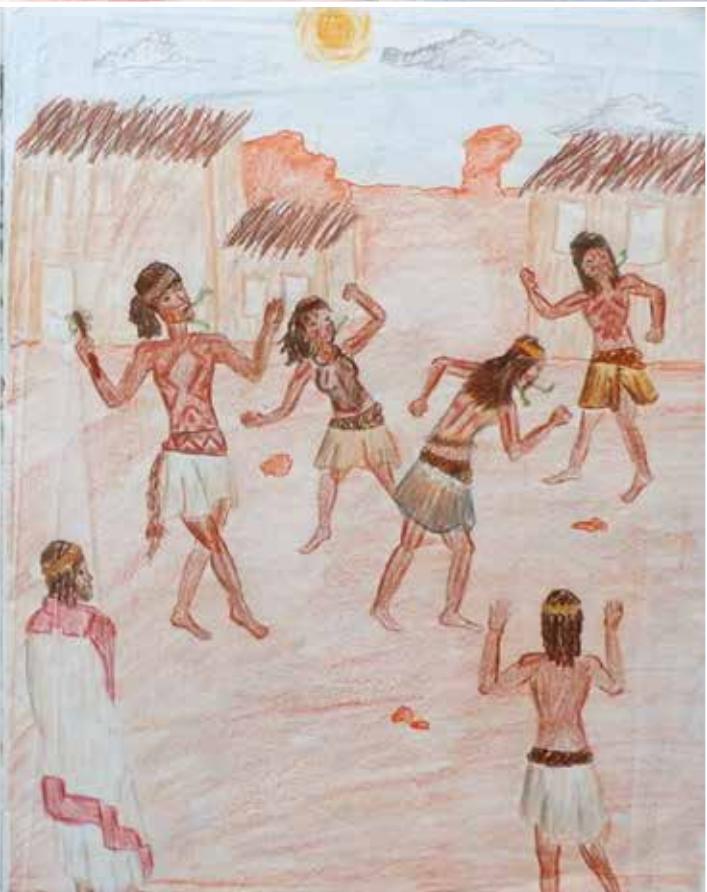
They only have a tiny amount of rain fall a year where they live, yet they grow very nice big crops and lots of hot big amount of rain.

They have a ritual called the snake dance which they believe helps them please the others (the gods) to give them enough rain. It takes 10 days to prepare, and they boil up water to make a paste, which are cleaned by the men then spit into the paste, other places are called. People within the tribe practice dances, while others go beyond the tribe boundary to the desert areas to find snakes. The snake gather try to draw the snakes out onto the ground so snakes can hear but feel vibrations. The snakes are then sent to the men cleaned and put into a pit.

The elders of the tribe bring these snakes to the ground to kill. The others stand to come to the ritual. People from all around the world travel to see the ritual.

The tribe people dance then paint their bodies with the paste that been made to protect the snakes or bite them. The cleaners then take a snake down and hit it to their bodies, the snakes have bitten them, because of the poison. Then they dance.

After the dance the cleaners are given hots to eat and sleep them with the hot stones over them and release my relaxations that has caused them from the snakes. The snakes are not dead where they were found. The snake dance must then finish and the Hopi people wait for rains to fall.



# Balinese Temple Dance

The Balinese people who live in Indonesia have a dance called the Calon Arang Dance. On the first night of the full moon, the villagers all go to the temple of the dead to watch the drama of Calon Arang, the widow-witch of Gunung. Every Balinese knows the legend of Rama and Calon Arang, a famous story in Indian folklore.

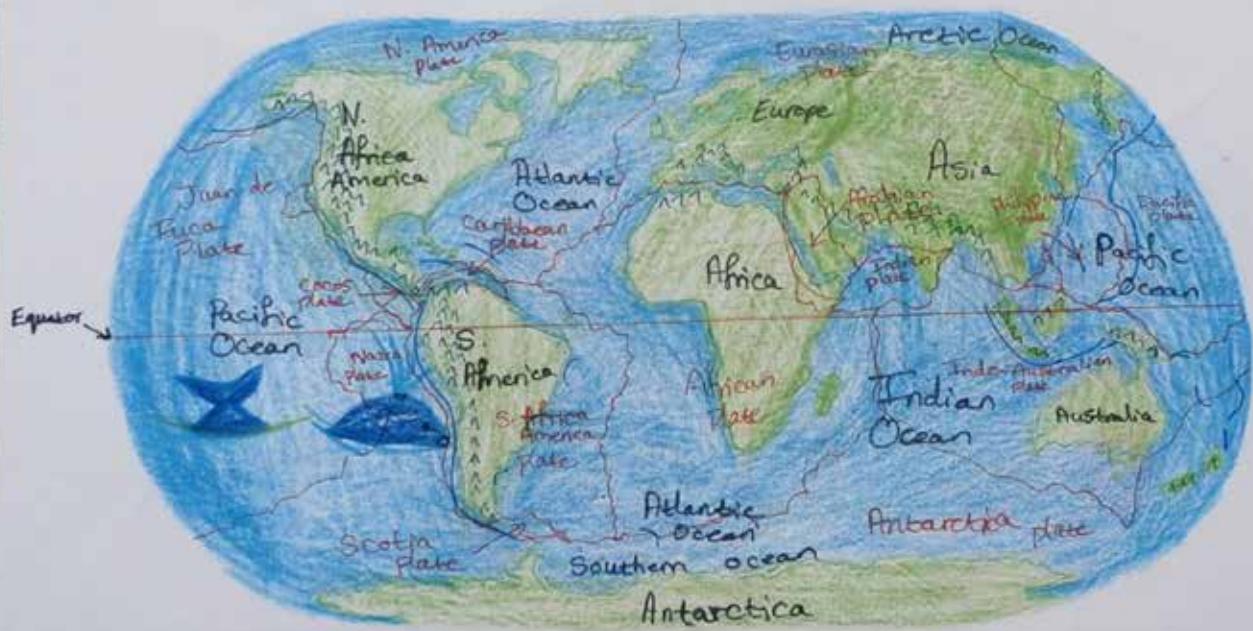
The drama is not a ritual inside the temple, but is performed in front of the temple. The performance is done in dances with mysterious costumes and music is played on gongs along with it.

The story of Calon Arang goes like this: long ago, when Astangga was King, there lived a widow called Calon Arang. She had a child called Ketut Menggih. Calon Arang wanted her daughter to marry a prince from the Palace of Abining. But despite her daughter's beauty no prince wanted to marry her. Calon Arang, so angry she wanted to the people of the kingdom to suffer. She used the art of black magic and poison to poison the kingdom. When the King heard about what Calon was doing he consulted his high priest, Nrip Bhadrabudha. The priest sent his son to marry Calon's daughter. Calon was pleased and let them marry.

The plague on the land subsided, the crops were withered. Calon had a letter (warning book) of these miseries. Her son-in-law found it, he gave it to his father. Nrip Bhadrabudha then found out how Calon had set a plague on the people. Calon found out that now her son had the curse and would die. The priest had no choice but to fight the priest cast a spell on Calon before she died, she died forevermore. Nrip Bhadrabudha forgave her wickedness and showed her the way to heaven.



