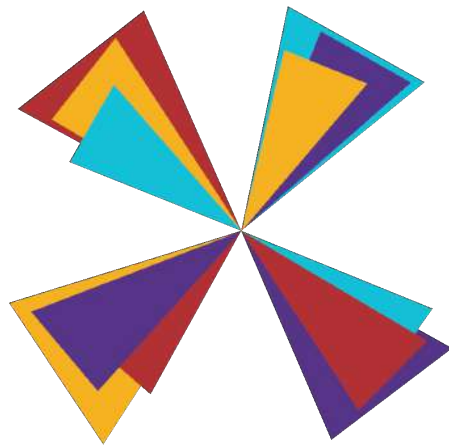


TEAM BLATCH



Online Learning Bulletin

Friday 3rd July 2020



Online Learning Bulletin

Dear Team Blatch,

Welcome to the latest edition of our online learning bulletin.

Our students have made us incredibly proud again this week, competing in our virtual Sports Day and showcasing their talents in our wonderful virtual Summer Concert, as well as submitting so much brilliant work.

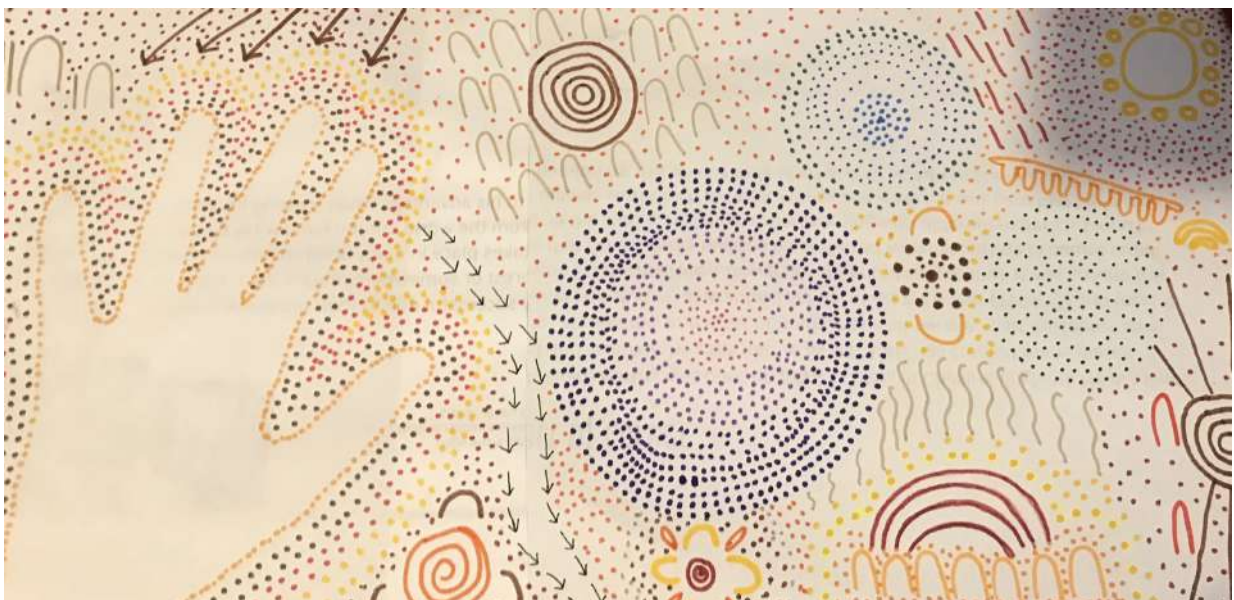
Our students have been supported to achieve so well by our staff who are making sure that students' achievements are recognised and that they are given feedback that helps them improve.

Thank you to everyone in our wider Blatch community for all the support you give our students and staff, it's very much appreciated.

We hope you enjoy reading this week's bulletin.



Year 7 Art



Ashleigh D



Sports Day

Our students took part in our Virtual Sports Day last week! 590 of them ran, swam, bounced, threw and rowed to try and reach the top of the leaderboard. Find the results below! Well done to all who took part - we look forward to hopefully being back at Withdean next year.

