THE BOURNE ACADEMY
KNOWLEDGE ORGANISER

everyone is a learner, everyone is a teacher

Ambitious
Self Confident
Physically Literate
Independent
Resilient
Emotionally Literate

Year 7 Summer Term
2025-26

Name: .....

House: .....

Contents

The Bourne Academy
Knowledge Organiser: Year 7 Summer Term

Excellence at The Boume Academy: Using your Knowledge Organisers'

'Don't just practise until you get it right practise until you can't get it *wrong.'* - Daniel Willingham

Routines for Excellence

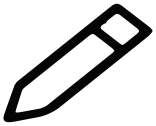
- You will get out your TBA Knowledge Organiser Booklet at the start of every lesson along with your Knowledge Organiser practise exercise book
- Your teacher will set you sections of the Knowledge Organiser to learn, off by heart, in every lesson.
- Your teacher will set you quizzes to test your knowledge every lesson.
- Your teacher will regularly set you questions that require you to APPLY your knowledge
- Your TBA Knowledge Organisers are saved on Show My Homework and on TBA website

How to revise with your Knowledge Organisers'
Self-quizzing

Look/read, cover, write and then green pen check your answers to show you where your 'knowledge gaps' are. Repeat until you have mastered the knowledge...until you can't get the knowledge wrong


Look/Read


Cover


Write


Check

Low-stakes testing
Your teachers will always have a **'Do now'** activity on the board at the start of lesson. Do as much as you can from memory. Use your Knowledge Organiser to green-pen check what you have accurately remembered. Then green pen correct. Repeat, each time checking and correcting until you have mastered your knowledge gaps.

HOW DO WE REVISE WITH OUR KNOWLEDGE ORGANISERS?

RECORD IT

Record yourself on your phone or tablet reading out the information. These can be listened to as many times as you want.

TEACH IT

Teach someone your key facts and then get them to test you, or even test them.

FLASH CARDS

Write the keyword/date on one side and the explanation on the other. Ask someone to quiz you on either side.

BACK 2 FRONT

Write down the answers and then write what the questions the teacher may ask to get those answers.

HIDE AND SEEK

Read through your Knowledge Organiser, put it down and try to write out as much as you can remember. Then keep adding to it until it is full.

SKETCH IT

Draw pictures to represent the facts or dates. It could be a simple drawing or something that reminds you of the answer,

POST ITS

Using a pack of post it notes, write out as many of the keywords or dates as you can remember in 1 minute.

PRACTICE

Some will remember knowledge by simply writing the facts, over and over again.

READ ALOUD

Simply speak the facts and dates out loud as you're reading the Knowledge Organiser. Even try to act out some of the facts - it really helps you remember.

1:
Aboriginals are the **indigenous** people, or the original inhabitants of Australia.
Humans are thought to have migrated to Northern Australia from Asia using primitive boats. A current theory holds that those early migrants themselves came out of Africa about 70,000 years ago, which would make Aboriginal Australians the oldest population of humans living outside Africa.

Early Aboriginal rock art includes cave paintings dating back over 17,000 years.

Colours used were '**earthy**' colours because their palette was limited to **colours found in nature**: reds, oranges, yellows, browns, plus black and white. Aboriginal artwork contains **symbols**, **animals**, and lots of **dots**.

2:
The **Dreamtime** is a commonly used term for describing important features of Aboriginal spiritual beliefs and existence. It is not generally well understood by non-indigenous people.

Aboriginals believe that the Dreamtime was way back, at the very beginning. The land and the people were created by the **Spirits**. They made the rivers, streams, water holes, the land, hills, rocks, plants, and animals. It is believed that the Spirits gave them their hunting tools and each tribe its land, their totems, and their **Dreaming**.

The Spirits made sacred sites for the Aboriginal people. The Aboriginals performed **ritual ceremonies** and customary **songs** near the sacred sites to please the Ancestral spirits and to keep themselves alive.

Dreamtime is the foundation of Aboriginal religion and **culture**. It dates back some 65,000 years. It is the story of events that have happened, how the universe came to be, how human beings were created and how their **Creator** intended for humans to function within the world as they knew it.

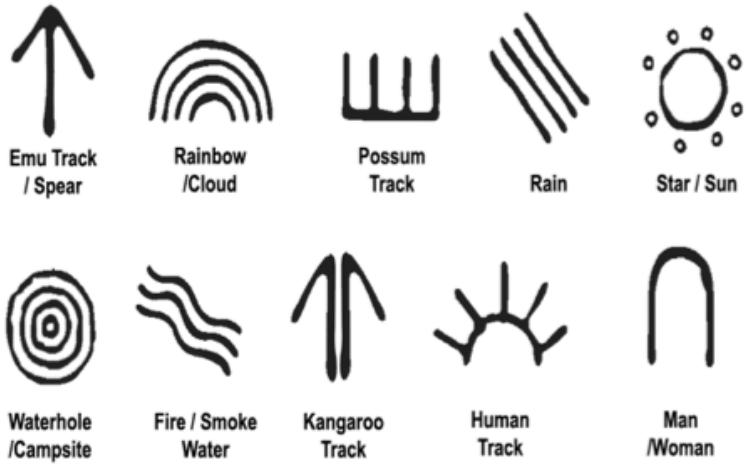
Aboriginals believe that humans are on an equal footing with nature, are part of nature and are morally obligated to treat animals, plants, and landforms with **respect**. The Aboriginal people have their own beliefs about death and consider this experience to be merely a transition into another life and the **afterlife** is very similar to their lives before death.

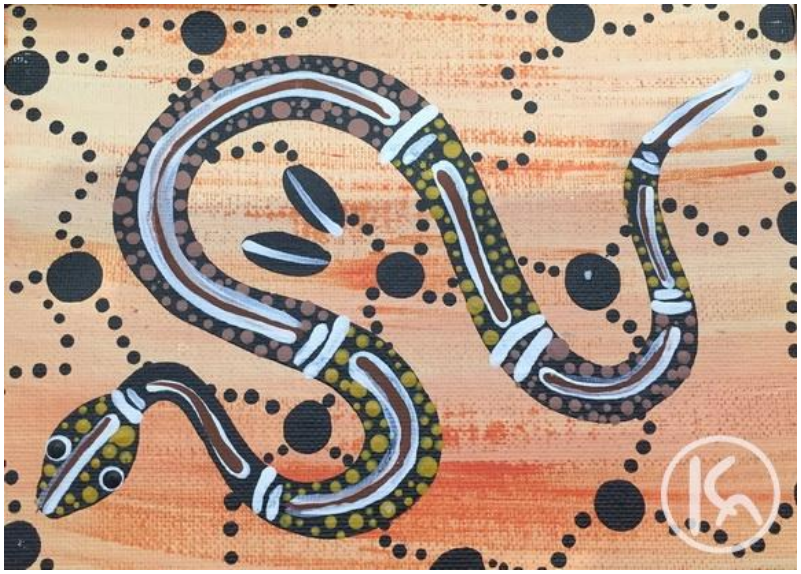
3: Aboriginal Flag: The symbolic meaning of the flag colours:
Black – represents the Aboriginal people of Australia.
Yellow circle – represents the Sun, the giver of life and protector.
Red – the red can have two meanings: representing the red earth, and Aboriginal peoples' spiritual relation to the land and the blood of the people.

The Bourne Academy

Knowledge Organiser: Year 7 Summer Term – Art

4: Aboriginal Art and Symbols





Section A:

A new genomic study, or DNA study, has revealed that **Aboriginal Australians** are the oldest known civilization on Earth, with ancestries stretching back roughly 70,000 years.

More than 26 million people live in Australia, in the UK there are nearly 69 million people. Aboriginal Australians make up 3.3% of Australia's population. **Why do you think the number is so low?**

Consider what kind of things and factors might influence this number, what determines the size of the population?

James Cook was a British explorer, navigator, and cartographer, he reached the south-eastern coast of Australia on 19th April 1770, his expedition became the first recorded of Europeans to have encountered Australia's eastern coastline.

Australia was colonized by Britain in 1788. British settlement of Australia began as a Penal Colony. **What does this mean?**

Section B:

Why was Australia colonized by the British?

The reasons that led the British to invade Australia were simple. **The prisons in Britain had become unbearably overcrowded**, a situation worsened by the refusal of America to take any more convicts after the American War of Independence in 1783.

Do you think that colonization is a positive or negative thing?

What are the impacts of colonization?

Section C:

What did the British do to the Aboriginal people?

The English settlers and their descendants **expropriated native land and removed the indigenous people by cutting them from their food resources** and engaged in genocidal massacres.

Section D:

Why are the Aboriginals struggling today?

Communities are neglected, exhausted. Aboriginal communities are also suffering from a mix of issues, often a consequence of the trauma people have experienced, **lack of services**. Communities lack medical and disability services, and often have no Home or Community Care services. Lack of education and employment are also significant factors.

Key Words:

Cartographer – a person who draws or produces maps.

Indigenous – originating in a particular place, native.

Trauma – a deeply distressing or disturbing experience.

Expropriated – to deprive of ownership or the right of ownership. To take over the property of another.

Colonized – to settle among and establish control over (the indigenous people of an area).

Genocidal – involving the deliberate killing of many people from a particular nation or ethnic group.