# Tectonic Plates



# Plates



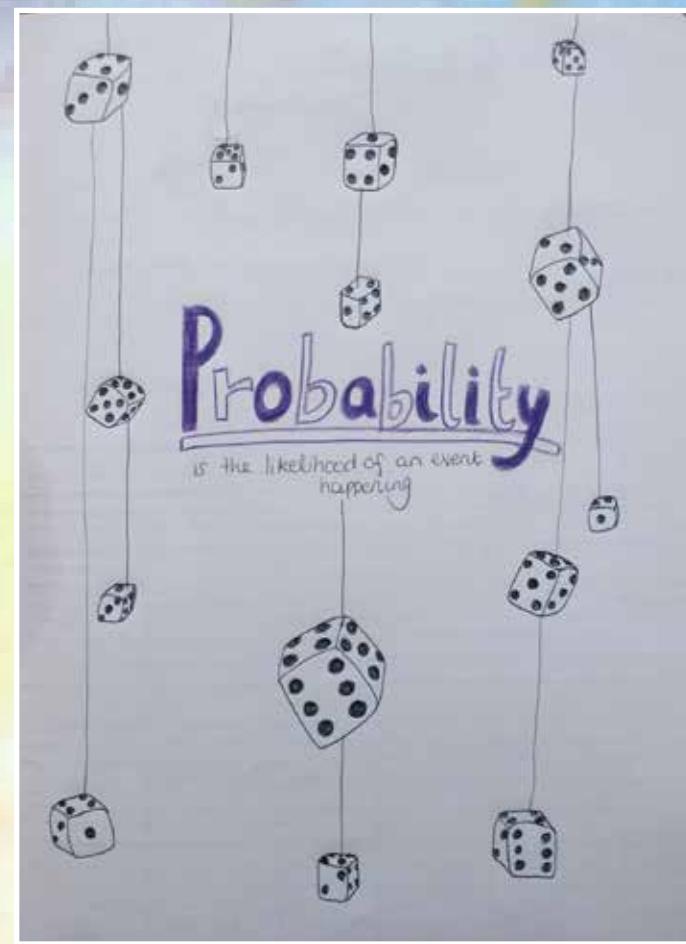
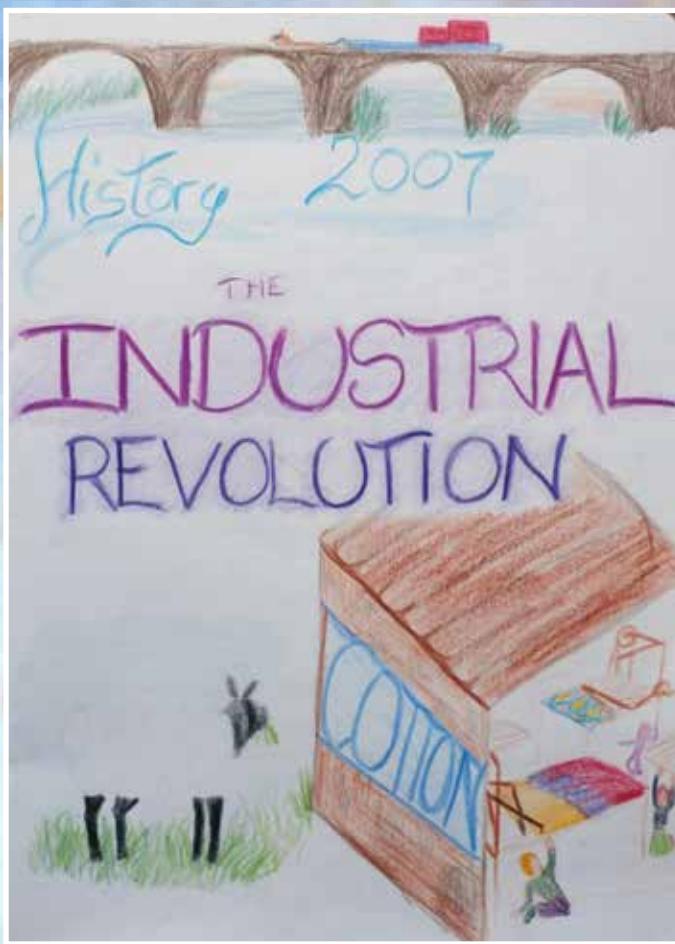
## What is Performance?

Performance as we know is a show for entertainment, for an audience to watch. To make a performance you need three essential things, one a audience, two one or more performers and three a stage or place to perform. A Performance as we know is for entertainment for the audience. Though hundreds of years ago and even today performances were quite different. Instead of performances you call them a ritual or ceremony. They'd be for religious or health reasons of entertainment. The Inca people who live in the Andes circle of the world, have dances within their tribes. These dances are believed to have various, dreams, healing powers. They'd have music, where the Inca tribe people sit round in an circle or group to dance. The shaman would also dance, they'd dance for hours till the shaman would fall in trance. The trance would take them to Godless' lands into the sea. The shaman would ask for enough water, food and other supplies for the Inca people to survive. After trying to please before the shaman would return to his or her normal state, into their bodies. The shaman would then stand and tell the tribe of what he dreamt and of his journey.

"When I saw you  
I fell in love  
and you smiled  
because you  
knew..."

## William Shakespeare

He is still  
loved by many  
because of his  
strange, yet beautiful  
use of words.  
And because his  
plays are so  
different and interesting  
from today's  
plays.



# THOMAS ALVA EDISON

TIMELINE

- 1847 - February 11<sup>th</sup> - Born in Ohio, USA
- 1854 - moved to Michigan where he attended school. His teacher said that he was retarded so he left and was home educated.
- 1859 - he got a job selling newspapers and sweets on railway train. He made the luggage wagon into a science laboratory, he created a printing press on the train and sold his own newspaper! He lost his hearing which socially isolated him, but allowed him to focus on his work.
- 1862 - He rescued a three year old child from a train. Her father was a telegraph operator. As a reward, the girl's father let Edison be a telegraph operator.
- 1868 - He worked for Boston telephone company.
- 1869 - He was promoted to telegraph machine operator.
- 1871 - His mother died. He married and had two children, Marion and Thomas Jr., nicknamed Dot and Dash.
- 1875 - He moved to New York where he became a printer here.
- 1876 - He invented an electric vote counter. Nobody wanted it.
- 1881 - He opened a factory which made his design of lightbulbs (carbonized thread powered by a low electrical current). He created parallel circuits and an underground conducting network.
- 1882 - 4th September, Edison open the first commercial power station in New York City at Manhattan the same year.

Elements in the orchestra can vary greatly from the instruments of one piece to another. For older age students they can stage scenes to go with music. If you want to teach your students about the different instruments in an orchestra, make sure that the music is a lot smoother and slower. It has to reflect the mood of the piece.