YEAR 7

	Throw	Sprint	Jump	Row	Dist.	Swim	Bounce	Total	POS	Participation
AL	7	11	5	8	8	9	8	56	3	20
GS	11	9	9	11	10	10	10	70	1	20
IM	8	8	10	9	3	5	11	54	4	16
JE	8	5	4	4	4	8	7	40	6	22
JH	4	4	2	6	7	4	4	31	7	21
JK	10	7	6	7	11	11	9	61	2	23
KD	5	3	8	1	2	6	3	28	9	16
KT	2	6	7	2	9	2	1	29	8	19
RA	1	1	3	5	5	1	2	18	11	17
RR	6	10	1	10	6	7	6	46	5	18
SR	3	2	11	3	1	3	5	28	9	23

YEAR 8

	Throw	Sprint	Jump	Row	Dist	Swim	Bounce	TOTAL	POS	Participants
PS	9	9	5	5	9	9	8	54	4	25
JC	5	10	9	11	6	11	11	63	2	19
MB	8	8	8	9	7	8	9	57	3	20
SE	11	11	10	10	8	6	10	66	1	17
JL/MA	6	4	6	8	4	4	1	33	8	18
GH	10	7	4	2	10	1	2	36	7	16
RG	2	5	2	3	3	7	3	25	9	16
RW	1	3	3	6	11	10	5	39	6	17
AW	7	1	7	1	2	3	4	25	9	15
EL	3	2	11	7	5	5	7	40	5	13
KR	4	6	1	4	1	2	6	24	11	13

YEAR 9

	Throw	Sprint	Jump	Row	Dist.	Swim	Speed	Total	Pos	Participation
AF	10	5	9	5	2	6	1	38	5	18
BF	9	10	4	2	6	2	4	37	7	18
BH	7	8	5	9	10	7	8	54	1	19
BT	8	4	7	7	3	10	5	44	3	22
FT	4	3	2	8	4	3	6	30	9	14
IS	2	7	6	10	9	9	9	52	2	18
JF	3	9	8	4	7	5	2	38	5	17
KG	6	6	10	1	5	8	7	43	4	19
SM	1	2	1	6	1	4	3	18	10	26
TT	5	1	3	3	8	1	10	31	8	15

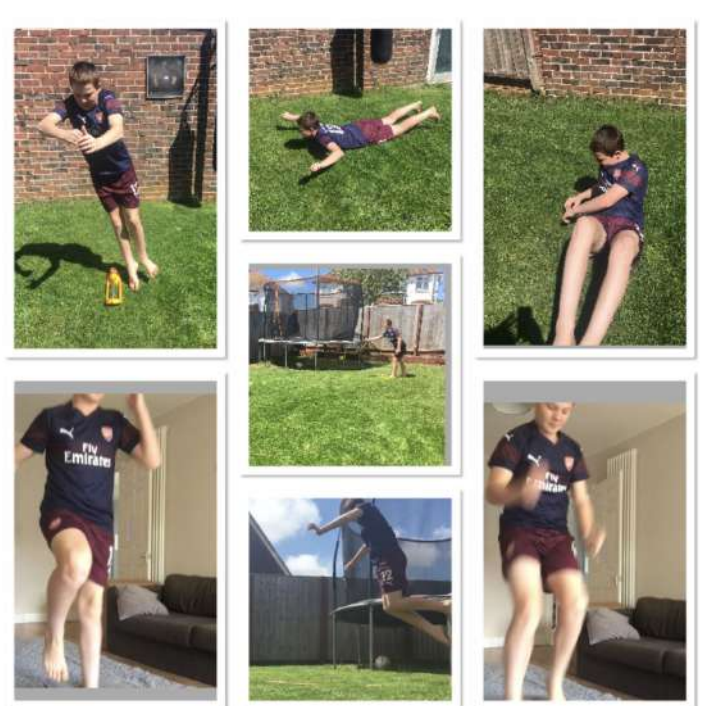
YEAR 7 v 8 v 9

	Throw	Sprint	Jump	Row	Dist.	Swim	Bounce	Total	Pos
Yr 7	2	2	2	2	3	2	3	16	1
Yr 8	3	1	3	1	1	1	2	12	3
Yr 9	1	3	1	3	2	3	1	14	2

Participation	
7	215
8	189
9	186
Total	590



Sports Day





Virtual Summer Concert

This week we were delighted to share our Virtual Summer Concert with our community. Since the very start of the pandemic we've been so impressed with our students' dedication to completing their school work to an exceptional standard. However, we also wanted to ensure that our students aren't missing out on the variety of extra-curricular activities that we would usually offer in school. At a time when the arts in our city are facing such challenges it is important to celebrate and promote the positive impact artistic expression, including music, has on all of our lives.

If you haven't watched yet, you can view our Summer Concert by clicking below!





Latin

Our year 10 Latin students have been carrying out some excellent research into the Roman Baths and their significance to the Romans.

The Sacred Spring

Previously the sacred spring was thought to be the work of the ancient Gods.

In Roman times a temple was built next to the sacred spring dedicated to the Goddess Sulis Minerva ('a deity' with powers of healing).

The sacred spring and its mineral-rich holy water attracted people from all over the 'Roman Empire'

'Objects Found'

When visitors came to the sacred spring many threw objects into the water as offerings to the Goddess. In particular, many made curse tablets that were inscribed on lead or pewter which were then rolled up and thrown into the water.

