Year 5/6 Knowledge Organiser

Year 5/6 Curriculum Information—Summer Term 2 2024

BETTER TOGETHER

Welcome

We have made it to the final term of the year! Everybody deserves a huge well done for all of their efforts so far this year, especially the Y6's for completing their SATs. It's the final push for the Y5's, with final assessments being carried out half way through this term.. You have worked so hard all year, so we know you will blow our socks off! We have some really interesting topics to end on this year. In geography we are looking at South America, in particular the Amazon; so be sure to brush up on your map and atlas skills. In computing we will be looking quite in depth at computer programs and computer systems, and how they communicate instructions to technology. Music is a fun one this term as we are looking at rapping! Science is going to be a little different this term, as each lesson we are looking at famous scientists who were not originally recognised for their contributions to science; this will include a mini experiment each lesson, following in the footsteps of each scientist. PSHE will cover a couple lessons of British values, and then the remaining lessons on first aid.

Useful information

Twitter

Please follow your class Twitter page for regular updates on what is happening during the school day.

5DH - @MissHartleySPS

5/6AM - @MissMarshallY56

6CP - @MrsPease_y6

Swimming

Y5 Wednesday

P.E.

For P.E. days , children should come to school in their P.E. kit and not their uniform.

P.E. day

5 DH— Tuesday

6CP – Tuesday

5/6AM—Wednesday

Geography: South America and the UK
Design Technology: Programming pioneers
RE: celebrating faith through the arts
Music: Music and me—rap
PSHE: British values and first aid
Science: Scientists
PE: Running

Geography Intent—South America and the UK

Key questions:

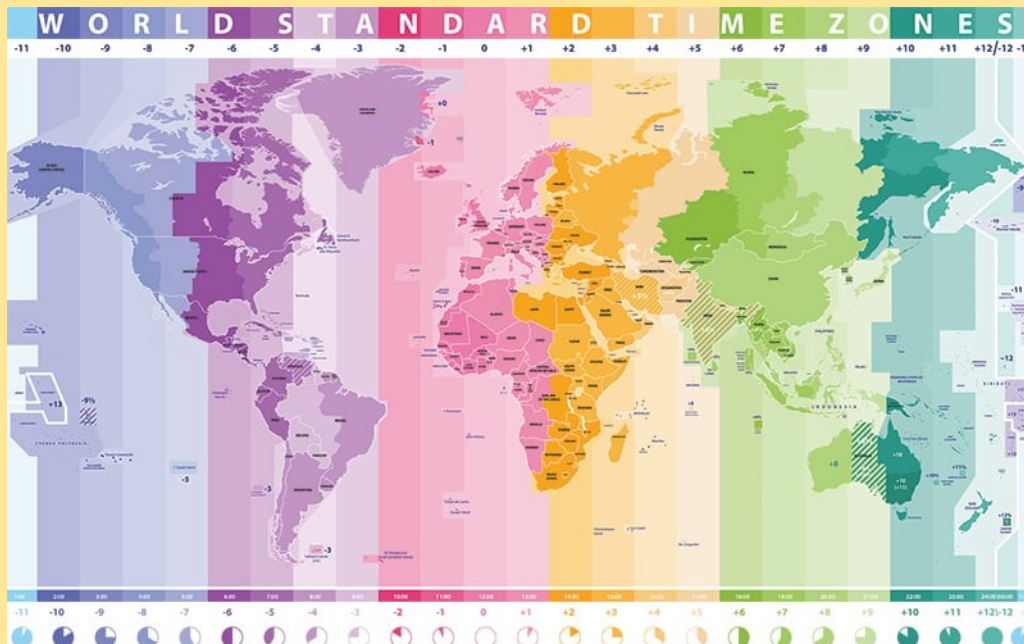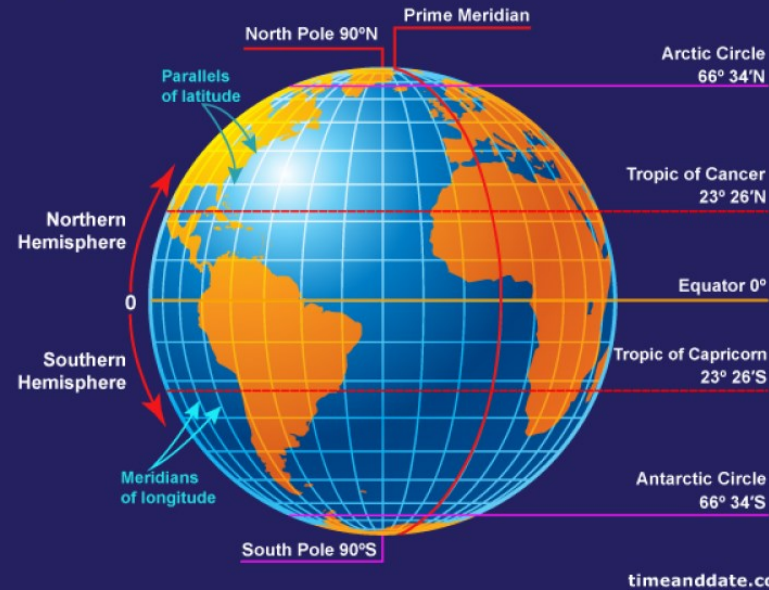What are the lines of Longitude and Latitude?