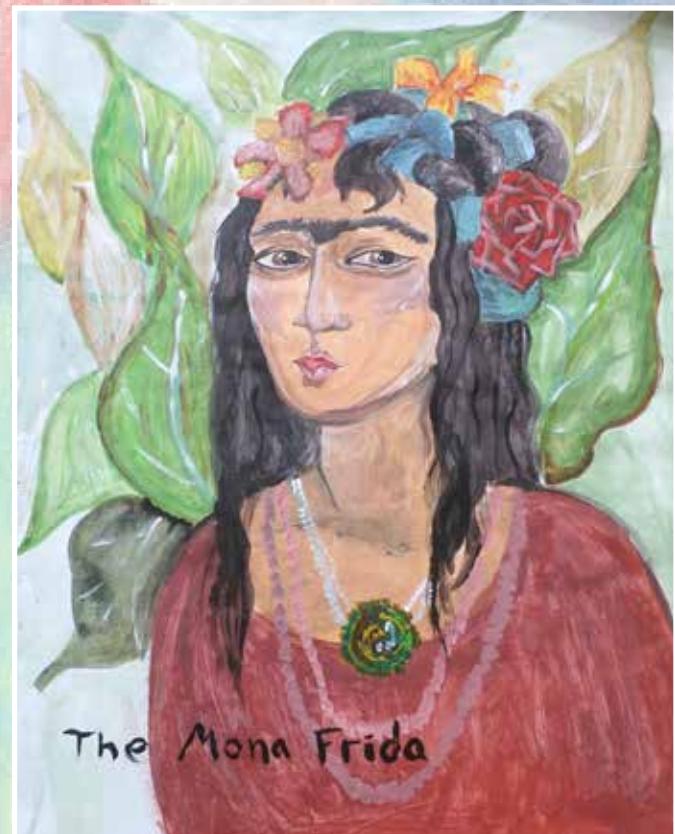
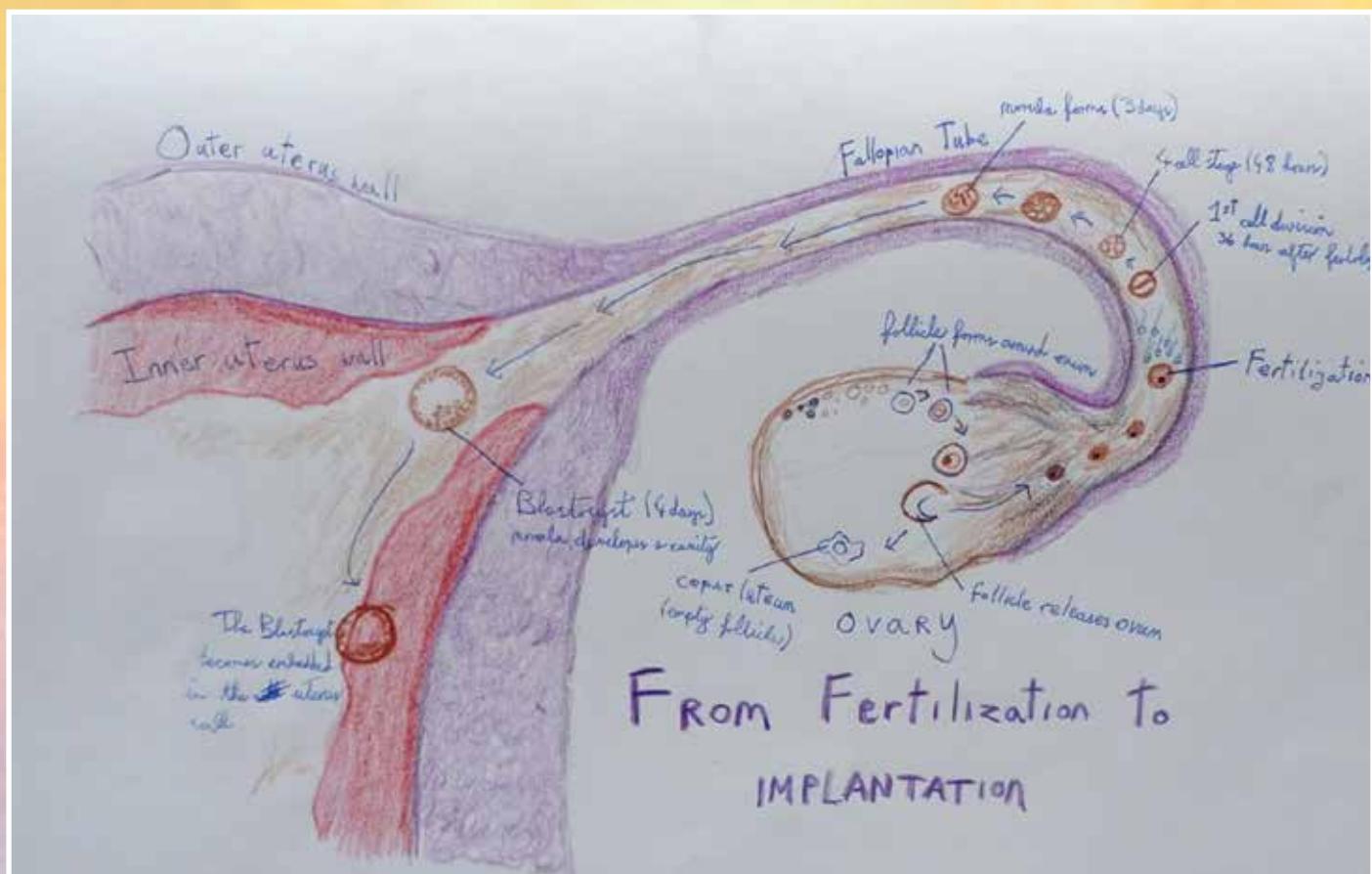
For younger students, it is easier to teach them about the instruments by playing them. You can play different instruments and ask them to identify them. This can help them understand what each instrument does.

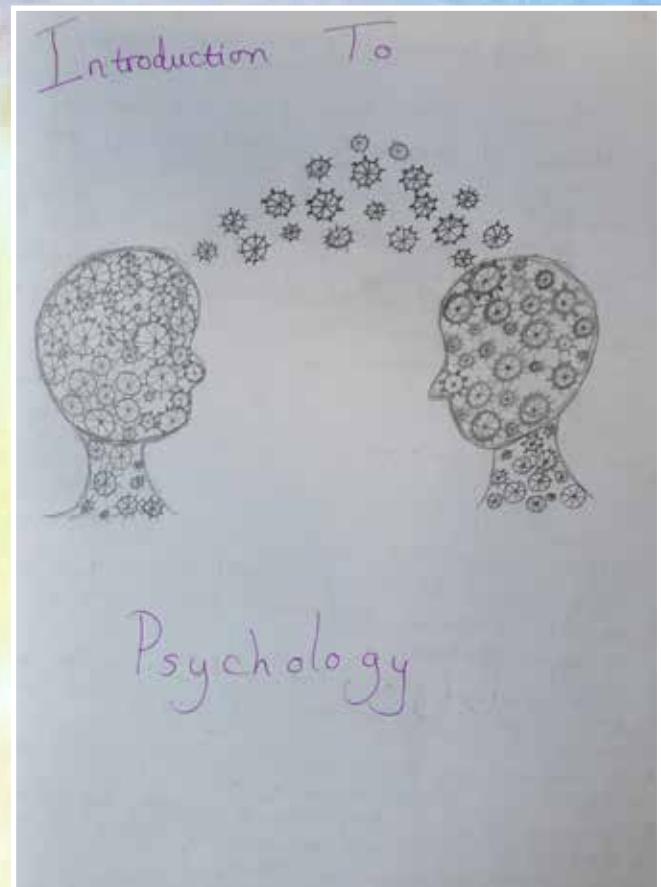
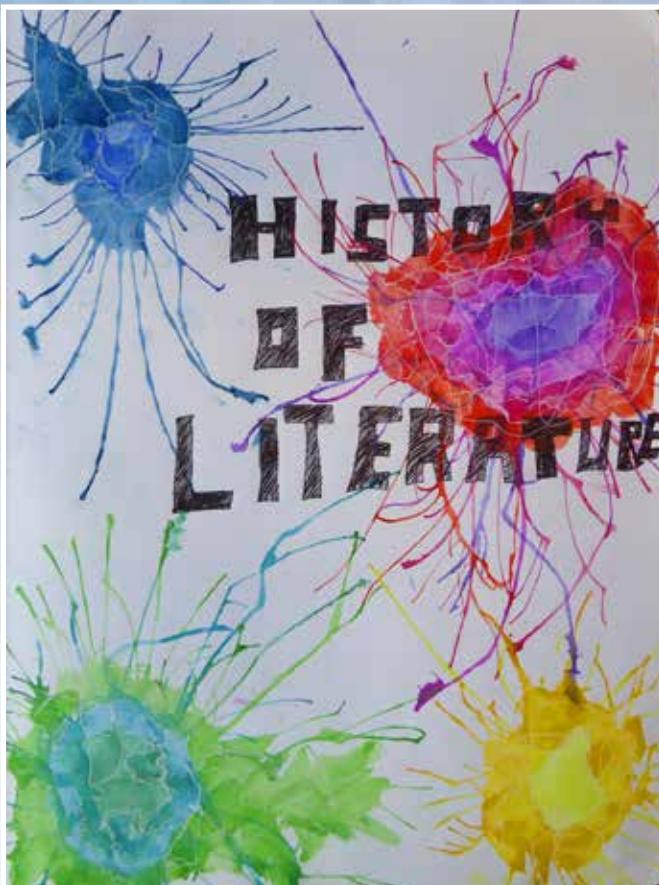
For older students, you can teach them about the different parts of an instrument. For example, I didn't really think about the bassoon until I saw it. It has a very unique sound.