The Bourne Academy

Knowledge Organiser: Year 7 Summer Term Catering & Hospitality

(1) Key Word	Definition
a) **Kneading**	Working dough to stretch the gluten and trap air for structure.
b) **Fermentation**	When yeast feeds on sugar to produce carbon dioxide and make dough rise.
c) **Gluten**	A protein in wheat flour that gives bread elasticity and structure.
d) **Proving**	Allowing dough to rest and rise before baking so it becomes light and airy.
e) **Contamination**	When harmful bacteria are spread from one food or surface to another.
f) **Cross-Contamination**	Transfer of bacteria between raw and cooked foods.
g) **Bacteria**	Microscopic organisms that can cause food poisoning if not controlled.
h) **Macronutrients**	The organs responsible for gas exchange in mammals, birds, reptiles, and amphibians.
i) **Micronutrients**	Vitamins and minerals needed in small amounts for health.
j) **Personal Hygiene**	Actions that keep the body clean to prevent the spread of bacteria in food.

(3) Health and Safety

Food safety is vital in all catering environments.

- Wash hands, tie back hair, and wear a clean apron.
- Store high-risk foods (meat, dairy, fish) below **5°C**.
- Cook foods to **75°C** to destroy bacteria.
- Keep raw and cooked foods separate to avoid cross contamination.
- Follow colour-coded chopping boards:

Red: Raw meat / Blue: Raw fish / Green: Salad & fruit / Yellow: Cooked meat / Brown: Vegetables / White: Bakery & dairy

(4) Food Bacteria

Bacteria need **warmth, moisture, food and time** to grow. The **danger zone** is between **5°C and 63°C**.

Common bacteria:

- *Salmonella* - Found in raw poultry and eggs.
- *E. coli* - Found in undercooked meat.
- *Listeria* - Found in chilled foods past use-by dates.

Prevention:

Cook food properly, store correctly, and keep kitchens clean.

Food poisoning symptoms:

Vomiting, stomach cramps, diarrhoea, and fever.

(2) Macronutrients include carbohydrates (main energy source), proteins (growth and tissue repair), and fats (energy storage, insulation, vitamin absorption). They are required in large amounts and support daily body functions and food preparation planning.

Micronutrients include vitamins and minerals, needed in small amounts to support immunity, bone health, wound healing, and metabolism. Deficiencies can cause health issues, making balanced meal planning essential in hospitality and catering.

1a. Sustainability
Describe what is meant by the term sustainability. Write a paragraph giving examples of how our food industry has a negative effect on our planet and explain how we can reduce/stop them.

1b. Greenhouse gasses
How are greenhouse gases causing global warming?

1c. Water use
What can we do to reduce the amount of water we use?

1d. Waste
How can we reduce the amount of waste that goes to landfill sites?

1e. Transportation
How can we reduce the pollution created from transporting our food around the world?

1f. Caged hens
What can we do as individuals to support animal rights? What products can we buy instead?

1g. Human rights
What can we do as individuals to support Human Rights? What products can we buy instead?

2a. Food provenance
Describe the journey a chicken takes from its source to our plates. What impact does this journey have on animals and the planet? How can these issues be addressed?

2b. Organic produce
What positive impacts do organic produce have on animal rights? What positive impacts do organic produce have on the environment?

2c. Fair trade foods
How does fair trade effect the lives of the farmers and the communities they live in?

2d. RSPCA Assured and MSC labels
Describe how the following foods can be sustainably sourced:

- Chicken
- Fish

3a. Manufacture/distribution
What impact does manufacture and distribution of food have on the environment? How can these be avoided?

3b. Food miles/ Carbon footprint
Write a paragraph explaining what food miles and carbon footprints are. How do they impact the environment? Suggest ways in which food miles and carbon footprints can be reduced.

4a. Consumption (use)
Think about the life cycle of a food you enjoy eating. How much impact on the environment has that food had? How can we reduce the negative impact of the food industry through the foods we choose to eat and buy?

4b. Waste

Describe the negative impact our food waste has on the environment? How can we reduce the amount of food we use and waste?

The Bourne Academy

Knowledge Organiser: Year 7 Summer Term - Computing

1. Hardware

a) Input devices are used to enter data into a computer, such as a controller.

b) Output devices are used to receive data from the computer and convert it into a human-perceptible form, such as a speaker.

c) Storage devices are used to store data, such as a USB flash drive.

d) Image capture devices are designed to take photos and videos, such as a drone or head camera.

e) Sensors are a type of input device that automatically take readings of the environment and input this data into a computer, such as a motion sensor connected to an alarm system.

f) Hard drive is used to store files and programs which retains (keeps) its data when turned off.

g) RAM is used for data currently being used. This data is lost when the computer turns off.

h) Motherboard is a circuit board that acts as a central hub to connect internal components together.

2. Software

a) Software is a set of instructions that tell a computer what to do, such as programs.

b) Application software are programs created to do a specific task for the end user. Often called apps for short. Examples include games and office programs, such as Microsoft Word.

c) Word processing is application software a user can use to create text-based documents.

d) Desktop publishing is a type of application used for created documents with both text and images, such as magazines.

e) Presentation software is used for creating slideshows with features such as animations and frame transitions.

f) Database software is used to organise data. This data is kept in tables arranged in fields (columns) and records (rows).

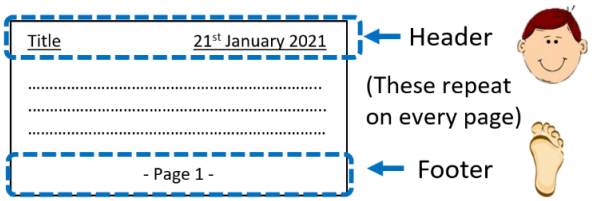
g) Operating system manages the computer's resources, runs application software and provides user accounts, such as windows 11.

h) Utility software helps the computer run, often working in the background.

3. Word Processing

a) Microsoft Word is a word processing software used for text-based documents, such as letters or essays.

b) Headers and **footers** repeat at the top or bottom of every page.



c) Formatting is changing the appearance or the layout of a document.

d) Theme is having consistent formatting throughout a document.

e) Template is a pre-created layout and style acting as a document's starting point.

f) Mail merging creates lots of personalised documents based on a single template.

g) Hard copy is a physical printed copy of a document, such as a letter handed to someone.

h) Soft copy is a digital version of a document, such as an email attachment.

4. Programming Basics

a) Code is computer instructions in a program.

b) Programming is writing a program giving instructions for a computer to perform a task.

c) Flow Chart is visually planning step by step how to complete a task in a logical order.

d) Sequencing is organising instructions in a sensible and logical order so the computer can correctly carry out your instructions.

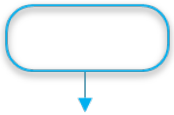
e) Scratch is creating programs using pre-written block-based code.

f) Python is a code creating programs by typing text-based code.

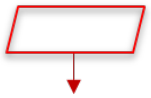
```
if answer > my_number:
    print "Too High!"
elif answer < my_number:
    print "Too Low!"
```

5. Flow Chart Symbols

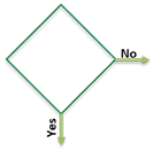
a) Start/End:



b) Input/Output:



c) Decision:

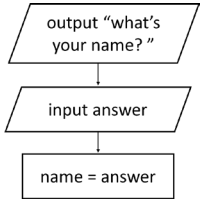


d) Process/Calculation:

6. Programming Terms

a) Variable is part of code storing information that can be changed.

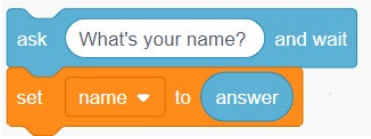
Flow Chart Example:



Text-Based code example:

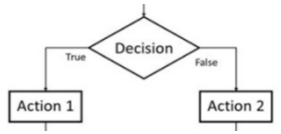
```
name = input("Type your name:")
```

Block-Based code example:



b) Selection is a <u>decision</u> in the program.

Flow Chart Example:



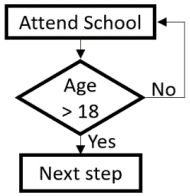
Text-Based code example:

```
if want cream hot chocolate:
    then add cream
else:
    skip to next step
```

Block-Based code example:

c) Iteration means <u>repeating</u> actions.

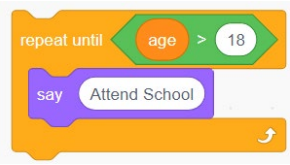
Flow Chart Example:



Text-Based code example:

```
while age < 18:
    attend school
next step
```

Block-Based code example:



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Bourne Scholars Knowledge Organiser: Year 7 Summer Term – Computing

1. Programming Vocabulary

a) **Assignment** is setting the value of a variable in a computer program

b) A **constant** is a value in programming that does not change

c) Data is divided up and organised according to **data type**, e.g. numbers or characters

d) To **execute** a program means to run it

e) **High-level language** is a programming language, like Python, used to write programs

f) **Binary** is a base 2 number system only using 1's and 0's such as 11001100

g) **Machine code** is low-level code that represents how computer hardware and CPUs understand instructions using binary numbers

h) **Runtime** is when a computer program is executing or running

i) Python uses **indentation** (created by pressing tab key) to identify blocks of code

2. Python Data Types

a) The code for an **integer** is **int**
e.g. age = int(12)

b) Code for **characters**, such as '#', '7', 'f', is **char**
e.g. letter = char("g")

c) The code for **strings**, such as "Harry" is **str**
e.g. name = str("Harry")

d) The code for **Boolean**, such as "True", is **bool**
e.g. answer = bool("False")

e) To output text is **print** e.g. print("hello")

Challenge 1. Create Python code which uses a combination of all data types listed above (a-d). Go through each data type and come up with your own example in Python

f) A **module** is a pre-written chunk of code which can be loaded into your program from a library

Python has many modules in its built-in library, such as 'random', 'math', 'turtle'. The random module is used to generates random numbers and the turtle module is used to draw basic images

3. Python Turtle

a) To use the turtle module in our program, we need to add 'import turtle' at the start of our code

b) Challenge yourself by creating a range of shapes in Python using the turtle module. Ask for the "Turtle Challenge Sheet" which examples of code. Try to create the following shapes:

Challenge 2. Square (sides 100, line colour pink)

Challenge 3. Rectangle (longer sides 200, shorter sides 100, green fill)

Challenge 4. Triangle (sides 100, blue line colour, red fill)

Challenge 5. Circle (cyan fill, blue line colour)

Challenge 6. Using what you've learnt and the Turtle Snowman help sheet, create your own snowman in Python using Turtle code

Challenge 7. Independently, try and create a basic house drawing in Python using Turtle code

The Bourne Academy

Knowledge Organiser: Year 7 Summer Term - Dance

1. A Linha Curva

- A Linha Curva means a curved line in Portuguese.
- It is a celebration of Brazilian culture.
- It is about having fun.
- It features three movement styles: Capoeira, Samba and Contemporary.