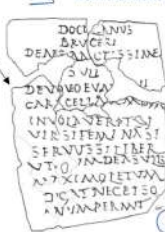


'paterae' (metal pans) were inscribed with DSM ('Deae Sulis Minerva') to show that their object was an offering to the Goddess.



A bronze statue of the Goddess 'Sulis Minerva' from the temple dedicated to her in Bath.

English translation of a curse tablet found in the sacred spring from Docilianus.

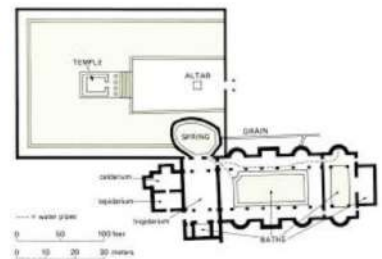


I curse him who has stolen my hooded cloak, whether man or woman, whether slave or free, that the goddess Sulis drive him to the greatest death and not allow him sleep [continues on other face] or children, now or in the future, until he has brought my hooded cloak to the temple.

Aquae

Layout of Baths Complex

The baths were laid out in a way that enabled visitors to move through several heated baths, then concluding in a cold plunge. This series did not normally involve swimming in...



'The Great Bath'

This was the centre piece of the bath complex. Its hot water was received directly from the 'Sacred Spring' so, knowing this, it was thought to be even more luxurious to visitors as this was where many objects were thrown as offerings to the Goddess 'Sulis Minerva'

'Circular Bath'

This was the cold plunge mentioned earlier which was included in the design of several Roman Bath Houses. However, were not usually as big as this one. This bath was 1.6m deep with a plinth on one side which was thought to have previously been a fountain.

'Laconicum'

The Laconicum was an unusual part of the baths complex. It was a room filled with harsh dry heat and could be turned into a steam room if the water was splashed. It was a great place if you wanted to be faced with quick intense heat as it was only after a minute or two that you would break out into a sweat.





The Roman Baths of Aquae Sulis

Ebi

The Sacred Spring

When the Romans arrived in Britain, they discovered a pool of bubbling, green, steaming water in the modern area of Somerset. The local Celts used the spring as a site of worship for the goddess **Sulis**. Because of its dramatic appearance, they believed that Gods lived inside, and the water had healing qualities.

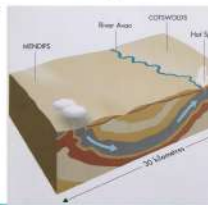


The spring could've looked like this before anyone built any baths.

The Sacred Spring

The water in the spring at Bath is actually rain from the Mendip hills from 1000s of years ago. It travels through the limestone under the ground, (picking up natural Sodium, Calcium, Chloride and Sulphate ions on the way), to a depth of 4km, where geothermal energy heats it to a near boiling point. The water then travels upwards under pressure through faults in the limestone, until it reaches the surface at 46°C - and the spring is formed.

Water rises from the spring at a rate of over a million litres per day!



The Sacred Spring

When the Romans found the Baths of **Sulis**, they decided to construct their own temple there for the Goddess **Sulis Minerva**.

The temple was built around the spring, and the Romans lined the walls with lead and sunk pine logs deep into the mud as foundations - they still provide support today!



A reconstruction of what the building of the structure around the spring would've looked like

What the spring looks like today (+Victorian architecture)



The Sacred Spring

Objects found in the Sacred Spring include:

- **Defixiones**
- 14,000 roman coins (the largest deposit in Britain, including rare gold **aurei** coins)
- Saucepans (**paternae**)
- Vases
- Candle holders
- Jewellery
- Parts of headdresses and priests' regalia

Objects were often inscribed with the letters **DSM**, or "**deae Sulis Minervae**" (to the Goddess Sulis Minerva).



Religious Beliefs

The Celts and the Romans both believed the Spring was a point where humans could talk directly to **Sulis**. Those who wanted divine intervention would make their wishes known by performing a sacrifice, or gifting her with something (see the objects in the last slide.)

One way people asked **Sulis** for something was by using **Defixiones**. Bath had the largest find of curse tablets in Britain. Most of the time, the tablets were asking that the Goddess punish a thief who stole something from someone whilst they were bathing! Some inscriptions include:

- "**Docimedis** has lost two gloves and asks that the thief responsible should lose their minds and eyes in the goddess' temple." (Poor **Docimedis**, I hope he got his gloves back.)
- "May he who carried off **Vilbia** from me become as liquid as water. May she who obscenely devoured her become dumb". (This one is talking about the theft of a girl...)