A band is a group of the same instrument being played together, and a orchestra is more like an orchestra, with different instruments playing different parts.

Sheet music shows the time, pitch, volume, key signature, and tempo. It is for you just look to play along and see that you can sing it right.

# Class 10





**Causes of Amenorrhea**

Amenorrhea is the absence of the menstrual cycle in women. It can be caused by many factors. The most common factor is pregnancy and menopause, but can also be caused of weight loss, low body weight, disordered eating and vigorous physical activity. There is also many female athletes get it, because of the pressure from coaches parents and themselves to lose weight. Amenorrhea results from reduced secretion of gonadotropin-releasing hormone which decreases the release of LH and FSH. As a result follicles fail to develop and the monthly menstrual bleeding does not happen.

**Shakespeare**

Generally Shakespeare wrote in 3 different genres: Comedy, Tragedy and History. He also wrote in various themes; love, family, leadership, and power, war and conflict, magical and supernatural and appearance + reality.

Random facts about Shakespeare: He mentioned birds 600 times in his plays such as; swans, ravens, crows, swallows etc. He mentioned by 200 and made up the phrase "watch dog". Shakespeare never actually published any of his plays but his friends did when he died. He wrote a total of 37 plays and 154 sonnets. He was born in Stratford Upon Avon. No one knows why he died at the age of 52 years. Some say it was kidney disease others too much to drink and some have said that it was even murder! He had 3 children (2 girls + a boy) who died without families, so there are no descendants of him. There are 15 million google searches for Shakespeare online, more than God and Elvis. There are over 80 ways of spelling his name but none of those are spelled like "Shakespeare". There were no pictures of painted while he was alive or so it was thought, but in 2009 experts found a painting that they are 90% sure was painted when he was 46 years old. People think that he was born on the 23rd of April and died on that same day. He also bought properties.

In the third week of development, called gastrulation takes place.

The formation of the 'primitive streak' → takes place, it is a vertical axis which gives the embryo blast lateral symmetry and posterior and anterior direction. The two layered disc becomes three layered (ectoderm, mesoderm). These layers are predetermined to form into certain organs.

### Examples of Structures Derived from the three Germinal Layers

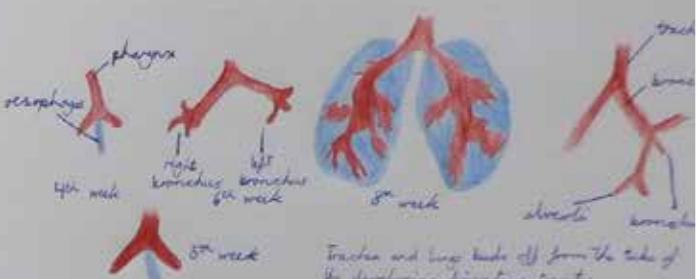
In the fourth week, dramatic changes in size take place, as the embryo triples in size. It changes into a three dimensional cylinder as a result of embryonic folding. Embryonic folding does not occur from

| Ectoderm              | Mesoderm                                  | Endoderm                       |
|-----------------------|---|--------------------------------|
| Nervous system        | Skeletal tissue                           | lining of gut/intestinal tract |
| Dermis layer of skin  | Cardiac tissue                            | Bladder                        |
| Hair                  | Blood, red bone marrow                    | Lungs                          |
| Outer layer of skin   | Cross layer of skin                       | Various internal glands        |
| Internal/external ear | Outer covering of body, epithelial tissue | Genital organs                 |
| Nails                 | Muscle tissue                             |                                |

actual physiological movements they occur because of growth of different parts at different rates moving. There are two types of folding, invagination and involution.

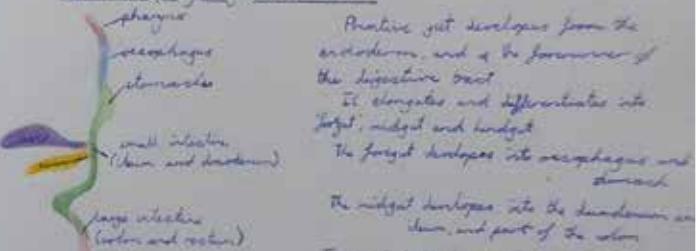
organs also move in the developing body before finally coming to rest in their rightful positions.

### Development of lung and bronchial tubes



Trachea and lung buds off from the tube of the developing digestive tract.

### The developing digestive tract



Pharynx just develops from the endoderm, and is the foregut of the digestive tract.

It elongates and differentiates into foregut, midgut and hindgut.

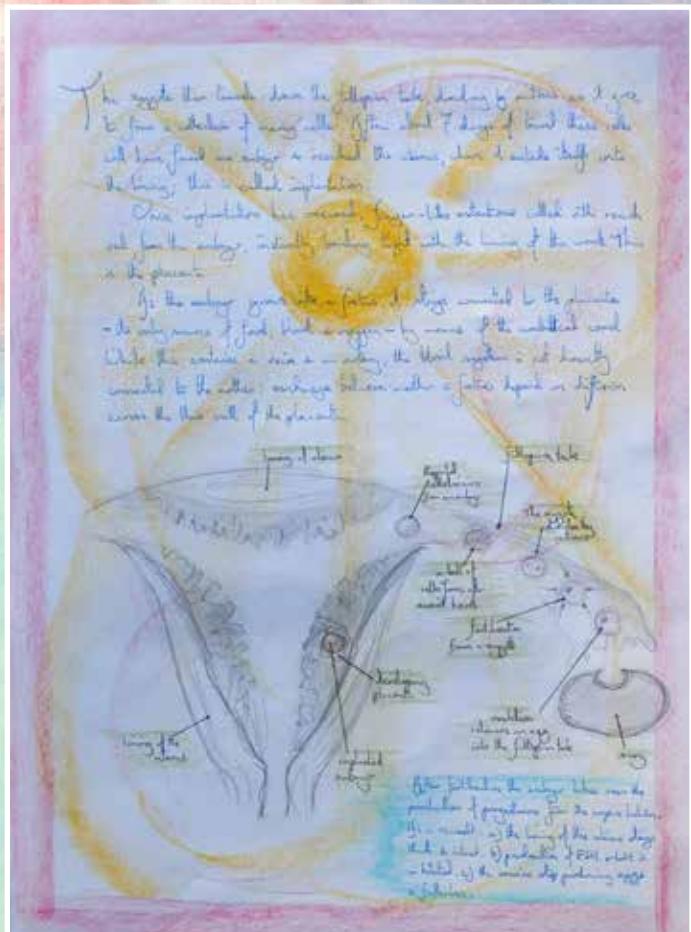
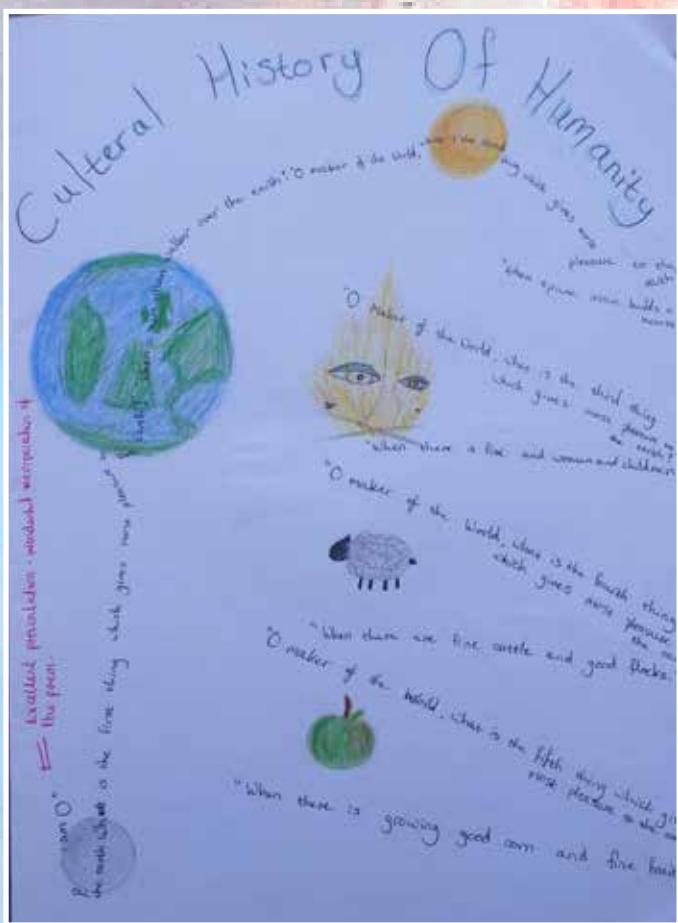
The foregut develops into oesophagus and stomach.