2. Capoeira

A mixture of Brazilian martial arts - combining elements of fight/ self-defense, acrobatics, music and dance.

3. Samba

- Lively rhythmical Brazilian Dance with Afro- beats
- Syncopated timing / swaying / rocking / bouncing Freedom within the hips and torso.

4. Contemporary

- Mixture of modern dance styles which has a balletic quality / fluid dynamics.
- Contemporary dance utilises floor work and the use of gravity.

5. Brazilian Culture

- Brazil is a country in South America.
- Brazilian people have a diverse mix of race, religion, country of origin and cultural heritage.
- Brazil is known for having lots of celebrations including Carnivals.
- Carnivals include lots of bright coloured costumes, masks, parades, and marches.



6. Key word	Definition
a. **Stamina**	Ability to maintain physical and mental energy over periods of time.
b. **Co-ordination**	The efficient combination of body parts.
c. **Strength**	Muscular power.
d. **Control**	The ability to start and stop movement, change direction and hold a shape efficiently.
e. **Flexibility**	The range of movement in the joints (involving muscles, tendons and ligaments).

7. Jazz Dance

Jazz dance developed from both 19th- and 20th-century stage dance and traditional Black social dances and their white ballroom offshoots.

Jazz dance paralleled the birth and spread of jazz itself from roots in Black American society and was popularized in ballrooms by the big bands of the swing era (1930s and '40s). It radically altered the style of American and European stage and social dance in the 20th century.

9. Key Jazz Movements

a. Kicks	Lifting one leg off of the floor whilst keeping it straight.
b. Pirouette	Turning on one leg.
c. Pas De Bourrée	A three-step movement with one leg stepping back, one stepping to the side and one stepping forward.
d. Jazz Hands	A highly stylized and exaggerated splaying of the fingers on open, extended palms.
e. Ball Change	a transfer of weight from one foot to the other, often performed quickly.

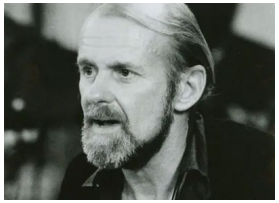
8. Jazz Pioneers

The term pioneer refers to a person who is the first to try or establish something. There are two key pioneers for Jazz Dance.

Jack Cole

Jack Cole is thought to be the 'father of Jazz' and is responsible for how Jazz is known today. Cole worked to create the style of jazz that is still widely received today, on Broadway, in Hollywood movie musicals and in music videos.

Bob Fosse



Bob Fosse was an American dancer, choreographer, and director who revolutionized musicals with his distinct style of dance. He began on the stage, where he worked on productions such as Sweet Charity) and Chicago, and later had a successful film career, which was highlighted by Cabaret.

Bourne Scholar Knowledge Organiser: Year 7 Summer Term - Dance

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e. **Flexibility**	The range of movement in the joints (involving muscles, tendons and ligaments).
f. **Mobility**	The range of movements in the joints; the ability to flow fluently from action to action.
g. **Extension**	Lengthening one or more muscles or limbs.

The Bourne Academy

Knowledge Organiser: Year 7 Summer Term – Drama

1. Key words	Definition
A. Script	Written by a playwright, which tells the actors what to say and do.
B. Playwright	A person who writes the scripts for plays, which then go on to be staged in theatrical productions
C. Stage Directions	Stage Directions tell the actors how to speak or act their character in a certain way. Stage Directions also explain how the staging may be in the performance
D. Rehearsal	A practice of the performance. You can have dress rehearsals and technical rehearsals.
E. Naturalistic	Acting as realistically as possible as close to 'real life' as an actor can perform.
F. Stanislavski	A Russian theatrical practitioner. He believed in naturalistic performances that were as realistic as possible.
G. The stage	The area in which you perform.
H. Dramatic Tension	Drives the drama and keeps an audience interested. The tension comes when opposing characters, dramatic action, ideas, attitudes, values, emotions and desires are in conflict creating a problem that needs to be resolved
I. Entrances and Exits	How a character comes onto and leaves the stage. This must be done in character.
J. Gesture	A movement of part of the body to express a particular feeling, idea or intention, e.g. a nod of the head

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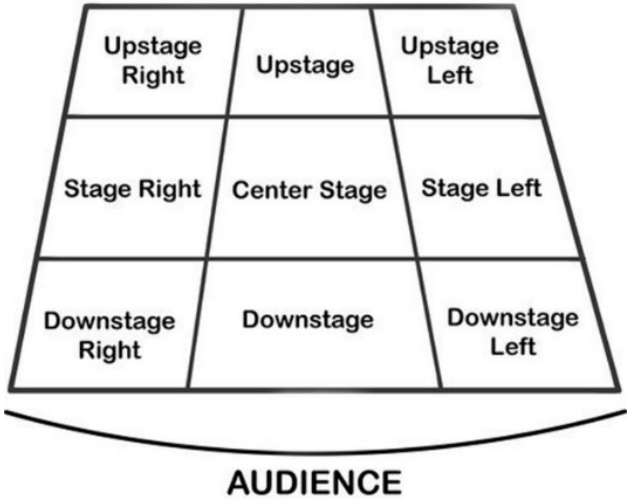
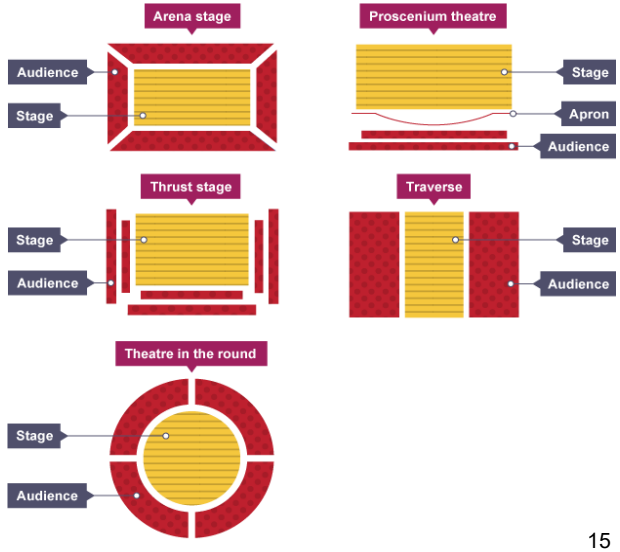
Bourne Scholars Knowledge Organiser: Year 8 Summer Term – Drama

1. Higher Thinking Question	2. Learning lines	
What am I showing the audience?	**Read and cover**	Read the line out loud, then cover the script with your hand and try and say the line without reading it. Repeat until you've learnt it
How am I communicating this?	**Gesture/Action**	For each line you need to add a choregraphed movement or gesture for each line
What else can I do to support my acting skills?	**Vocal Skills**	Experiment with different vocal dynamics. Change the volume of your voice for each line. The first line you might shout, then whisper the second and say the third at a normal speaking volume. Add a Liverpool accent
How am I showing my character?	**Call and Response**	A partner reads you one of your lines and you repeat it back to them without looking at the script until learnt. Then add the next line putting them together.
What is my character feeling?	**Record**	Record yourself reading your script allowed and listen to it 10 minutes a day.

3. Stage Positioning





Knowledge Organiser: Year 7 Summer Term – Drama

2. Learning Lines	
A. Read and Cover	Read the line out loud, then cover the script with your hand and try and say the line without reading it. Repeat until you've learnt it
B. Gesture and Action	For each line you need to add a choregraphed movement or gesture for each line
C. Vocal Skills	Experiment with different vocal dynamics. Change the volume of your voice for each line. The first line you might shout, then whisper the second and say the third at a normal speaking volume. Add a Liverpool accent
D. Call and response	A partner reads you one of your lines and you repeat it back to them without looking at the script until learnt. Then add the next line putting them together.

3. Evaluating Performance	**Step One Before Performance**	**Step Two During Performance**	**Step Three After Performance Be ready to share your evaluation**
What went well?	Select either a physical or vocal performance skill to evaluate	While you watch the performance look out for specific examples of how the skill is being used and the impact it has.	The way the group used _____ was very successful because it showed the audience that…… .
B. Even Better If…			The group could improve further by adding ……. This would have shown the audience that…… .

1. Context	Description
a) Shakespeare	William Shakespeare was an English playwright and poet.
b) The Globe Theatre	The open-air theatre built in 1599 on the River Thames by a group of actors that included Shakespeare.
c) Genre	A style or category of literature. Shakespeare wrote three genres of play: comedy, history and tragedy.
d) Elizabethan and Jacobean Times	Shakespeare wrote across two different periods of English history, defined by the monarchs: Queen Elizabeth I and King James I.