Religious Beliefs

One of the main attractions of **Aquae Sulis** was the temple built there for **Sulis Minerva**. Public ceremonies on the steps of the temple often took place, with some of the common rituals being an **augur** reading the **auspices** (predicting the Gods' will through watching birds) and **haruspices** looking at the entrails of animals to determine what the Gods were up to.

In 1965 an inscribed pedestal was found near the sacrificial altar in Bath. It says that a **haruspex** named **Lucius Marcius Memor** (he was real), made a dedication to **Sulis Minerva**. This is the only record of a **haruspex** in Britain, which mean the temple must have had significance.

Sacrificial altar



The inscription on **Memor's** pedestal reads: "**Deae Sulis • Lucius Marcius Memor, Haruspex, D[ono] D[edit]**"
Meaning:
"To the Goddess Sulis, the Haruspex **Lucius Marcius Memor**, gave this as a gift."

The Temple at Aquae Sulis

The ceremonies and sacrifices (see last slide) at the temple would've been held outside - only priests were allowed inside a dimly lit room called the **cella**, which held a lifesize bronze statue of **Sulis Minerva** and a fire burning before it.

It is one of two truly classical temples in Britain - the other being the temple of **Claudius** at Colchester. The remains of the triangular pediment are on display in Bath: it would've been supported by columns and has an inlet featuring the image of the **Gorgon's head**, a symbol of **Minerva**.



The head from the bronze statue inside



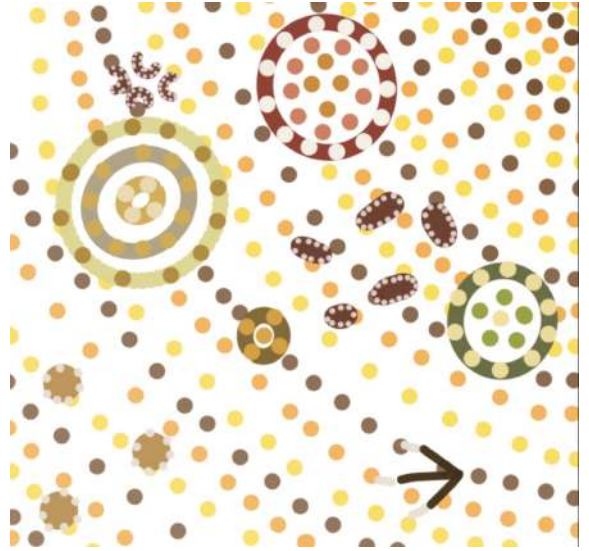


Art

Our year 7 Art students have been busy creating some amazing pieces of aboriginal-inspired art. Take a look at this excellent selection of work below.



Violet H



Nily V



Gabriel R



Theo C



Indi D



Richard P



Art



Maisie H



Rosa S



Imogen L



Camen M-L



Eva Z-D



Callum S



Amia S-P



Dance

Lily L in Mrs Brushwood's year 10 Dance class wrote an excellent exam answer this week focussing on the A Linha Curva dance. Read it below!

In A Linha Curva, they wear brightly coloured, wet-look lycra, mini shorts including red, blue, green, yellow etc. The vibrant colours enhance Itzik Galili's choreographic intent of having fun and celebrating Brazilian culture. The colours and fit suggest the vibrancy of a carnival parade where the performers would wear revealing, colourful costumes.

However, to contrast, the costumes worn in Infra are monochrome. Instead of enhancing a particular mood they compliment the monochrome, simplistic set. Similarly to A Linha Curva, the costumes in Infra are also revealing – skin tight shorts, mini skirts, strapless tops, however this is to enhance the intricate Balletic movements and allow the audience to see Mc Gregor's complex, undulating choreography and clean lines of the body.

Both of the dance's costumes are non-restricting and made from stretchy, light weight fabrics to allow the physically demanding choreography to be performed accurately for example, the high pike jumps in A Linha Curva and the numerous grande battements in Infra.

To dissipate the contemporary and capoeira styles of dance, bare feet are used in A Linha Curva This is similar to Infra as pointe shoes are worn for the balletic style and beautiful pointe work.

The black mesh vests, worn with an open front for males and open back for females reinforce gender whilst similarly the women in Infra wear skirts and strap tops with some men in trousers and topless. In both works, the costumes are similar to show uniformity, however differences in hairstyle add a sense of individuality.

The simple, minimalistic costumes in Infra do not detract from the movement or meaning whereas the coloured zips adds to the sense of fun. The silver, reflective, circular discs worn around the neck by the male dancers create an engaging and memorable opening for the audience. In contrast, no particular special effects are made by the costume to create striking, highlights.



English

Mr Breckenridge's year 8 students have been working on poems focussed on the theme of 'When all this is over'. Read some of the excellent poems below!