The midgut develops into the duodenum and jejunum, and part of the colon.

The hindgut develops into the colon and rectum.

The liver, pancreas and lungs form as diverticula along the gut epithelium. The lungs bud off and become separate structures.

In the fifth to eighth weeks the brain expands rapidly resulting in head expansion and makes it too big in respect to the rest of the body. Limbs begin to form, and initially digits of hands and feet are short and webbed. Fingers appear to be open, though this is only because the webs have not





### My "Mistake"

It was dark and I was in bed in a family friend's house and the chair full of clothes, and to me I could see a face and a snake. It was scary. To gain a truer picture of this I could engage more of my senses. For example I could go and feel the clothes to prove to myself that nothing was actually there.

### Diffusion of Potassium Permanganate crystals

Method: We filled a beaker with water and put a heaped tsp of potassium permanganate crystals. They diffuse into the water slowly. This looks like a light, bright purple rain cloud - raining at first. It, to me, is beautiful! Then it all settles at the bottom and, after a while, it diffuses into all the liquid.

Diagram:

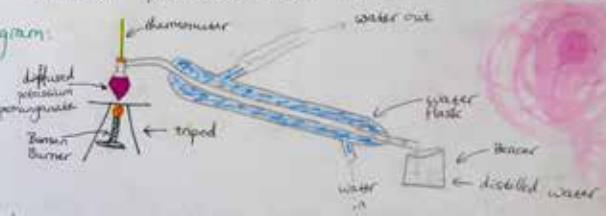


Conclusion: Our results show us that the crystals diffuse in water. To me the colour diffusing is magical.

### Distillation of the potassium permanganate crystal solution

Method: We wanted to separate the water and purple solution from each other so we distilled it.

Diagram:

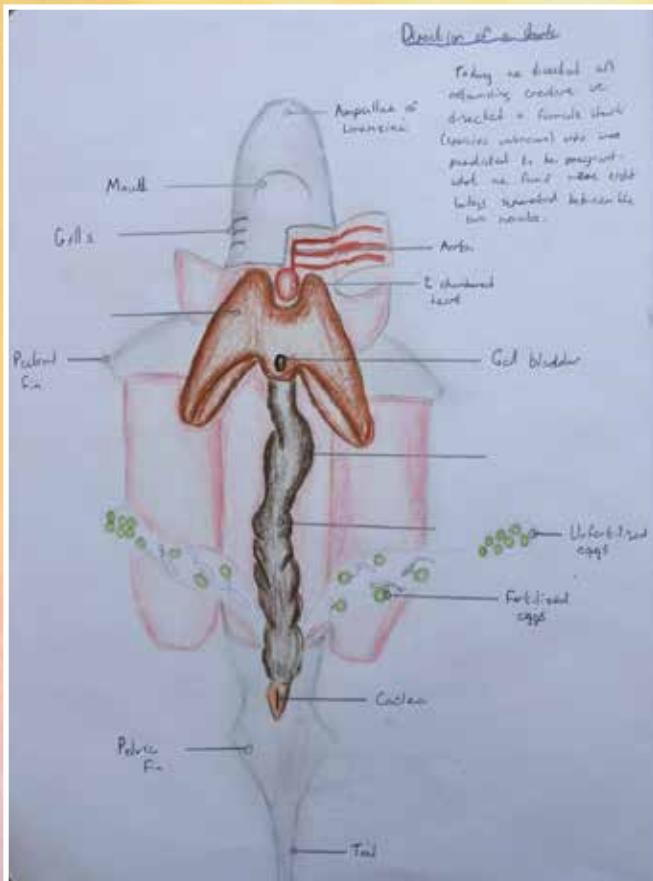


Results: The solution in the flask heated up and formed condensation which then went through the water jacket and turned to liquid again.

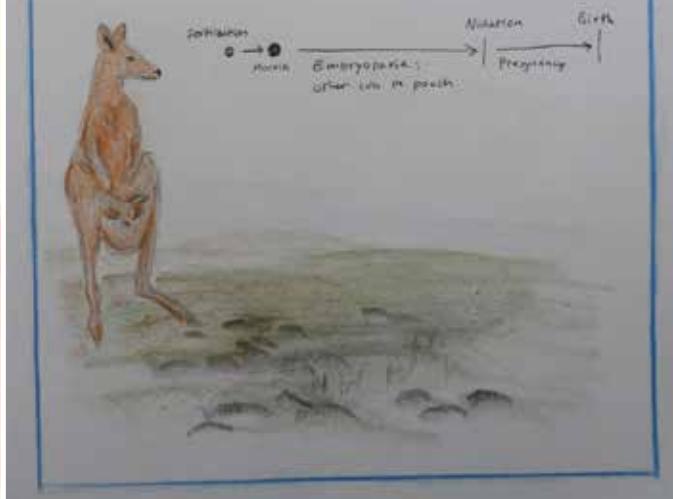
Conclusion: The solution is heavier than the water so it could separate which meant that the colour also separated back to clear.

### Chromatography paper

Method: 3 colours of food colouring were mixed together. We dropped a little dot of the mixture onto the chromatography paper and placed the bottom into a little way filled beaker of water. Keep the paper still by folding it over the edge.



Embryoparity can also happen in kangaroos. The fertilization may occur after mating, either when the kangaroo is already bearing a cub in its pouch. The embryo then interrupts its development just before implantation so the mother kangaroo doesn't have to bear two cubs in her pouch at the same time. From the moment the extra cub leaves the pouch, the embryo starts implanting and developing - embryoparity in humans has not been observed.



### Ancient Hindu Culture, The Rise Of Buddhism And The Origins Of The Caste System

In first Hindu social classes were identified with parts of the body. The traditional social classes were called 'varna'.

- Mouth = Brahmins (specialist in reciting the hymns and performing rituals (a priestly being))
- Arms = warriors (kshatriya)
- Thighs = commoners (vaishya)
- Feet = servants (shudra)

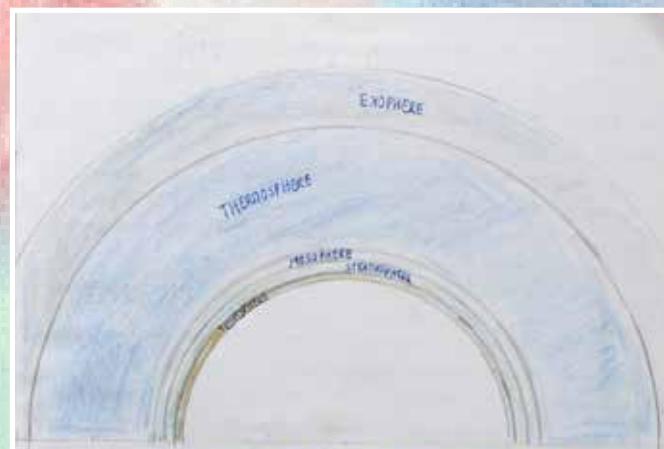
The top 3 were all boys and their sons were called twice born males. They were also entitled to hear the Veda. Those who were not entitled to listen to the Veda were also not thought to follow the same stages of life as the other more highly born males.