2. Key ideas and Tragedy	Description
a) Theme	A key idea explored through a text. E.g. love, violence, family
b) Tragic hero	The main character, often named in the play's title.
c) Fatal flaw	A personal weakness in the tragic hero's personality.
d) Conflict	Arguments, disagreements or difficult choices.
e) Fate	The idea that things that happen were 'meant to be'.
f) Tragic ending	No happy ending in tragedy- only death or loss.

3. Titus Andronicus	Summary
a) Titus	A brave Roman general who faces terrible betrayals and seeks justice for the wrongs done to his family.
b) Tamora	The queen of the Goths, captured by Titus in the beginning of the play.
c) Lavinia	Titus' only daughter, who is brutally attacked by Tamora's sons and then killed by her own father at the end.
4. Romeo and Juliet	**Summary**
a) Montague	Romeo's family including Lord and Lady Montague and Benvolio (Romeo's cousin)
b) Capulet	Juliet's family including Lord and Lady Capulet, Tybalt (Juliet's cousin) and the Nurse.
c) Prologue	A piece of writing at the opening of a story to give some key background information to the audience.
5. Terminology	**Summary**
a) Imperative verb	Shows commands or instructions e.g. sit down, stop.
b) Modal verb	Show likelihood or probability of something e.g. might, could, must
c) Speech	A piece of writing written to be delivered verbally.
d) Discourse marker	A word that helps to organise your writing e.g. firstly

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Knowledge Organiser: Year 7 Summer Term - English

1. Terminology	Definition
a) Denotation	A surface meaning – what is obvious and what you see
b) Connotation	A deeper meaning – what can be inferred
c) Mass Audience	A large group of people, not individualised
d) Specialised Audience	A small group of people defined by factors such as age, class, gender.

2. The Role of Media	Definition
a) Information Dissemination	The process of distributing or spreading information.
b) Entertainment	The aim to create interest or provide amusement or enjoyment in an audience.
c) Education	The aim to inform, educate or develop the knowledge of the audience.
d) Advertising and Marketing	The process of creating paid message to promote products.

3. Non-fiction methods	Definition
a) Direct address	When the author speaks directly to the reader/ listener, using pronouns such as 'you'.
b) Collective pronouns	Used to represent groups of people and involve the audience, such as 'we', 'our'
c) Call to action	A direction for a specific response or to provoke a reaction from the reader.
d) Anaphora	When a word or phrase is repeated at the beginning of successive sentences.
e) Emotive Language	Using specific word choice to provoke an emotional response from the reader

4. Critical thinking	Definition
AI tool	Refers to Artificial Intelligence technology that creates text, images or content for the user. E.g. Chat GTP
Bias	Media bias refers to the tendency of journalists or organisations to present information in a certain way.
Disinformation	False information that is intended to mislead.
Misinformation	The false or misleading information that is spread without malicious intent.
Reliable	Refers to sources that provide accurate, well-researched, unbiased information

1. Extended vocabulary	Definition
a) **Distortion**	The act of altering or changing something from its true appearance.
b) **Empathy**	Being able to understand and share the feelings of someone else.
c) **Sympathy**	Being able to express feelings of pity and sorrow for someone else.
d) **Representation**	The description or portrayal of something or someone in a certain way.
e) **Intertextuality**	Where a text or media refers to another text to communicate meaning to an audience.
f) **Credibility**	The quality of being trusted and believed in.
g) **Authentic**	To be of undisputed origin and not a copy or imitation.
h) **Sensational**	To cause great public interest and excitement.
i) **Plausible**	An argument or explanation which is reasonable or probable.

2. Authors	Additional reading
a) **Ray Bradbury**	The Veldt (Fiction)
b) **Isaac Asimov**	The fun they had (Fiction)
c) **Fleur Adcock**	The Telephone Call (Poetry)
d) **Adrian Henri**	Futures (Poetry)
e) **Robert DiYanni**	You are what you read (Non-Fiction)

3. Extended writing	Tasks
a) **Research**	Research articles on the correlation between screen time and its impact on the lives of young people.
b) **Explain and explore**	Explore online sources of news such as Newsround and First News. Compare how the latest news stories are presented.
c) **Writing**	Plan and write the opening of a dystopian story on how media influences our lives in the future.

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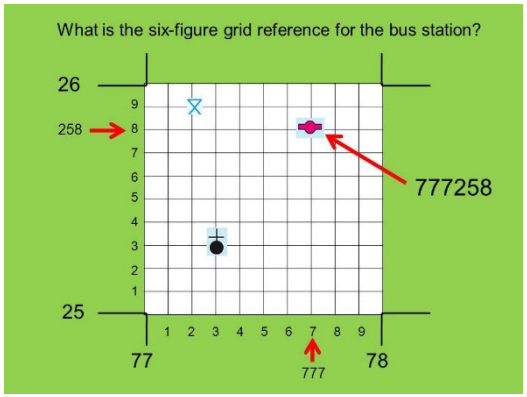
Knowledge Organiser: Year 7 Summer Term - Geography

1. Grid References



2. Waves

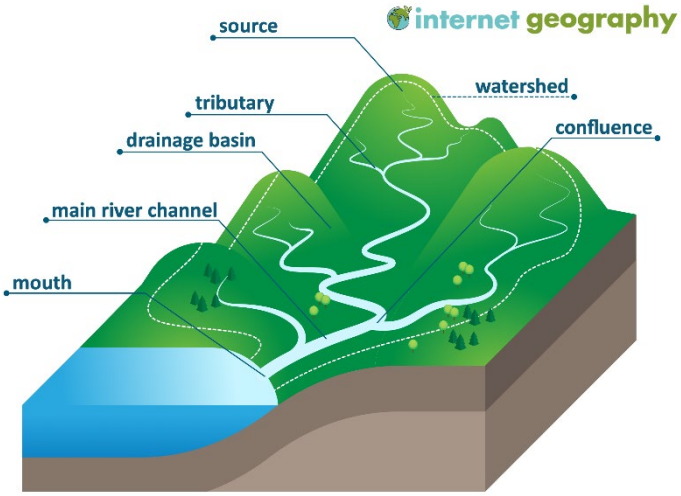
How do waves form?

Waves are created by wind blowing over the surface of the sea. As the wind blows over the sea, friction is created – producing a swell in the water.
Swash – when a wave moves up a beach.
Backwash – when a wave moves back out to sea.

What influences the size of waves?

- Fetch: how far the wave has travelled.
- Strength of the wind.
- How long the wind has been blowing for.

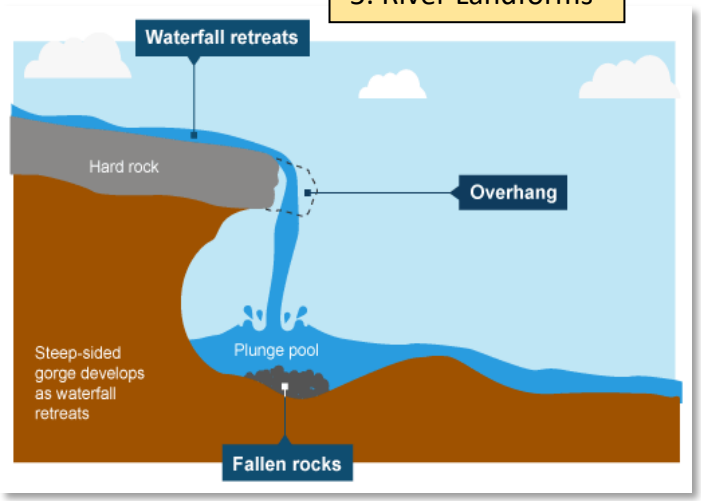
3. River Drainage Basin



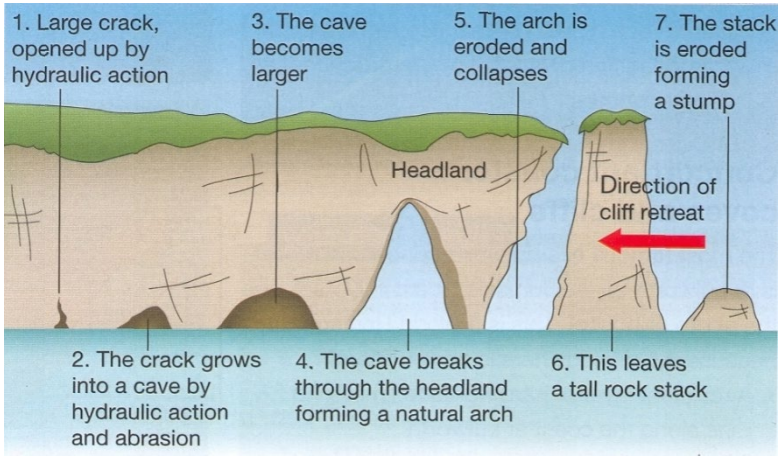
4. Erosion Processes

Types of Erosion	
The break down and transport of rocks – smooth, round and sorted.	
Attrition	Rocks that bash together to become smooth/smaller.
Solution	A chemical reaction that dissolves rocks.
Abrasion	Rocks hurled at the base of a cliff to break pieces apart.
Hydraulic Action	Water enters cracks in the cliff, air compresses, causing the crack to expand.

5. River Landforms



5. Coastal Landforms



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Knowledge Organiser: Year 7 Summer Term - Geography

6. Coastal Retreat Impacts

Social: Impacts on people and community. E.g. evacuation, migration.

Economic: Costs of repairs, affects of business, rebuilding, loss of jobs, loss of farmland etc.

Environmental: Impacts on the natural environment, e.g. loss of habitats.