What are time zones?

Where is South America and what are the land features of South America?

How does South America compare to the UK?

What are the key characteristics of the Amazon Basin?

Longitude and Latitude

WORLD STANDARD TIME ZONES

Physical Geography

-Brazil has a wide variety of landscapes, including rainforests, grasslands, mountains and deserts.

-Brazil is the largest country in South America and the fifth largest in the world.

-The majority of the Amazon Rainforest (around 60%) is in Brazil. Much of the climate is tropical, with the south being relatively temperate.

-The Equator runs through northern Brazil. Most of the country lies in the Tropic of Capricorn.

-The highest mountain in Brazil is Picoda Neblina, at 2,994m, a mountain in the Serra da Neblina near the border with Venezuela.

-Other Brazilian highlands are found in the south of the country.

-60% of the Amazon River is in Brazil. By some measures, the Amazon is the longest river in the world! The Rio Parana and Negro River are other large rivers in the country.

Geography Intent—South America and the UK

BETTER TOGETHER

Human Geography

The history of Brazil can be split into two distinct sections: Before 1500, Brazil was settled by thousands of small tribes. Post-1500 Portuguese settlers have had a profound impact on all aspects of Brazilian life.

|		
Population		The population of Brazil is around 212 million people. This is around half of all of the people in South America. Across the country, there are 26.5 people per km², which makes Brazil the 4th most densely populated country in South America.
Settlements		The capital city of Brazil is Brasilia. It was specially designed to be the capital of Brazil, and currently has a population of around 2.4 million. However, Sao Paulo (12.1 million) and Rio de Janeiro (6.3 million) are much larger and more populous cities.
Economic Activity		The Brazilian real is the national currency of Brazil. There has always been huge inequalities of wealth in Brazil, however between 2004 and 2013 the economy rapidly developed, lifting 29 million people out of poverty.
Resources/ Trade		The top exports of Brazil are soy beans, iron ore, crude petroleum, raw sugar and cars. Portuguese is the first language of Brazil, which has helped to build strong trade with European countries.

Itaipu Dam

Location:
Border between Brazil and Paraguay

Eco Reserva Mbatoví
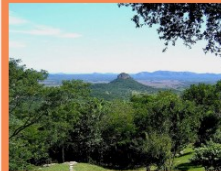
Location:
Paraguarí Department, Paraguay

Saltos del Monday

Location:
Alto Paraná Department, Paraguay

Lake Titicaca

Location:
The border of Bolivia and Peru

The Eden Project

Location:
St Austell, Cornwall

Stonehenge

Location:
Amesbury, Wiltshire

Giant's Causeway

Location:
County Antrim, Northern Ireland

Windsor Castle

Location:
Windsor

Comparison with the UK

-The UK is in Europe, in the northern hemisphere, whilst Brazil is in South America and lies mostly in the southern hemisphere.