*When all this is over i am planning,
To travel to your house on the wings of a
bird,
And feel your loving embrace once more,
To not be worried about spreading a virus
that could take you from my life,*

*I am hoping that the sun shines after what
seems like a decade of dark nights,
I long for looking into the eyes of Kenco
pleading for treats,
And the taste of lemon drizzle cake in late
afternoon,
With a cup tea and your hand to hold,
I miss the sound of your snores echoing
around the room in the dead of night,
And the many spiders that dance across
your ceiling scaring me silly,
Our early morning chats cuddled up on the
sofa before the world has woken up,
Will always make me chuckle,*

*By the time this is all over, it will bring tears
of joy to my eyes to see you at the airport,
Waiting,
After 5 months,
Waiting,*

To see us again.

Minnie D-P

**When this is all over I'm planning for a
big party
For me and my friends, before I have to
leave
We'll party till the sky is dark
But then I'll have to say goodbye
because I'm off to bedes**

**I'm hoping for beautiful sunshine
And lustrous heat
As then we can play football on the
grass
In our bare feet
We'll be munching on Ice - cream
When soon the moon is our only light
We'll all say goodbye
And have one last hug**

But really tight.

Theo F



Poem for the Here and Now

*When all this is over I am planning our getaways.
We will sit on the beach with hair crunchy from the sea
and our towels drenched.
We will hold pebbles up inspecting their shapes and colours*

*I'm hoping for long walks across the beach.
Where the sunset is so bright it will make it seem like we're
looking through tinted sunglasses.
The heat will be sticky yet not uncomfortably hot which makes
our face radiant with light sweat and tiredness.*

*The sun, orange, will guide us whilst pathetic clouds slowly
travel through the sky
Our mouth dry from dehydration, chatter about pointless and
important topics,
We're unaware of our friends taking pictures of us walking step
by step whilst the last bit of light creates a small gradient across
the image.*



English

Also in English, Frankie Muggleton was particularly impressed with Louis B's extension work. Here is his excellent writing below, along with an art piece that he created to accompany his writing.

What was once a vigorous green leaf had gradually become a moist dampened moosh. The dirt became thick gloopy mud which swirled around my feet gulping up my shoes into the abyss. The heavens became darker and dimmer, the clouds had scoffed up the sun and the air became colder and thicker. As I slowly crept into the cabin the hairs on my back popped out as if they had heard an ice cream truck. It had started, my toes crackled like candy, my nails were pulled out and the palm of my hand deflated, my elbows popped out of place and my skin shriveled up like a raisin. My face was stretched out and my nose caved in to grow a new fresh moist one. My brown eyes were kidnapped by a rich vibrant blue. By the end my body from head to toe was coated in a thick clumpy fur. The splintered wooden floor was glacial on my toes and feet. What had I become?





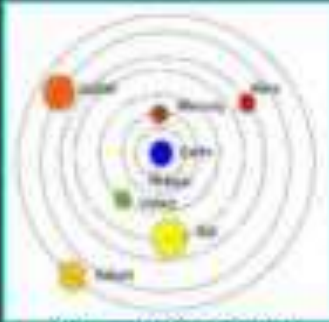
Science

Mrs Hamilton was incredibly impressed by our triple science students and their astronomy projects this week. Take a look at their amazing work below.

This Is Major Tom To Ground Control

Steve Gully 1987

Geocentric Model




This is the first theory of the planets' orbits. Many people before the 17th century thought that all the planets and the sun revolved around the Earth. This is where it gets the name Geocentric - Earth centered. This particular model was made by Ptolemy of Alexandria and was the most developed Geocentric Model at the time. This model of the solar system was the most popular until the 16th and 17th centuries.

Modern Heliocentric Model


The modern Heliocentric model of the Solar System. It was designed by Johannes Kepler when he discovered that the orbits of the planets were not elliptical.

Planets from the sun in order:
Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune




Steady State Theory

The steady state theory is a view that the universe is forever expanding but maintaining an average density. In this theory it is thought that as old stars and galaxies become unrecognisable, matter is being continuously re-created new ones. The theory says that there is no end or beginning to time and that all galaxies are interconnected. It was first put forward in 1948 by Sir Hermann Bondi, Thomas Gold and Sir Fred Hoyle and was then later developed by Hoyle to deal with the problems put forward by the Big Bang Theory. Since the 1950s, observations of the universe have made a lot of evidence against the Steady State Theory.




Heliocentric Model



This idea was that of Nicolaus Copernicus. It is the idea that everything revolves around the Sun which is now proved to be the real model. Copernicus detailed his theory in 1543 and it took over a century for the theory to be widely accepted, especially by the church. The model gets its name Heliocentric because of Heli meaning sun and centric meaning centered. This was the first Heliocentric Model!