7. Coastal Management

Hard Engineering Defences		
Groynes	Wood barriers prevent longshore drift, so the beach can build up.	✓ Beach still accessible. ✗ No deposition further down coast = erodes faster.
Sea Walls	Concrete walls break up the energy of the wave . Has a lip to stop waves going over.	✓ Long life span ✓ Protects from flooding ✗ Curved shape encourages erosion of beach deposits.
Gabions or Rip Rap	Cages of rocks/boulders absorb the waves energy, protecting the cliff behind.	✓ Cheap ✓ Local material can be used to look less strange. ✗ Will need replacing.
Soft Engineering Defences		
Beach Nourishment	Beaches built up with sand, so waves have to travel further before eroding cliffs.	✓ Cheap ✓ Beach for tourists. ✗ Storms = need replacing. ✗ Offshore dredging damages seabed.
Managed Retreat	Low value areas of the coast are left to flood & erode.	✓ Reduce flood risk ✓ Creates wildlife habitats. ✗ Compensation for land.

8. River Flooding Causes

***Physical:* Prolong & heavy rainfall** Long periods of rain causes soil to become saturated leading runoff.	***Physical:* Geology** Impermeable rocks causes surface runoff to increase river discharge.
***Physical:* Relief** Steep-sided valleys channels water to flow quickly into rivers causing greater discharge.	***Human:* Land Use** Tarmac and concrete are impermeable. This prevents infiltration & causes surface runoff.

9. River Flooding – Boscastle Causes

Causes of flooding in Boscastle

- Heavy localised rainfall - 89 mm of rain fell in an hour.
- Saturated ground from previous rainfall.
- Topography of the land. The landscape upstream of Boscastle, a steep-sided valley, acted as a funnel directing vast volumes of water into the village.
- Narrow river channels in the village itself.

10. River Flooding – Boscastle Effects

- Homes, businesses and cars were swept away, affecting more than 1,000 people.
- Income from tourism was lost. This had an impact on livelihoods and the local economy.
- There were vast numbers of subsequent insurance claims.
- No lives were lost, partly due to the rapid response of the emergency services.

Once the water had receded, the extent of the damage became clear. More than 70 vehicles were washed downstream by the flash-flood in Boscastle.

11. River Flooding – Boscastle Responses

What has Boscastle done to prevent flooding in the future?

- £4.5 million has been spent on a flood defence scheme.
- The scheme stretches along the valley, incorporating drainage, sewerage systems and land re-grading.
- Boscastle car park has been raised in height, which will stop the river from bursting its banks so easily.
- New drains allow water to run into the lower section of the river quickly.
- The river channel has been made deeper and wider so that it can accommodate more water.

12. River Management

River Management Schemes	
Soft Engineering	**Hard Engineering**
Afforestation – plant trees to soak up rainwater, reduces flood risk. **Demountable Flood Barriers** put in place when warning raised. **Managed Flooding** – naturally let areas flood, protect settlements.	**Straightening Channel** – increases velocity to remove flood water. **Artificial Levees** – heightens river so flood water is contained. **Deepening or widening river** to increase capacity for a flood.

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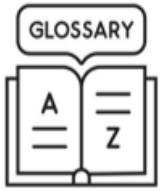
Bourne Scholars Knowledge Organiser: Year 7 Summer Term – Geography

1. Tier 3 Key Words: You must be able to use Geographical terminology in your written work.

Create a glossary for the below key words;

Erosion, coastal retreat, coastline, abrasion, hydraulic action, attrition, solution, flooding, topography, swash, backwash, fetch, hard engineering, soft engineering.

Then, use these words in written summaries about the topic theory.



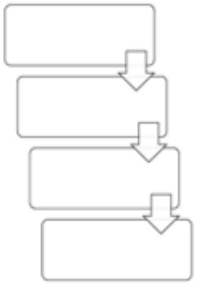
2. Geographical Writing: Part of being a Geographer is to write like a Geographer.

Search up the water cycle.
Then explain it. See how many points you can get from the grid below.

1 point	2 point	3 point	- Point
Rain	Evaporation	Infiltration	Like
River	Condensation	Ground water	Erm
Sea	Precipitation	Surface runoff	I think
Rock	Permeable	Throughflow	But

3. Identifying and explaining: Being able to identify landforms and explain their formation,

Identify the coastal landform below.
Then explain how it has formed in 4 steps. Think of it like a flow chart, step by step process. Include key terms!
Challenge: explain how a river landform has been created.



4. Mapping: You need to be able to locate examples of Geographical events.

Find a blank UK map.
Label each river onto the map. Mark on there the upper, middle and lower course of each river.

Then, research the river and find out how humans have managed those rivers to prevent flooding.

- River Thames
- River Stour
- River Avon
- River Severn
- River Exe
- River Tweed
- Bann River

5. Graphical Skills: It is important to be able to plot and interpret graphs.

Plot a graph to show the average erosion rates over time in Holderness, Yorkshire.

Period	Years	Average Erosion Rate, m/year
1852-90	38	0.8
1890-1908	18	1.0
1908-26	18	2.3
1926-52	26	2.0
1952-72	20	2.0
1972-89	17	2.4
1989-92	3	3.4
1992-95	3	3.3

6. CATT: To reach the higher levels in Geography, you need to develop all explanations.

One way of developing your explanations is to think about a multiplier effect. This is where one event/factor leads to another and leads to another.

Use the sentence starters below to answer the following question: *how does river flooding impact people and the environment?*

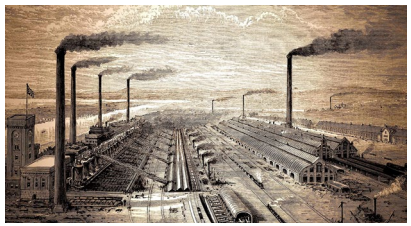
C – consequently
A – as a result
T – this means that
T – therefore

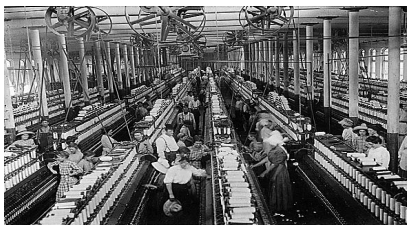
A. Key words	
1. Industrial Revolution	A time of great change in Britain between 1750 to 1900 where machines and factories changed the way people worked and travelled.
2. Economy	The system of how money is used within a particular country
3. Agriculture	The process of producing food, and fibers by farming of certain plants or raising animals
4. Poverty	The lack of basic human needs such as clean water, nutrition, healthcare, education and shelter
5. Sanitation	Sanitation is the system that disposes of human waste
6. Industry	The process of making products by using machines and factories
7. Mass production	The production of many products in one go e.g., textiles

B. Changes in Britian	
1. Agriculture	New tools, fertilizers and harvesting techniques were introduced, resulting in increased productivity and agricultural prosperity.
2. Industry	Factories sprung up all over the country creating more efficient ways to produce goods such as wool, cotton and coal.
3. Transport	Building of new roads, canals and railways allowed goods and people to be transported more easily.
4. Technology	Society and industry. Changes to sanitation and medical treatment such as the work of John Snow and Edward Jenner improved people's quality of life.

C. Factory Working Conditions	
1. Long working hours	Normal shifts were usually 12-14 hours a day, with extra time required during busy periods.
2. Low wages	A typical wage for male workers was about 15 shillings (75p) a week, but women and children were paid much less, with children three shillings (15p).
3. Cruel discipline	There was frequent "strapping" (hitting with a leather strap). Other punishments included nailing children's ears to the table and dowsing them in water to keep them awake.
4. Poor health	The air was full of dust, which led to chest and lung diseases and loud noise made by machines damaged workers' hearing.

D. Living Conditions	
1. Overcrowding	Due to large numbers of people moving to the cities, there were not enough houses for all these people to live in.
2. Disease	Typhus, typhoid, tuberculosis and cholera all existed in the cities of England. Overcrowding, low standard housing and poor-quality water supplies all caused disease.
3. Waste disposal	Gutters were filled with litter. Human waste was discharged directly into the sewers, which flowed straight into rivers.
4. Poor quality housing	Tenement houses were built very close together so there was little light or fresh air inside them.





Knowledge Organiser: Year 7 Summer Term - History (The Slave Trade)

A. Keywords	
1. Empire	A group of countries, people or land controlled and ruled by one single powerful country.
2. Colony	A country which is part of an Empire.
3. Slavery	A relationship where one person has absolute power over another. They control their life, freedom and wealth.
4. Triangular Trade	The name of the system for trading slaves across the world.
5. Middle Passage	The name used to describe the journey from Africa to America for slaves, it took up to 2 months.
6. Auction	An event where slaves are put up for sale and prospective owners bid for them. The highest bid wins the slave.
7. Plantation	A large farm that slaves worked on to produce cotton, tobacco and sugar.
8. Abolition	The act of putting an end to something by law.
9. Cash crops	Sugar, cotton, tobacco and coffee grown for profit.
10. Act	A law passed by Parliament.
11. Bill	The name given to an Act before it is passed by Parliament.
12. Prejudice	Unfair opinions that are not based on facts.
13. Reform	To change something, making it better.

B. Timeline	
1. 1562	First English slaving expedition by **Sir John Hawkins**.
2. 1772	**Granville Sharp** wins court case ruling that no slave can be forcibly removed from Britain.
3. 1786	**Thomas Clarkson** publishes book calling for abolition of slavery.
4. 1789	**Olaudah Equiano** publishes book describing his experiences as a slave. 'The interesting narrative of the life of Olaudah Equiano.'
5. 1792	House of Lords reject Abolition Bill passed by Commons.
6. 1804	Successful slave rebellion on island of St Dominique (Haiti) drives out the French
7. 1807	Abolition of the Slave Trade Act abolishes the buying and selling of slaves in the British Empire.
8. 1833	The Slavery Abolition Act is passed in Britain.