-Due to its position over the Equator, most parts of Brazil are much warmer than the UK. The UK has a temperate climate, whilst many parts of Brazil do not have clear seasons.

-Brazil is much larger than the UK – 8.51 million sq. km compared to 243,610sq km.

-More people live in Brazil, 209 million people compared to 66 million in the UK.

-However, Brasilia has a smaller population than London: 2.4 million people compared to 8.4 million.

-Brazil is situated on its continent, whereas the United Kingdom is an island country.

Recommended books set in or about Brazil:

Journey to the River Sea: Eva Ibbotson

Amazon Adventure: Unfolding Journeys: Stewart Ross & Jenni Sparks

The Great Kapok Tree : Lynne Cherry

The Explorer: Katherine Rundell

Key vocab

latitude

longitude

Equator

Northern Hemisphere

Southern Hemisphere

Tropics of Cancer and Capricorn

Arctic and Antarctic Circle

Prime/Greenwich Meridian

Time zones

Bolivia

Agriculture

Rural

Urban

Amazon

Tributary

Biodiverse

Ecosystem

UK

Poverty

Rural

Deforestation

Physical

Human

	Vocabulary
Component	A part of a larger whole. E.g. part of a machine or car..
Quartz	An electric al component that measure the passing of time in a circuit.
Algorithm	An algorithm is a specific list of rules to follow in order to complete a task or solve a problem.
Programme	Is a set of instructions that a computer can understand.
Circuit Board	Is a base which allows you to attach electrical components such as a battery or wire. .
Memory Chip	A device that stores data by setting lots of tiny switches on or off.
Micro-processor	This is a clever tool that remembers instructions and will complete them.
Embedded computer system	A small computer that is built into another device. They monitor input devices and then run a set of instructions accordingly.
Micro controller	These are small computer systems that are used to control objects, such as a traffic light system.
Debugging	A problem in an algorithm which is found and corrected.
Hardware	The physical parts of a computer system, eg a graphics card, hard disk drive or CD drive.
software	The programs, applications and data in a computer system. Any parts of a computer system that aren't physical.

- **Memory chips** store data by setting thousands, millions or even billions of tiny switches called transistors in on or off positions.

- **Microcontrollers** are small computer systems on chips. They are usually designed and built for one purpose such as controlling a traffic light system.

- A programmer writes a set of instructions for a **microcontroller** in human language and then turns them into an **algorithm** written in computer code which the **microcontroller** understands.

- **Algorithms** or instructions can be shown using a flow chart.

- **Computer engineers** make computer systems. They also help to design and develop products which are monitored and controlled by computer systems

- **Software engineers** specialise in designing programs for computer systems.

- **Hardware engineers** specialise in designing physical computers.

- **Debugging** means finding and fixing faults within a system. In order to debug a system, we might need to rewire a physical computer part or we might need to rewrite the code which controls them.

- An **embedded system** in a product such as a lift, constantly monitors buttons and other sensors. The system waits until it detects a signal from a button or sensor and then runs a set of instructions in response. Embedded **systems** can even be used to monitor doors or to switch lights on and off.