Big Bang Theory

This is the leading explanation of how the universe was created and is widely accepted by astronomical community. The theory states that the universe started with a small singularity that has inflated over the last 13.8 billion years. The majority of the proof of the theory has come from mathematical formulas and models. Astronomers are in favour of the expansion through a phenomenon known as the cosmic microwave background. It was first thought up of by a Belgian Catholic Priest in 1927 that explained redshift of spiral nebulae and calculated the Hubble Law.



Redshift Of Galaxies

The redshift of galaxies suggests that the universe is expanding. This is because when it is moving away from you it is shifted to the red side of the colour spectrum. This proves the expanding universe because when galaxies are viewed from Earth their light is on the red side of the colour spectrum which shows they are moving away from us.

Cosmic Microwave Background

The Cosmic Background shows how the universe can be seen from any direction. It is however invisible to the naked eye. It shows that when the universe was extremely small it was also extremely hot. As the universe expanded in the big bang it left behind a glow. This proves that the glow should be visible as part of the electromagnetic spectrum.



There's A Starman Waiting In The Sky

Forman 0.05

The Evolution Of Stars (Similar Mass To The Sun)

Nebula

Stars form large clouds of dust and gas particles, which are called nebulae. They are drawn together by gravitational forces over millions of years. As the particles get closer, the temperature and pressure rises and a nuclear fusion of hydrogen nuclei and helium nuclei happens. This releases vast amounts of energy in the form of heat and light.



Star

The fusion produces forces that make the star expand outwards, while gravitational forces are pulling the particles towards the center. The two forces are balanced, the star is stable and is called a main sequence star. The star should stay in this form for millions of years with a constant size and temperature.



Red Giant

Eventually the hydrogen fuel will stop because the star runs out of fuel. As the outward force is larger than the inward force, the star collapses inward and compresses. This causes the star to heat up even more, causing the fusion of helium nuclei to begin. The power output increases which causes the star to expand greatly. As the surface area is so big, it is much cooler in the outer layers and is red.



White Dwarf

Eventually the fusion will stop when the star runs out of helium nuclei and then the gravitational forces cause the star to collapse and compress. This heats up the star causing it to turn white. Because the star is so small it becomes very dense. It will cool down and change colour as that eventually it becomes black.



The Balance Of Forces

Stars have two main forces. These are thermal expansion, caused by nuclear fusion, and gravitational force, caused by stars being a mass of things. Thermal expansion is an outward force and gravitational forces are inward forces. If the forces are equal, the star will stay the same size as neither one is stronger. If one of the forces becomes stronger than the other, the star will either become bigger or smaller. This is like if you and a friend were both pushing on the same door it would start to move in the direction one of you were pushing in as your strength overpowers their strength. The strength of the two forces in a star will change depending on how much matter and heat a star has left. If it runs out of heat or matter the star will collapse inward because the gravitational force is now bigger. Because the star collapses, it heats up again which will cause fusion to begin.



The Evolution Of Stars (Larger Mass Than The Sun)

Stars with a larger mass than the sun starts off as nebulae and then become stars just like the sun. However after the stable period, the star expands into a red supergiant rather than just a red giant. During the nuclear fusion a giant star will produce the first 25 elements on the periodic table. When a red supergiant runs out of matter it has it will collapse due to gravitational forces and then explode. This is called a supernova.



This explosion will throw dust and gas particles back into space which will then cause more nebulae in the future. After the explosion, a dense core remains. This is called a neutron star as it is only made up of neutrons. If the mass of the neutron star is bigger enough, the star will compress further and it will become a black hole.



Is There Life On Mars?

01/01/2011



Mars

If Earth-like creatures were to live on Mars, they would have to have some adaptations. One would have to be an adaptation to be able to get water as Mars is colder and drier than the Atacama Desert, Chile. To get water they could use a water-hydrogen peroxide mixture. This mixture would also help microorganisms survive because of the natural antifreeze. It also naturally attracted water molecules from the atmosphere. As well as this a plant like organism could use it for photosynthesis during the day and then use it to get water molecules at night.

Titan

Surviving on Titan would be very different than Mars. This is because it is much colder and there is no liquid water or carbon dioxide in the atmosphere, which are considered essential for life. This means these organisms would have to use something else to survive, possibly liquid methane or ethane. Organisms could live in lakes of liquid methane or ethane on the surface of Titan. Oxygen would be replaced by hydrogen and it would react with acetylene to produce methane instead of carbon dioxide. Because of the temperature, metabolism would be slower and ageing would be much slower.



Theo B





EARLY BELIEFS ABOUT THE SOLAR SYSTEM

Some of the earliest forms of beliefs about the solar system come from the Greeks known as the Celestial Sphere. It did not contain all the planets as we did not know of them at that point in time. It only contained: the moon, the Sun, Mercury, Venus, Earth, Jupiter and Saturn.