C. Key Individuals	
1. Thomas Clarkson	Formed first Abolition Committee.
2. Olaudah Equiano	Ex-slave who spoke out about his experiences.
3. William Wilberforce	Leading campaigner in Parliament for Abolition.
4. Granville Sharp	Anti-slavery activist. Worked with Wilberforce and Clarkson.

1: Demonstrate knowledge and understanding of the key features of the periods studied.

1.1 Chronology
- Create an A3 timeline of England's involvement in the Transatlantic Slave Trade from 1562 to 1833.

1.2 Historical Terminology
- Define the following words: Branding, Caribbean, Chattel slavery, Corporal punishment, Diaspora, Dysentery, Enfranchisement, Indentured servant, Mulatto, Quaker, Royal African Company

1.3 Key Features (Historical Knowledge)
- Explain TWO English court-cases about the slave trade that may have influenced attitudes to slavery.

2: Explain and analyse historical events and periods studied using historical concepts.

2.1 Change & Continuity
- Research how the Quakers in England went from being deeply involved in the slave trade to leading a religious crusade against it.

2.2 Cause and Consequence
- Record 3 arguments that would be used to defend the institution of slavery in the 17th and 18th centuries.

2.3 Significance
- Research and evaluate the impacts of Thomas Clarkson on the campaign for abolition in England. Was his work more significant that the work of Hannah More, William Wilberforce or Olaudah Equiano?

3: Analyse, evaluate and use primary sources to make judgements.

3.1 Valid inferences
- What can you infer from the source about children's experience of mill work?

3.2 Nature, Origin, Audience, Purpose
- What is the nature, origin, Audience and purpose of the source?

A picture of working children from a novel published in 1840 called *Life and Adventures of Michael Armstrong: The Factory Boy* by Francis Trollope.

3.3 Usefulness
- How useful is this source for an enquiry into children's work in factories during the Industrial Revolution? Why could it be limited?

4: Analyse, evaluate and make judgements about interpretations.

4.1 Identifying views
- What is the view given by Toynbee about the Industrial Revolution?

4.2 Analysing interpretations
- What evidence can you find to support Toynbee's claim that the Industrial Revolution increased 'pauperism'?

4.3 Evaluating Interpretations
- Find TWO historians interpretations which support Toynbee's view on the Industrial Revolution and TWO historians who counter his view. Who do you agree with? Why?

A period as disastrous and as terrible as any through which a nation every passed; disastrous and terrible, because, side by side with a great increase of wealth was seen an enormous increase in pauperism and production on a vast scale, the result of free competition, led to a rapid alienation of classes and to the degradation of a large body of producers.
Arnold Toynbee's *Lectures on the Industrial Revolution in England*

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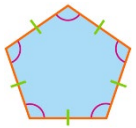
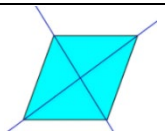
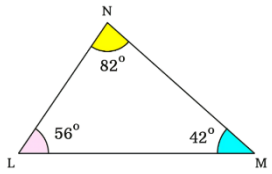
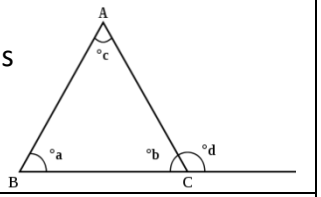
Knowledge Organiser: Year 7 Summer Term – Mathematics 2D Shapes

1.Keyword	Definition	Example
a. 2D shape	A 2D shape has two dimensions. It has length and width.	 The circle and the rectangle are 2D shapes
b. Regular polygon	A polygon that has all the sides equal and all the angles equal.	This shape is a regular pentagon as all the sides and angles are equal 
c. Symmetry	When one shape is the exact mirror image of another if it is rotated, reflected or translated.	The rhombus has two lines of symmetry 
d. Rotational Symmetry	A shape has rotational symmetry when it still looks the same after some rotation.	This shape has a rotational symmetry of order 5. 
e. Interior angles	An interior angle is an angle inside a shape.	The interior angles of a triangle add up to 180° 82 + 56 + 42 = 180 
f. Exterior angles	The exterior angle is the angle between any side of a shape, and a line extended from the next side.	Angle d is an exterior angle of this triangle. 
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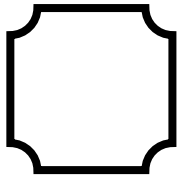
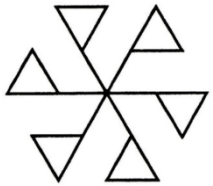
2. Worked examples

a. State the number of lines of symmetry and order of rotational symmetry for each shape below.

i. ii.





i. This shape has:

4 Lines of symmetry.

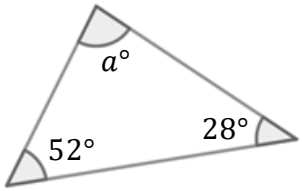
Rotational Symmetry of order 4.

ii. This shape has :

0 Lines of symmetry

Rotational symmetry of order 6.

b. Find the unknown angle.



The sum of the interior angles of a triangle is 180˚

$$a + 52 + 28 = 180°$$

-52 -28

$$a = 100°$$

-52 -28

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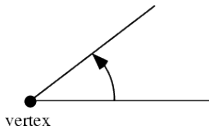
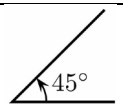
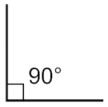
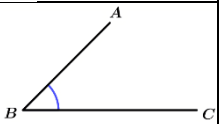
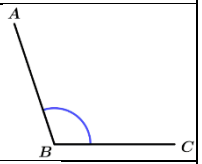
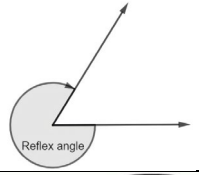
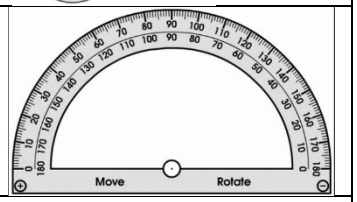
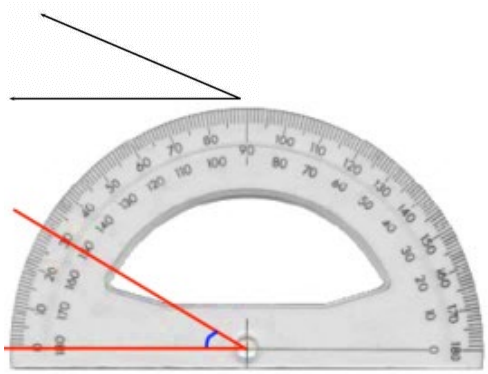
Knowledge Organiser: Year 7 Summer Term Mathematics - Angles

1.Keyword	Definition	Example
a. Vertex	Any corner point where two lines meet	
b. Angles	The space (usually measured in degrees) between two intersecting lines	This angle is 45° 
c. Right angles (Perpendicular)	Where two lines meet to form 90˚	
d. Acute angles	Angles less than 90° $0< x <90$	Angle ABC is an acute angle 
e. Obtuse angles	Angles greater than 90° but less than 180° $90< x <180$	Angle ABC is an obtuse angle 
f. Reflex angles	Angles greater than 180° but less than 360° $180< x <360$	
g. Protractor	An instrument used to measure angles. Starting from 0 moving clockwise or anticlockwise.	
SPARX INDEPENDENT LEARNING		M502 M541 M780 M331 M818

2. Worked examples

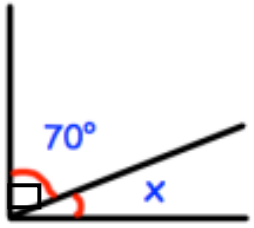
a. Write down the size of the angle below



Answer = 30˚

i. Place the midpoint of the protractor on the vertex of the angle.
ii. Line up one side of the angle with the zero line of the protractor.
iii. Read the degrees

b. Calculate the size of the missing angle.

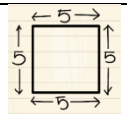
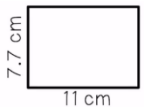
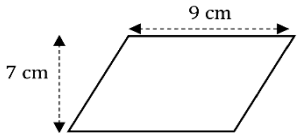
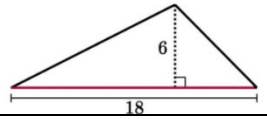
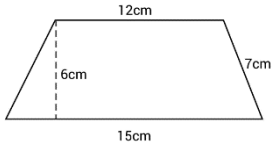
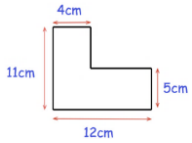