- The first programmable computer was the Z3 built by Konrad Zuse in 1941. It was programmed in machine code which uses letters and numbers and is very slow and difficult to write. COBOL was developed by Grace Hooper in 1959 and was one of the world's first 'readable' programming languages which used English language words to code.
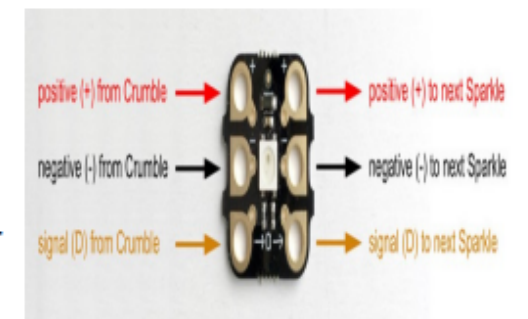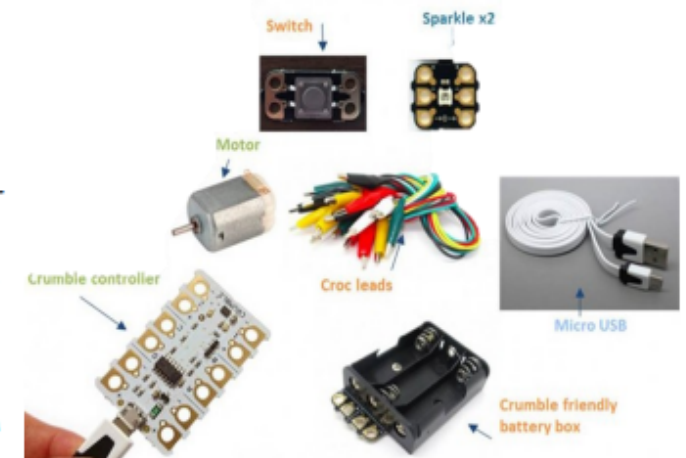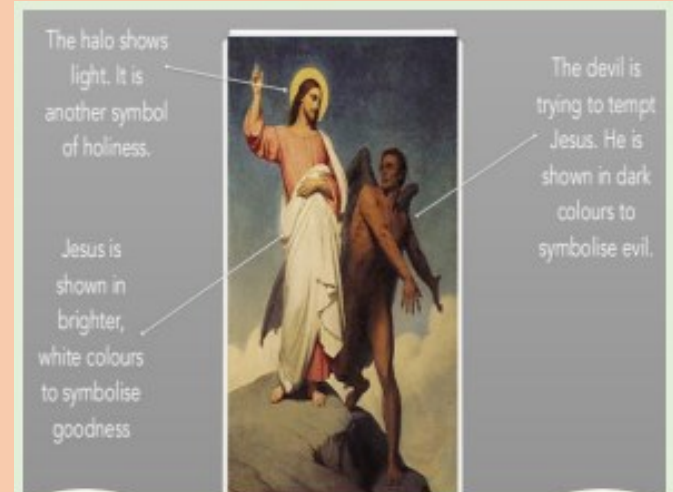
Facts

- Art in Islam is dominated by geometric designs usually with patterns, colour, texture, and calligraphy.
- Christian art is mainly defined by pieces that try to show or express the ideas of Christianity. Most Christian denominations or groups either use or have used art to some extent.
- From its original homeland of India, Buddhist art was transported to other parts of Asia and the world, adapting to local styles and norms in each new host country. Today, Buddhist art constitutes an important part of overall Buddhist cultural legacy.

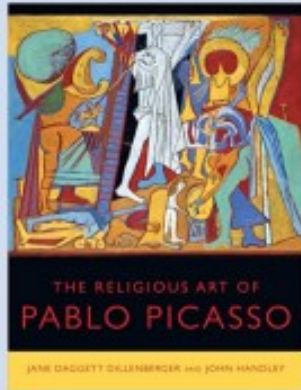|	
symbolism	The use of symbols to represent ideas or qualities.
statues	A carved or cast figure of a person or animal, especially one that is life-size or larger.
calligraphy	Decorative handwriting or handwritten lettering.
mandala	a circular figure representing the universe in Hindu and Buddhist symbolism.
mural	A painting or other work of art executed directly on a wall.

Key vocabulary

Express

Emotions

Faiths

Scriptures

Vestments (robes)

Easter

Advent

Lent

Christmas

Pentecost

Holy Spirit

Humility

Spiritual

Sacred

Symbols

Calligraphy

Geometric

Arabic

The halo shows light. It is another symbol of holiness.

The devil is trying to tempt Jesus. He is shown in dark colours to symbolise evil.

Jesus is shown in brighter, white colours to symbolise goodness

A lavishly decorated murti of the goddess Durga at a pandal (a temporary structure for religious events) in Ontario, Canada. Durga Puja is a Hindu festival that pays respect to Durga and which celebrates the triumph of good over evil.