Another early Greek belief came from the Greek philosopher Thales where he hypothesised that the Earth was a flat disc floating on an infinite ocean. This was the first time someone had tried to explain phenomena through rational means based on observation and evidence.

THE STEADY STATE THEORY

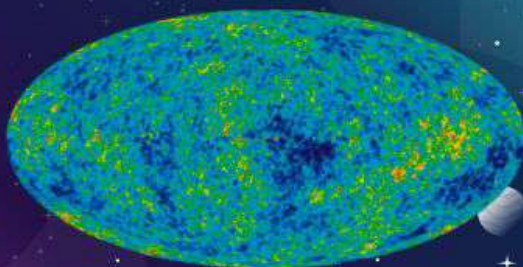
The steady state theory is the theory that the universe is constantly expanding, while maintaining a constant average density with matter being continuously created to form new stars and galaxies at the same rate at which old galaxies and stars become unobservable as a consequence of their increasing distance and velocity of recession. There is no beginning or end in time and from any point the grand scale view is the same.

THE BIG BANG THEORY

The Big Bang theory states that the universe started as one singularity and then inflated over 13.8 billion years into what we see today.

THE COSMIC MICROWAVE BACKGROUND (CMB)

The cosmic microwave background is radiation which is remnant heat left over from the start of the universe. This is evidence for the big bang theory as it depicts that the universe began hot and as it expanded, the gases within it cooled.



THERMAL EXPANSION AND GRAVITY

As a star passes through its life cycle, it experiences different connections towards thermal expansion and gravity. When all stars begin, gravity pulls the nebula together to form the protostar and then thermal expansion propels it from a protostar to a main sequence star. At this point they live in total equilibrium until it becomes a red giant and thermal expansion overcomes gravity, allowing it to expand to a larger size. From this point it either explodes, completely overriding gravity, or it shrinks, succumbing to the force. Finally, if it became a supernova, it then compresses so far to create the two densest things in the known universe. The black hole alone has gravity strong enough to bend light.

THE GEOCENTRIC MODEL

The geocentric model of the solar system was first introduced by Ptolemy who was an Egyptian astronomer from the 2nd century. His model placed the Earth at the centre on the solar system and said that all other planets orbited around it. This idea was believed for more than a millenia.

THE HELIOCENTRIC MODEL

The heliocentric model was first introduced by Nicholas Copernicus in the 15th-16th century. This model showed how the Earth and all the other planets revolved around the Sun. This was the first model in which the Earth was neither flat nor fixed. It is also the model we continue to use today.

COMPARISONS AND CONTRASTS BETWEEN THE BIG BANG AND STEADY STATE THEOREMS

Comparisons

Both are descriptions for how the universe has evolved over time.

Both describe an expanding universe.

Contrasts

The big bang theory has become more popularized over the steady state theory.

Galaxies and stars are unable to disappear in the big bang theory.

REDSHIFT

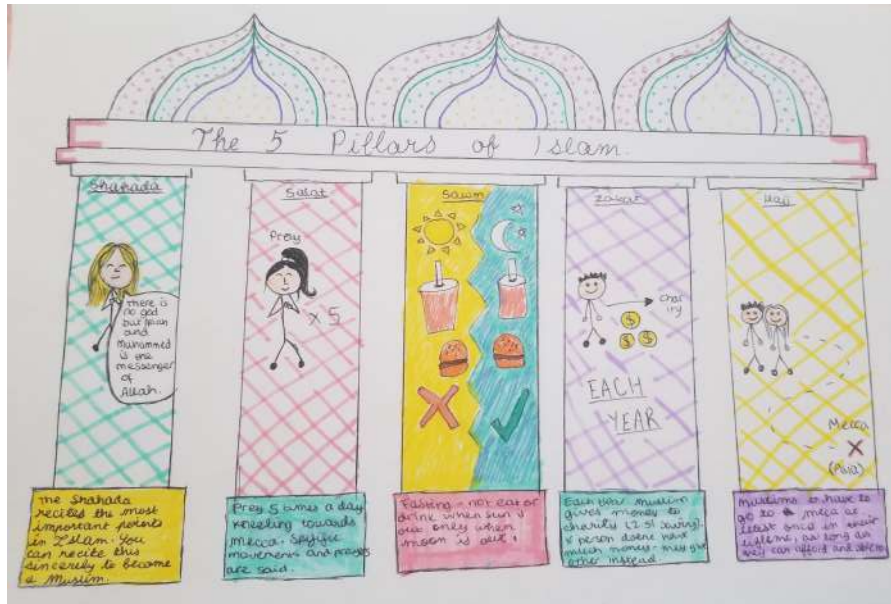
Redshift is when a star or galaxy is moving away from us, it will be seen as the colour red as the wavelengths will be longer. This is evidence for the universe expanding because it doesn't just tell us that a galaxy is far away but instead it tells us that it's moving further away from us, which means the universe must be expanding.