You are born into a caste, or <sup>caste</sup> ~~caste~~, and you marry into that same caste system. The lowest caste system were known as the 'unclean' and were considered 'untouchable' even if they became rich. In Lucy's time the 'caste system' was more on who could survive and who was the fittest.

Nowadays we are able to choose our own 'caste system' like class or gender but we aren't enclosed within the systems and are allowed to marry out of them.

Hinduism and Buddhism have shared parallel beliefs that have existed side by side, but also pronounced differences. Buddhism virtually disappeared in the 11<sup>th</sup> century except in some places in India. It has continued to exist outside of India and is the major religion in several East Asian countries.

The God Shiva is very important within the Hindu religion but there were other gods as well. They believed in reincarnation.



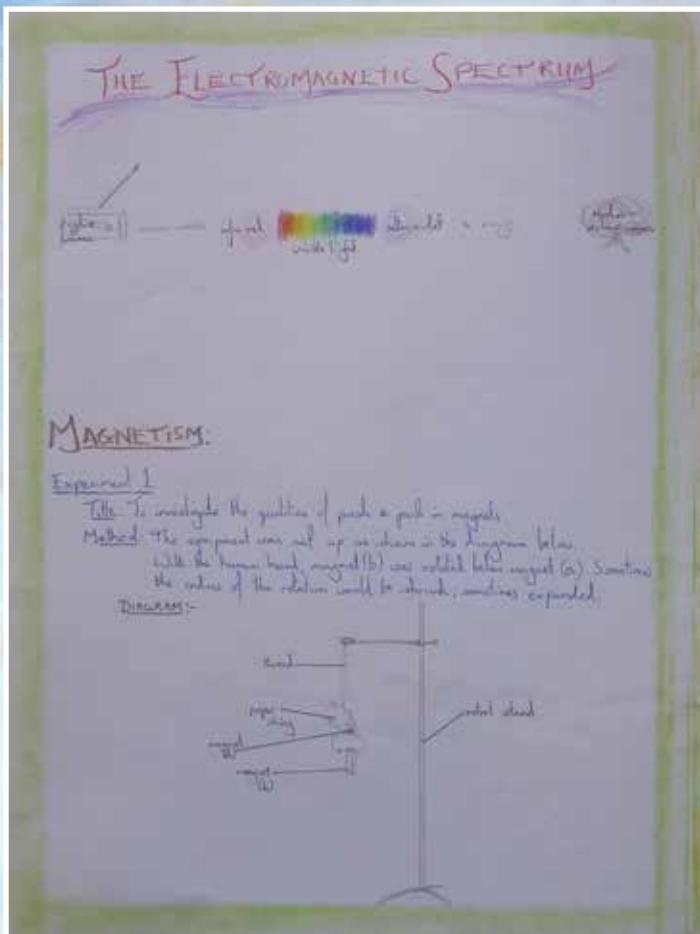
Please Note: Atmospheric layers are in proportion to one another.  
The earth and atmosphere themselves are not in proportion.

## The Atmosphere

The atmosphere, as we all know, is a layer of 'air' which surrounds the Earth. However, the atmosphere itself is divided up into several layers, which differ dramatically from each other. Most of the atmosphere will contain air suitable for humans to stay in healthily in due to extreme atmospheric pressure/ oxygen levels.

So how does our atmosphere benefit us? Well, for starters, it keeps us warm. If the atmosphere didn't exist, it is estimated that the Earth would be on average a temperature of -25° Celsius. The atmosphere also protects us from solar rays, charged particles, and to a certain extent, meteors. It helps break up falling particles so that the surface isn't as much of a meteorite.

# Class 11



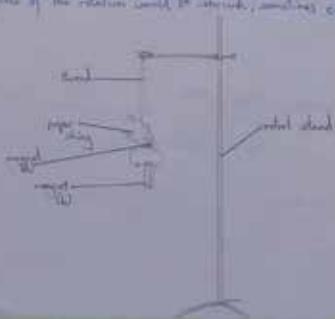
## MAGNETISM:

### Experiment 1

Title: To investigate the qualities of push & pull in magnets.

Method: The equipment was set up as shown in the diagram below. With the two bar magnets (b) were pulled from magnet (a). Sometimes the value of the relation will be different, sometimes expanded.

Diagram:



Observations:

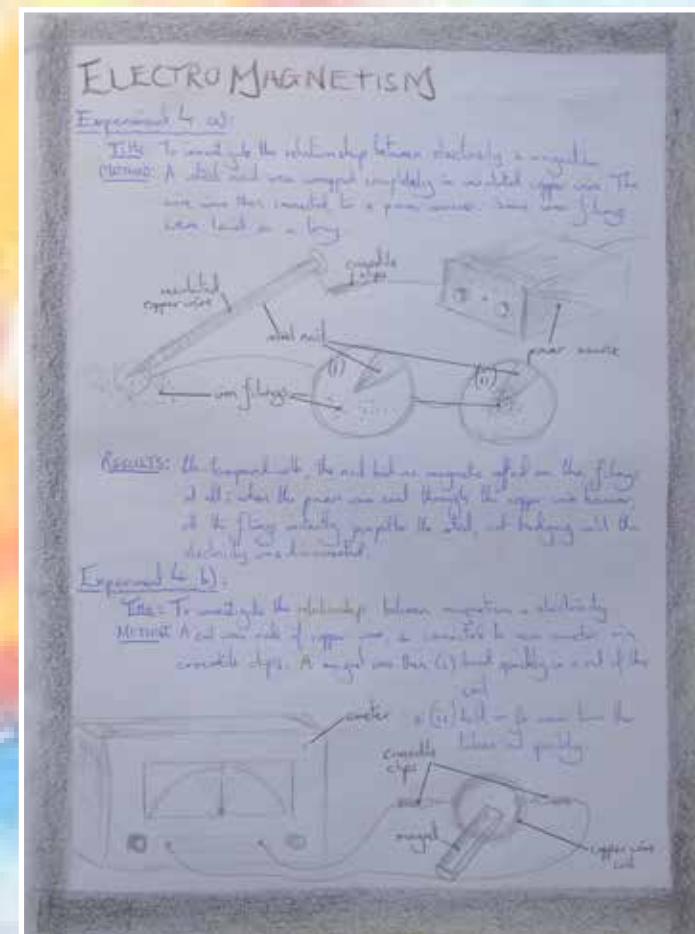
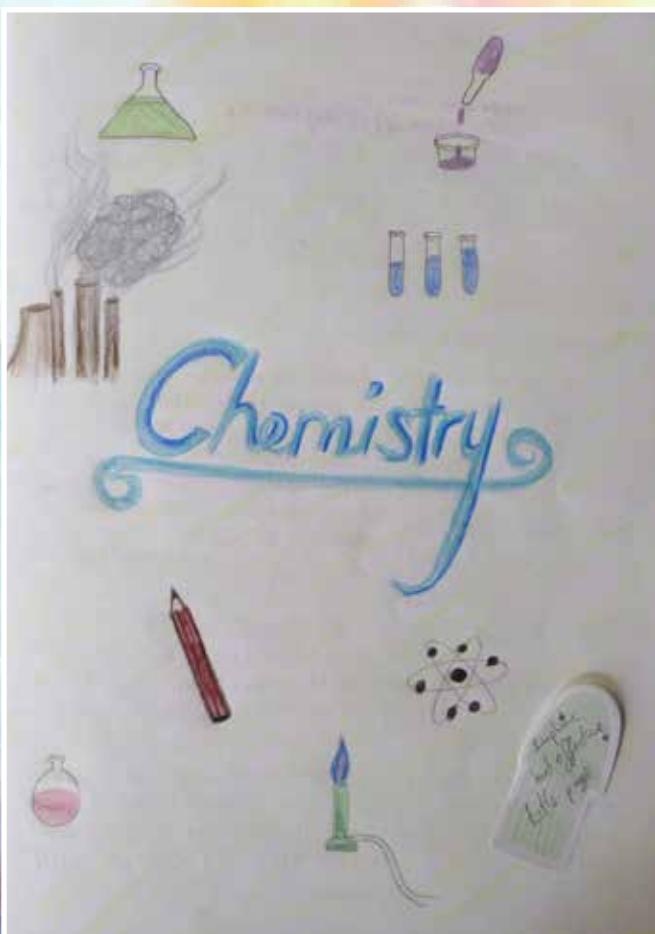
- When magnet (b) was pulled, magnet (a) pushed it, spinning in the same direction at the same speed.
- When the experiment was begun, it was seen that magnets can adhere to each other from a distance (where the two poles are placed together) & pull (when opposite poles are close, the magnets repel).
- It began to notice that the two forces did not seem to be equal during the rotation, with magnet (a) stronger.
- With the magnet closest to the experiment, it tended to drag the rest of the rotation of magnet (b) when magnet magnet (b) pushed off again, when magnet (b) started down.
- On how to get the right vertical distance from magnet (a) to (b). Distance (a) could be affected to start as the magnet (b) would spin out of control.