Book suggestions

AN ILLUSTRATED HISTORY OF
ISLAMIC ARCHITECTURE

THE RELIGIOUS ART OF PABLO PICASSO

BETTER TOGETHER
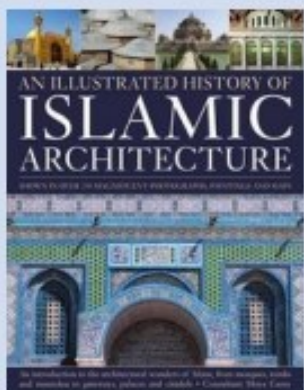
Key vocabulary:

Compose/Composition

Part/Piece

Performance

Read

Sing

Styles

Theme

Vocal

Purpose

Pulse/Beat/Tempo

Accuracy

Combinations

Compare

Dynamics/Texture/Structure

Melody

Notes/Note value

Musical dimensions

Repeated notes

Key questions

Can I write a set of lyrics to reflect my musical identity?

Can I create a beat for a rap song?

Can I create a melody for my rap?

Can I create a rap using my own lyrics, melody and beat?

How do I prepare for a music performance?

Can I perform my own composition?

USE THESE TIPS TO WRITE YOUR RAP

GET LITT!

1. Emotions will help you connect with the audience. So, write about a topic that resonates with you and pick a tempo/beat that makes you feel something.

2. Let your lyrics tell a story. Stories are engaging and make people yearn for more.

3. Use senses to heighten the effect of what you are trying to say.

4. Remember to gradually release the story to your audiences. First show them what you see and let them experience it.

5. Use active voice. Helps listeners put themselves in your shoes. This method of writing is also conversational and direct.

Meaning Of The Term 'Rap'

Depending on who you ask and from which generation the word 'rap' will take on different meanings.

- **Today rap means saying rhymes to the beat of music making it one of the four major elements within hip hop culture.** Because the other elements (deejaying, breakdancing and graffiti) aren't as widespread, the words Hip Hop and Rap have been used interchangeably over the years.

- **The word rap wasn't always used to describe this activity.** The act of rhyming to the beat of music was initially called **emceeing**. The term rap first became associated with Hip Hop around 1979.

Rhythm in Music

Rhythm

Phrasing

Tempo

Beat

Rhythm

Ostinato

Length of Notes

Time Signature

Accents

PSHE Intent—British values and first aid

Unresponsive	Not reacting or responding to communication.
Underlying	Significant as a cause or basis of something but not necessarily obvious.
Casualty	A person badly affected by an event or situation.
Compressions	To press or squeeze (something).
Unconscious	Not awake and aware of and responding to one's environment.

Rescue breaths

1. Open the airway
2. Pinch the soft part of the nose closed
3. Allow the mouth to fall open
4. Place your mouth over the casualty's, forming a seal
5. Blow into their mouth for one second, until the chest rises
6. Take your mouth away and watch the chest fall
7. Repeat step 1-6 before commencing a further 30 chest compressions.

BRITISH VALUES

INDIVIDUAL LIBERTY
- FREEDOM OF SPEECH FOR ALL
- THE RIGHT TO MAKE OUR OWN CHOICES

THE RULE OF LAW
- UNDERSTANDING RULES AND WHY THEY ARE IMPORTANT
- FOLLOWING RULES TO DEVELOP ORDER

MUTUAL RESPECT
- TREATING OTHERS AS YOU WANT TO BE TREATED
- RESPECT FOR EACH OTHER
- WORKING TOGETHER

DEMOCRACY
- MAKING DECISIONS TOGETHER
- THE RIGHT TO AN OPINION/VOICE

TOLERANCE
- LEARNING ABOUT DIFFERENT FAITHS AND CULTURES
- LISTEN TO OTHER VIEWPOINTS
- LEARNING ABOUT DIVERSITY

UTC PLYMOUTH

Recovery position

1. Kneel
- By the side of your casualty

2. Angle arm
- Put the arm nearest to you to make a right angle. Palm facing upwards

3. Hand to cheek
- Bring the arm furthest away across the chest and place the back of their hand against the cheek nearest to you
- Hold it there