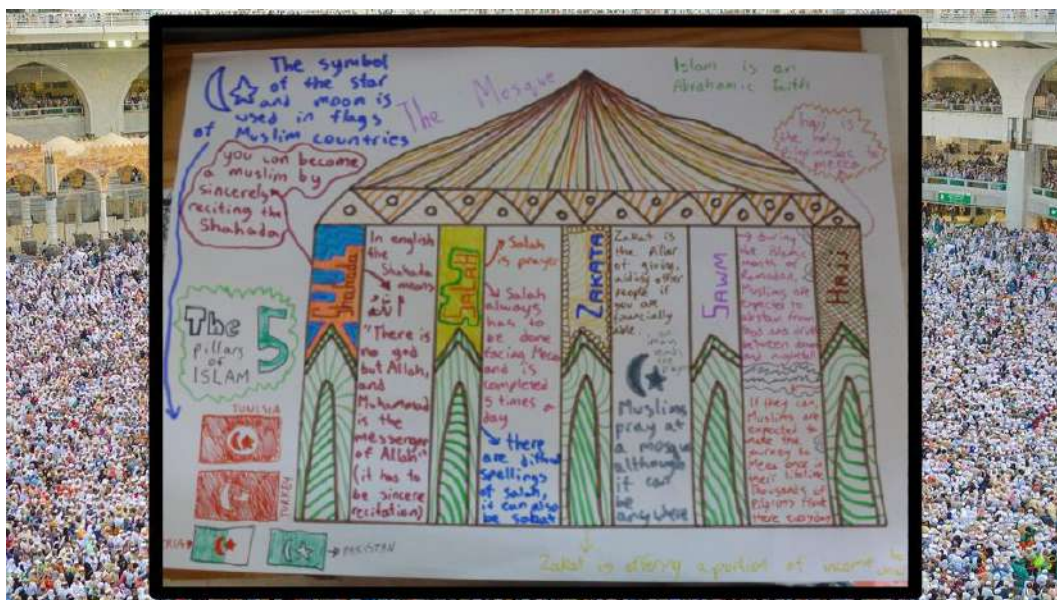


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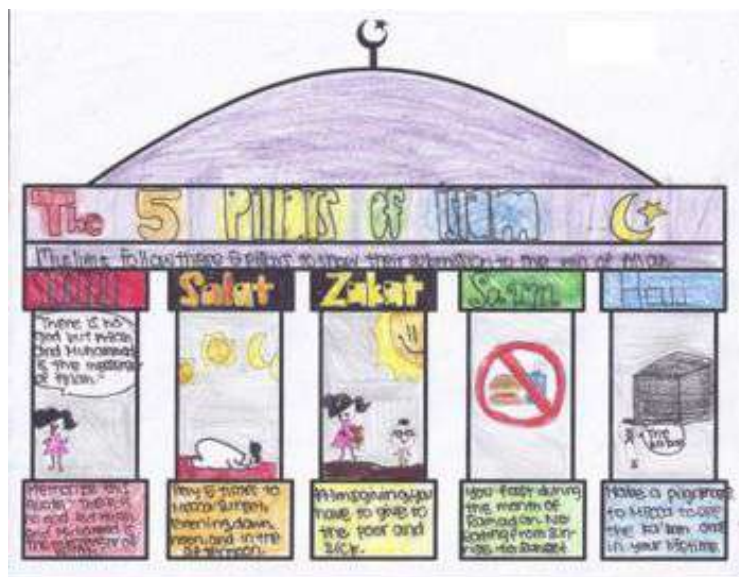
Mr Walmsley's class created some excellent work on the Five Pillars of Islam this week. Take a look at their work below.



Roni C

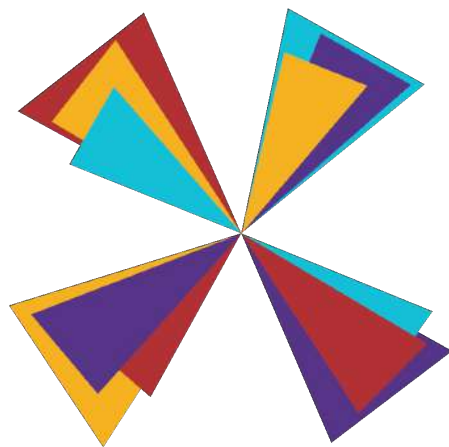


Calvin C-R



Marley R

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tips with us on Twitter [@blatchmill](https://twitter.com/blatchmill)



#TeamBlatch