This is a right angle so needs to add up to 90° Therefore

$x + 70° = 90°$

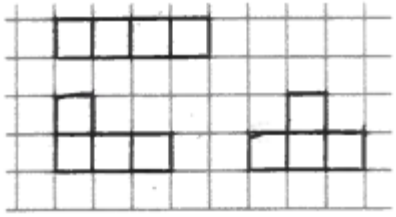
-70 -70

$x = 20°$

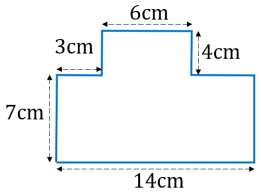
1. Keyword	Definition	Example
a. Perimeter	The distance around the outside of a shape.	Measured in units, like cm, m, km, etc.
b. Area	The measure of space in two dimensions contained within a boundary (perimeter).	Measured in square units squared cm^2, m^2, etc.
c. Square	Area = $length \times length$ a = l^2 Perimeter = $4 \times l$	 The area is 5 x 5= 25 $units^2$ The perimeter is 4 x 5 = 20 units
d. Rectangles	Area = base x height $A = b \times h$ Perimeter = $2(b + h)$	 The area is 7.7 x 11 = 84.7cm^2 The perimeter is 2(11 + 7.7) = 37.4cm
e. Area of parallelogram	Area = $base \times perpendicular\ height$	 The area is 9 x 7 = 63cm^2
f. Area triangles	Area = $\frac{1}{2} \times base \times perpendicular\ height$	 The area is $\frac{1}{2} \times 18 \times 6 = 54cm^2$
g. Area of a trapezium	Area = $\frac{1}{2} x\ (a + b)\ x\ h$ Where *h* is the perpendicular height, *a* and *b* are parallel.	 The area is $\frac{1}{2}$ x (12+15) x 6 = 81cm^2
h. Compound shapes	Any shape that is made up of two or more geometric shapes.	This is a rectilinear compound shape. 
Sparx Independent Learning	M900 M920 M390 M635 M269 M690 M610 M996 M291 M705 M303	

2. Worked examples

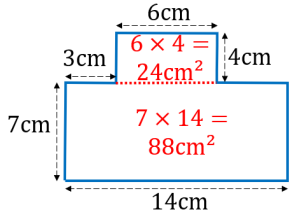
a. Draw 3 shapes on the grid with right angles at all the vertices with perimeter 10 units.



b. Calculate the area and perimeter of the shape below



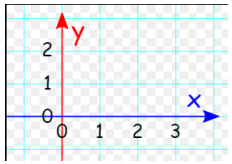
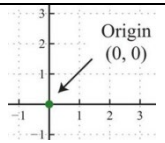
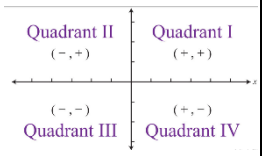
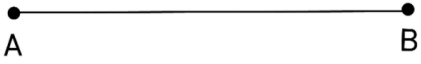
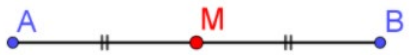
Answer



The total area is $88 + 24 = 112cm^2$

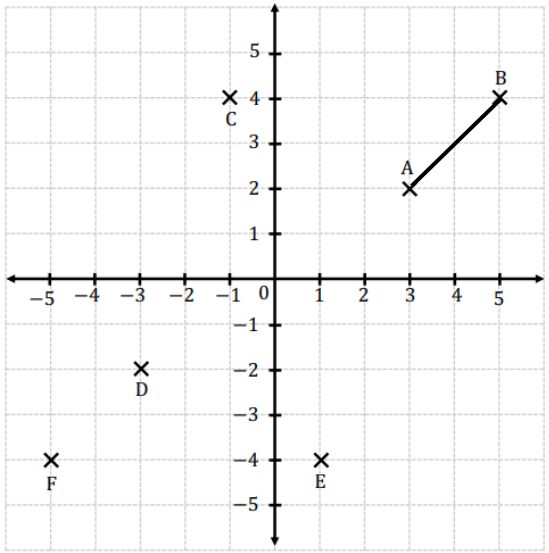
The total perimeter is
$14 + 7 + 3 + 4 + 6 + 4 + 5 + 7 = 50cm$

Knowledge Organiser: Year 7 Summer Term – Mathematics Coordinates

1. Keyword	Definition	Example
a. $x-$ axis	This is the horizontal axis or the line y = 0	The blue line is the x axis. The red line is the y axis. 
b. $y-$ axis	The vertical axis or the line $x = 0$	
c. Coordinates	Coordinates are a set of numbers giving the position of a point on a graph. (x, y)	Point P is at (-2, 5) Point P is at -2 on the x axis and 5 on the y axis.
d. Origin	Where the x axis crosses the y-axis.	The origin is at the coordinates (0,0) 
e. Quadrant	Any of the 4 areas made when we divide up a plane by an **x** and **y** axis.	In the 3rd quadrant the coordinates are both negative 
f. Line Segment	A line segment is the portion of a line that connects two points.	AB is a line segment 
g. Mid-point of a line	The middle point of a line segment. It is equidistant from both end points.	 M is the midpoint of the line AB.
h. Equation of a straight line	Any equation that conveys information about a line's gradient (m) and intercept (c) in the form y= mx + c .	In the equation of the straight line y= 3x + 8 identify the gradient and intercept. gradient m= 3, intercept c= (0,8)
SPARX NDEPENDENT LEARNING		M618 M622

2. Worked examples

a. Write down the coordinates of the points on the grid below.
b. Find the midpoint of the points A and B.
c. Which of the coordinates are in the 3rd quadrant?



Answers

a. $A\ (3,2)\quad B\ (5,4)\quad C\ (-1,4)\quad D\ (-3,-2)$

$E\ (1,-4)\quad F\ (-5,-4)$

b. $A\ (3,2)\quad B\ (5,4)$

The midpoint is halfway between points A and B so is therefore at point (4, 3).

c. D and F

1. Mathematical Vocabulary

Define each of the following words.
Describe how each of them is used in maths

a. Geometry
b. Frustum
c. Column vector

2. Mathematician Research

Who are they?
What are they famous for?
What contributions have they made to maths?

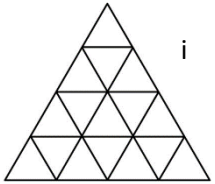
Hypatia of Alexandria

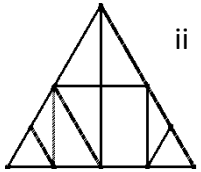
3. Watch

The Story of Maths 3 - The Frontiers of Space (2008) - YouTube (58 mins 45 sec)

4. Thinking Mathematically

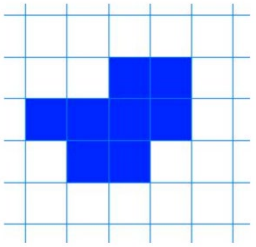
a. A triangle problem





i. How many triangles and quadrilaterals can be found in triangle i?
ii. What are the smaller shapes that can be seen?
iii. What are the angles in each of your smaller shapes?
iv. How many different trapezia can you make?
v. How many different parallelograms can you make?
vi. How many different rectangles can you make?
vii. What other quadrilaterals can you make?

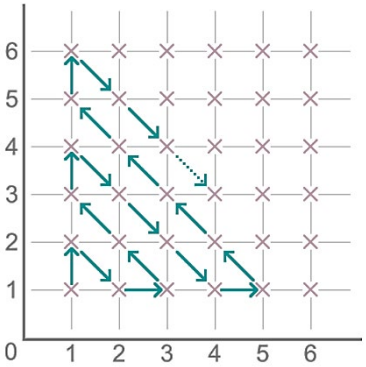
b. Changing areas, changing perimeters



i. Draw a shape with the same perimeter.
ii. Draw a shape with the same area.
iii. How many shapes are possible that have an area and perimeter equal to the shape shown.
iv. Draw shapes with a smaller perimeter and area.
v. Find the possible perimeters of rectangles with an area of $24cm^2$
vi. Find the possible perimeters of rectangles with an area of $24cm^2$ when you include non-integer lengths.

c. Route to Infinity

Take some time to look at the route followed by the arrows in this diagram.



i. If the pattern of arrows continues forever, which point will be visited immediately after (18, 17)? Explain how you know.
ii. How many points will be visited before the route reaches the point (9, 4)? Explain how you worked it out.
iii. Which point will be the 1000th to be visited?

5. Short Problems

a. Handy angles: How big is the angle between the hour hand and the minute hand of a clock at twenty to five?
b. Spiral Snail: A coordinate grid has its x-axis pointing due East and its y-axis pointing due North. A sluggish snail starts at point (0,0) and slowly slithers 1 unit North, 2 units East, 3 units South, 4 units West, 5 units North, 6 units East, 7 units South, 8 units West, 9 units North and (lastly!) 10 units East. What are the coordinates of the snail's finishing point?
c. Each interior angle in a quadrilateral (apart from the smallest) is twice the previous one. What is the size of the smallest interior angle?
d. In triangle ABC, angle B is $\frac{3}{4}$ of the size of angle C and $1\frac{1}{2}$ times the size of angle A. What is the size in degrees of angle B?

The Bourne Academy

Knowledge Organiser: Year 7 Summer Term - Music

1. Keywords and Definitions

Keyword	Definition
a. Pulse	A regular BEAT that is felt throughout much music. Certain beats of the pulse can be emphasised to establish regular pulse patterns
b. Rhythm	A series of sounds or notes of different lengths that create a pattern. A rhythm usually fits with a regular pulse.
c. Tempo	The speed of a sound or piece of music – fast/slow.
d. Texture	Layers of sound or how much sound is heard – thick/thin
e. Structure	The organisation of sound or how sounds are ordered
f. Silence	The absence of sound or no sound, shown in music by RESTS.
g. Form and Structure	The different sections or parts of a piece of music and how they are ordered, the overall shape of the music.

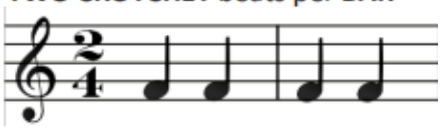
2. Time Signatures

A time signature tells us how many beats (and what type of beats) there are in each bar of music and is made up of two numbers at the beginning of a piece of music.

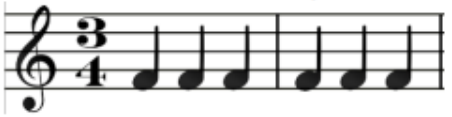
The top number tells us how many beats.