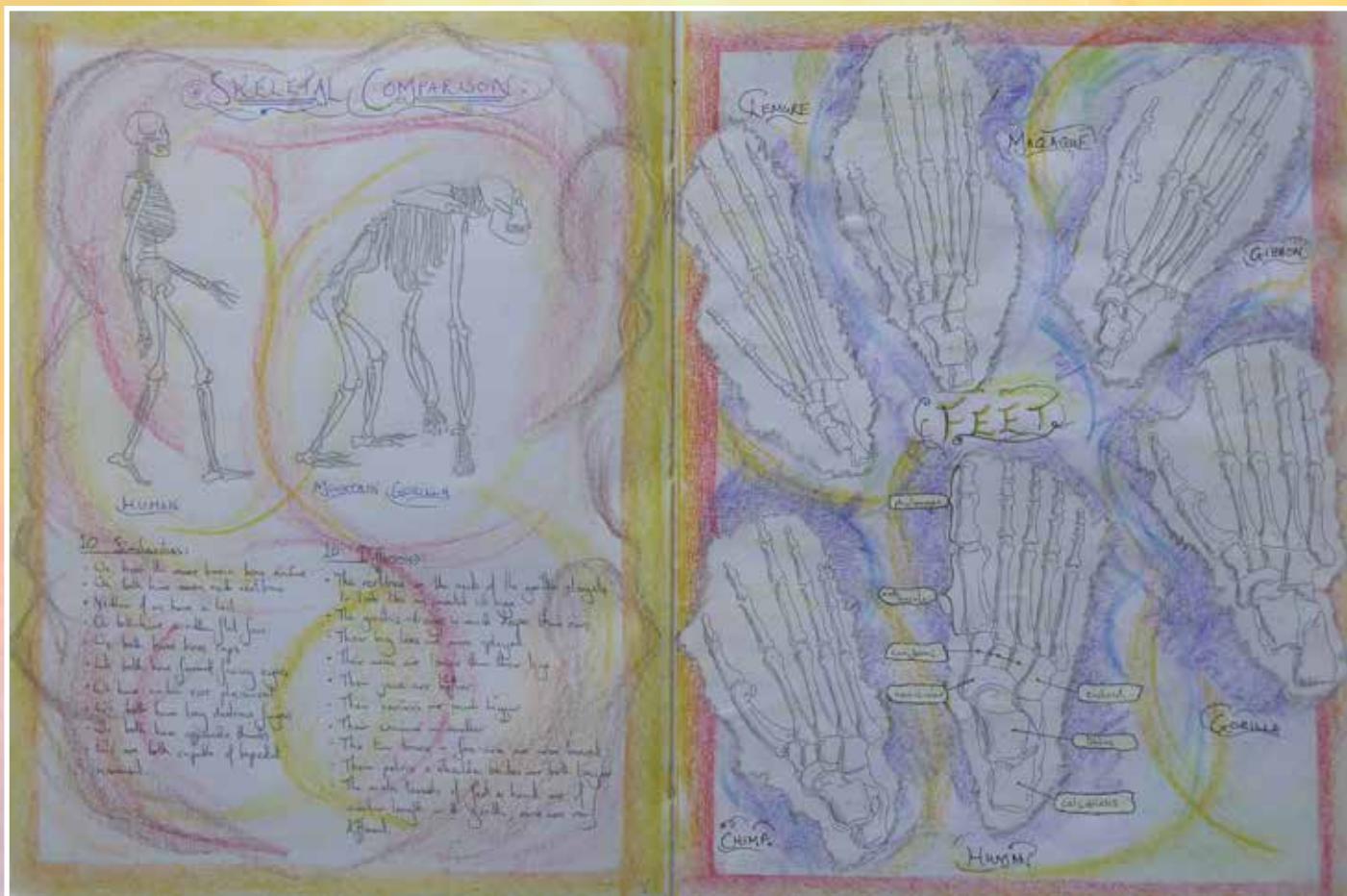
### Experiment 2

Title: To investigate the effects of magnetism on other atoms, we attempt to show this by creating a compass.

Method: The equipment was set up as shown in the diagrams below.

A length of iron wire (paper clip) was cut to be about long enough straightened and suspended with a magnet. This will make a stand and to fit it on the stand to the pole side.





Results: (1) When the magnet was quickly bent in and out of the coil, the galvanometer showed a smaller dipole in the negative direction than in the positive.

(2) When the magnet first went in the bulb and bulb bent over, but as it was held there the deflection slowly began to equalise until the bulb was bent back to normal; then as the magnet was pulled out, the bulb readings became positive.

Conclusion: There was a significant link with the relationship between magnetism & electricity and how electrons flow from one end to another. They are compatible. Magnets create electricity, electricity creates magnetism.

Experiment 5

To see what force electromagnet can create.

METHOD: A magnet and a piece of copper wire was coiled around a pencil - a small magnet from the paperclips attached to the bottom of each clip. One end of the pencil was held in a holding stand. Then the copper coil - magnet was placed. Finally the coil was set to swing freely.

Results: When the coil was set spinning it caused an increase in the voltage output. However, when the coil stopped, the voltage output went down to zero. This is because the current flowing through the coil causes the coil to turn. After the coil turns back to a magnet position, the coil begins to swing again - creating further pulses of current.

Conclusion: From electromagnetism (a magnetic field creates current). What we could see the experiment was a very similar but inverted into.