4. Knee bend
- With other hand, bend their far knee up so that the foot is flat on the floor

5. Knee pull
- Pull on the knee to roll the casualty towards you onto their side
- Adjust them as necessary

6. Ensure airway is open
- Recheck breathing
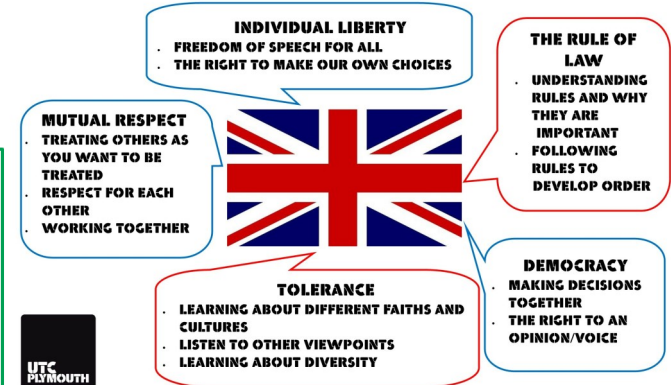- Call 999/112
- Stay and monitor casualty until help arrives.

How to do CPR on an adult

1. Call 999/112
2. Give 30 chest compressions
3. Give 2 rescue breaths
4. Repeat 30:2
   - Use a defibrillator if available
   - Do CPR until help arrives.

Primary survey

1. Check for danger
- Always make sure the area is safe

2. Response
- Check the casualty's response. Ask questions and gently tap shoulders. Say "open your eyes!"

3. Shout for help
- Anyone nearby can assist you

4. Airway
- If not clear, then open by tilting the head back, use one hand on forehead and two fingers under the chin

5. Breathing
- Check for normal breathing (Remember 10 seconds!)

6. Circulation (only if breathing normally)
- Check the casualty for bleeding.

Minor	Lesser in importance, seriousness, or significance.
Seizure	A sudden, uncontrolled electrical disturbance in the brain.
Nauseous	To feel sick in your stomach, as if you might vomit.
Incident	An event or occurrence.

BETTER TOGETHER

BETTER TOGETHER

Ahmed Zewail
Facts

Ahmed H. Zewail
The Nobel Prize in Chemistry 1999

Born: 26 February 1946, Damanhur, Egypt

Died: 2 August 2016, Pasadena, CA, USA

Affiliation at the time of the award: California Institute of Technology (Caltech), Pasadena, CA, USA

Prize motivation: "for his studies of the transition states of chemical reactions using femtosecond spectroscopy"

Prize share: 1/1

Photo from the Nobel Foundation archive.

Dorothy Crowfoot Hodgkin
The Nobel Prize in Chemistry 1964

Born: 12 May 1910, Cairo, Egypt

Died: 29 July 1994, Shipston-on-Stour, United Kingdom

Affiliation at the time of the award: University of Oxford, Royal Society, Oxford, United Kingdom

Prize motivation: "for her determinations by X-ray techniques of the structures of important biochemical substances"

Photo from the Nobel Foundation archive.

Prize share: 1/1

Who Is Mae Jemison?

Dr. Mae Jemison is a physician and scientist who, in 1992, became the first Black woman astronaut in space. After attending Stanford and Cornell Universities, she served as a medical officer in the Peace Corps. In June 1987, she achieved a lifelong dream when she became the first Black woman to be admitted into NASA's astronaut training program. Jemison made history again on September 12, 1992, when she flew into space aboard the *Endeavour* on mission STS47 and became the first Black woman in space. In recognition of her accomplishments, Jemison has received several awards and honorary doctorates. Today, she works as a scientist and public speaker.

Sally Ride (1951-2012)

NASA Astronaut / First American Woman in Space

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In a space agency filled with trailblazers, Sally Ride was a pioneer of a different sort. The soft-spoken California physicist broke the gender barrier on June 18, 1983, when she became the first American woman in space.

In a space agency filled with trailblazers, Sally Ride was a pioneer of a different sort. The soft-spoken California physicist broke the gender barrier on June 18, 1983, when she became the first American woman in space.

Sally Ride died on July 23, 2012, at the age of 61. This tribute is based on earlier interviews and remembrances by her colleagues.

Jane Colden
America's First Woman Botanist

Jane COLDEN

18th century

Fields: Biology, Botany

Born: 1724 in New York (USA)
Death: 1766 (USA)

Main achievements: First woman in the New World to be distinguished as a botanist.