Experiment 6

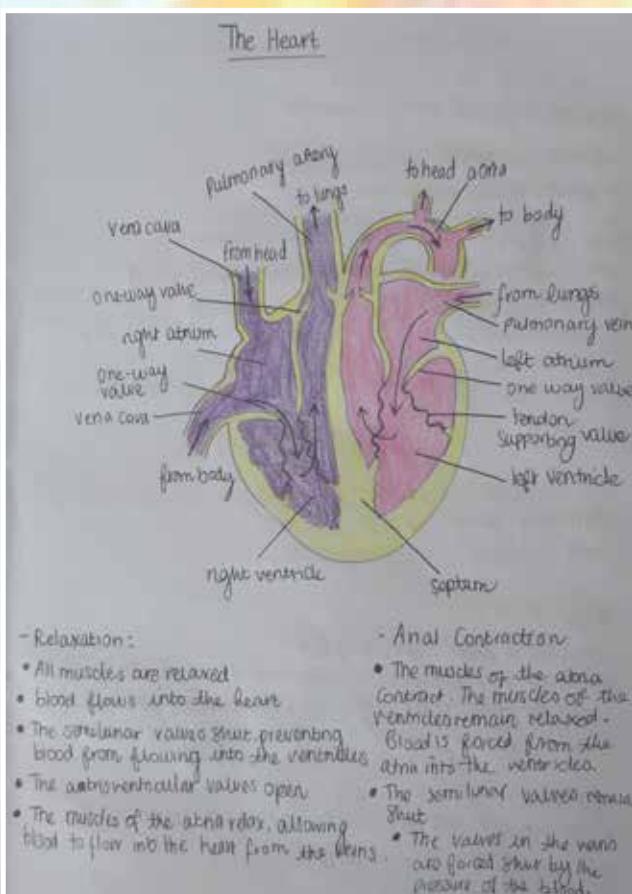
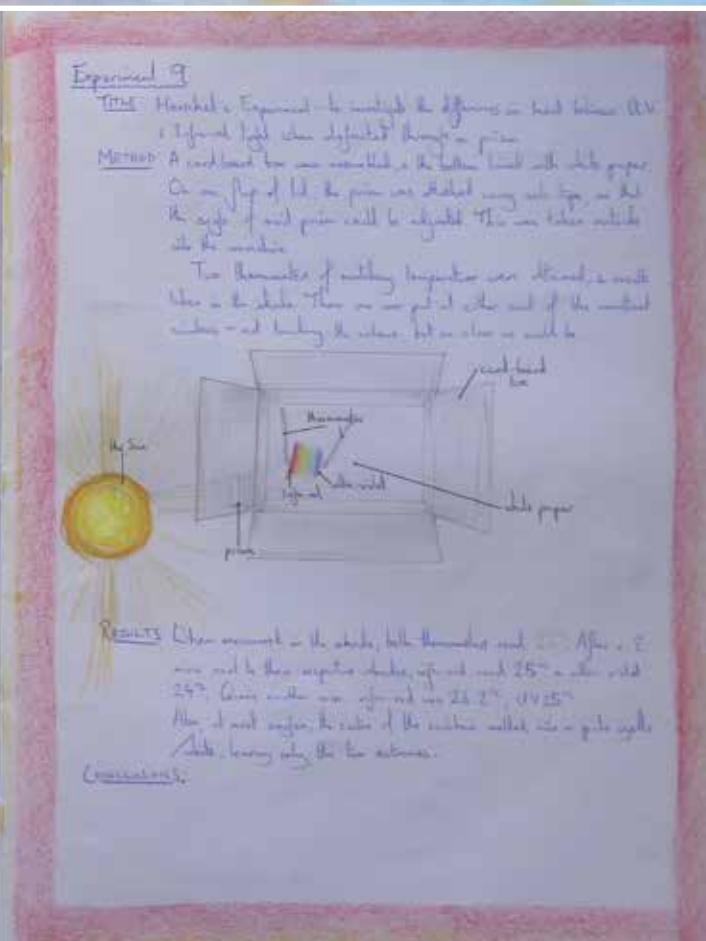
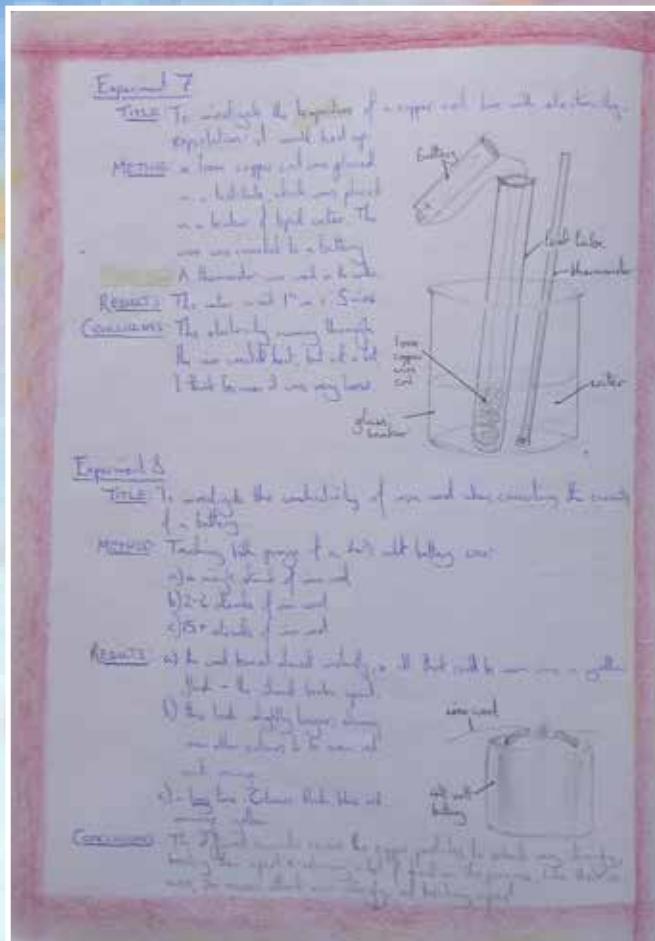
TEST: Bend the wire between a copper tube and a magnet.

RESULTS:

- As the magnet is moved in, where no electric current flows in the copper tube.
- The two fields oppose each other causing the magnet to move upwards.
- As the magnet moves upwards the electric currents fall - so oppose the fields in the magnet change - this is the right orientation.

- All three were caused by electromagnetism.

- The magnet had oppositely directed currents flowing through the tube.



### Crude Oil

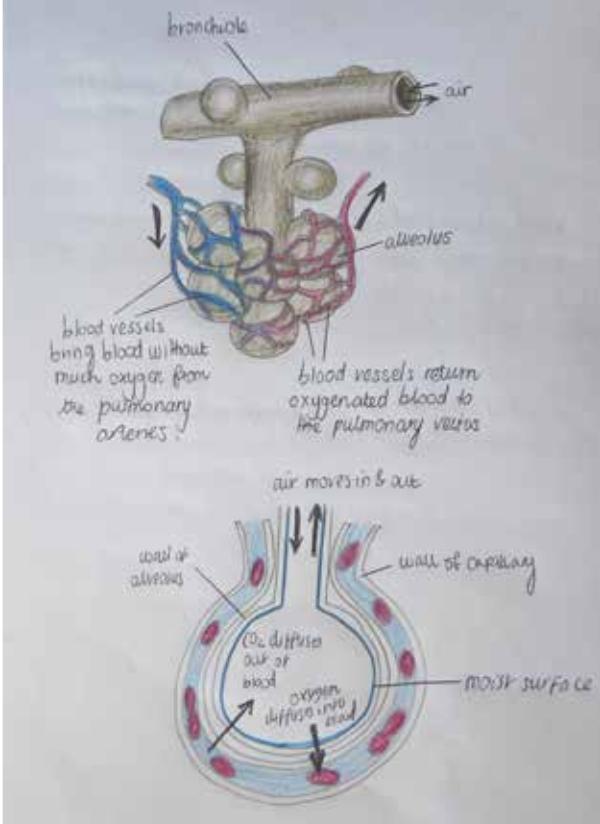
Crude oil is made from algae, diatoms and microorganisms. It is also known as unprocessed oil, and it is a mixture of different hydrocarbons. These hydrocarbons all have different carbon chain lengths. When separated, they make various useful substances that can be split into different fractions. Crude oil is created by algae, diatoms, and other slimy plants being compressed and heated over billions of years. This happens underwater, in a low oxygen environment. Plants fall to the bottom of the sea or swamp and mud slowly builds up on top of them, causing them to get lower and lower.

### Fractional Distillation

In order to be used, hydrocarbons must be separated from each other. This is done through a fractional distillation column. The longer the carbon chain in a hydrocarbon, the higher the boiling point and the harder it is to break the intermolecular forces. The shorter the chain, the easier it is to break these forces and therefore the lower the melting point. In the column, hydrocarbons are sorted into fractions depending on their boiling points. Those with longer chains and higher boiling points stay near the bottom, and those with shorter chains and lower boiling points rise to the top.



### Gas Exchange In Humans



## THE SPREAD OF ISLAM



- [Green Box] Islamic Empire
- [Yellow Box] Byzantine Empire
- [Dark Green Box] Byzantine territories captured by Islam
- [Blue Box] Persian Empire
- [Grey Box] Franks



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