The bottom number tells us the beat type.

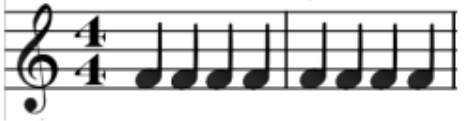
2/4 = **TWO CROTCHET** beats per **BAR**



3/4 = **THREE CROTCHET** beats per **BAR**



4/4 = **FOUR CROTCHET** beats per **BAR**



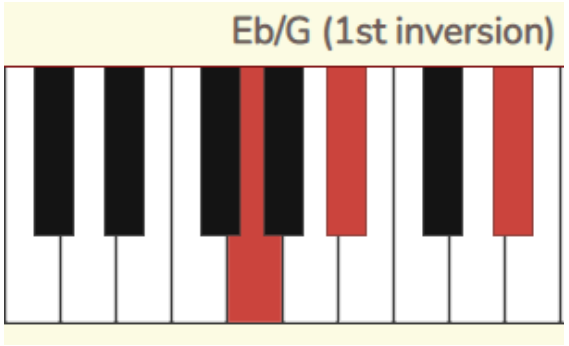
Bottom Numbers:
2 = Minim 4 = Crotchet 8 = Quaver

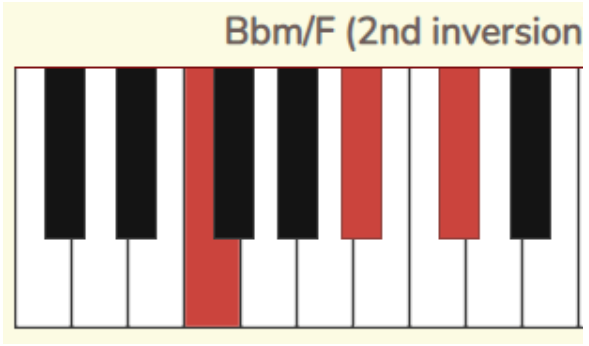
3. Structure of a Pop Song

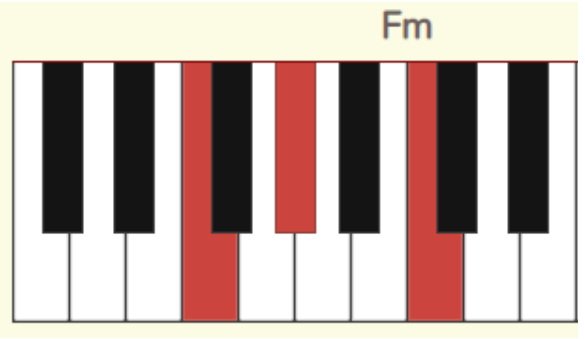
1. Introduction – Sets the mood of a song, often instrumental.
2. Verse – Same melody, different lyrics.
3. Pre-Chorus – Short, prepares for the CHORUS.
4. Chorus – Main part, catchy, same lyrics and melody, hook.
5. Bridge/ Middle 8 – Contrasting section (new chords etc.)
6. Outro – Ending: dramatic or fade out

Bourne Scholars Knowledge Organiser: Bourne Scholars Year 7 Summer Term Music

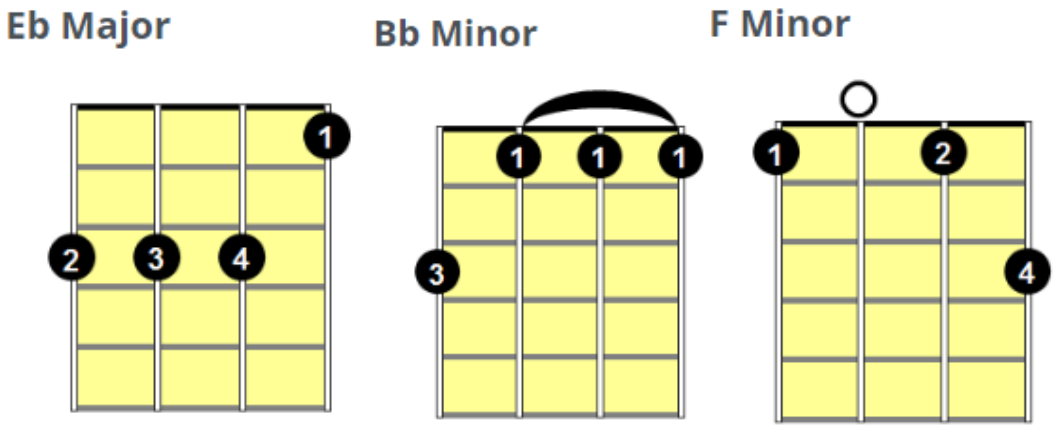
1. Chords using flats







2. Ukulele Chords



3. Different chord techniques for keyboard.

a. Block Chord – Play each chord on the beat.
b. Chord and root note – Left hand adds in the root note of the chord.
c. Arpeggio – Play each note of the chord individually one after the other.
d. Broken Chords – Play the middle note first then the 2 outside notes together.

The chord sequence above is used in Coldplay's song 'Clocks'. The technique they use is a falling arpeggio starting on the highest note of each chord.

Knowledge Organiser: Year 7 Summer Term – Physical Education: Striking and Fielding

1. Tactical Awareness	
a) Placement	Hitting the ball into space away from fielders to reduce the chance of being caught out and create opportunities for scoring.
b) Depth of field	Adjusting how close or far away the fielders stand depending on the strengths or weaknesses of the batter.
c) Backing Up	Standing in a position behind another fielder or the stumps to stop the ball if the ball misses the target.
d) Field Positioning	Standing in specific areas of the field to reduce scoring opportunities or increase the chances of getting the batter out.
2. Technique	
a) Striking	Keep your eyes on the ball. Follow through when striking the ball. Adjust swing speed and body position to give you control and direction. Move your feet to the position of the ball to make better contact.
b) Catching	Low stable base. Thumbs together for high catches, pinkies together for low catches. Have 'soft' hands. Watch the ball into your hands.
c) Throwing	Step as you throw. Opposite hand and foot for balance and power. Underarm for controlled shorter throws. Overarm for further and more powerful throws.
d) Bowling (Cricket)	Side on stance. Grip the ball with fingers either side of the seam. Non bowling arm high to generate power. Straight bowling arm rotating over the shoulder. Release the ball above head height.
e) Bowling (Rounders)	Side on to the batter. Smooth underarm action with a straight arm. Release the ball between knee and head height. Aim within the batting square. Step forward and follow through for accuracy.
f) Long Barrier	Body side on and directly behind the ball. One knee on the ground, other foot planted. Head over the ball. Fingers pointing to the ground. Use hands to stop the ball.

Bourne Scholars Knowledge Organiser: Year 7 Summer Term – Physical Education

1. Higher Order Thinking	2. Research
a) Evaluate whether attacking batting, or, defensive fielding strategy, has a greater impact on winning a game in striking and fielding sports. b) Compare the tactical differences between batting in rounders and cricket. Which requires more strategic thinking and why? c) Design a fielding strategy to stop a strong batter, who is always hitting the ball to the left, in a game of rounders. What are the strengths of your strategy? What weaknesses might there be?	a) Research the names of different fielding positions in the game of cricket. Present this in a diagram. b) Research how technology (e.g. ultra edge and hawk eye) are used in a game of cricket. c) Research two striking and fielding sports that we have not looked at in school. Compare the rules and tactics to rounders and cricket.
3. Application	**4. Analysis**
a) Create a 5-minute warm up drill specifically focusing on improving reaction time for fielders. b) Cricket games typically take a long time to play, even T20, which is the shortest format of the game. Adapt the rules of cricket to make it quicker and more inclusive for school students.	Draw a rounders pitch. From the batter's box, draw a line to roughly where the last 10 shots you hit went. Analyse your batting performance and write down a series of steps to help you to improve.

The Bourne Academy

Knowledge Organiser: Year 7 Summer Term Religious Studies

A. Key Words

Faith: Islam

Followers: Muslims

Holy Book: Qur'an

Arabic letters for Ism: peace

Name of God: Allah

Place of worship: Mosque

Important Prophet: Prophet Muhammad

Muslim preacher: Imam

Symbol: Crescent moon and five-pointed star

Religious Practices: 5 Pillars

Shahadah: Declaration of the belief in one God

Salah: praying five times a day

Zakah: Charity 2.5% of wealth

Sawm: Fasting in the month of Ramadan

Hajj: Pilgrimage to Makkah

B. Shahadah: Declaration of faith

'There is no god but God'

It is said in a new-born babies' ear, announced in the call to prayer, recited during daily prayers, on a Muslim soldiers lips as they go into battle and if possible the last words a dying Muslim hears.

C. Salah: prayer

Wudu: washing occurs first to prepare Muslims

5 prayers are said daily:

1. Fajr: Just after dawn
2. Zuhr (just after midday)
3. As'r (late afternoon)
4. Maghrib (just after sunset
5. Isha (after dark)

D. Zakah: Charity 2.5%

Wealth is not ours; it is given by God for the benefit of all humans.

It is a duty to share good fortune.

Giving is a sign of cleansing and purity.

E. Sawm: Fasting

Muslims refrain from eating & drinking from dawn to dusk for 29 / 30 days.

Muslims fast to help identify with the poor, brings people closer together and promotes self-control.

It also is commanded in the Qur'an and follows the example of the Prophet Muhammad.

F. Hajj: Pilgrimage

Muslims are encouraged to take part in a pilgrimage in Makkah lasting five days.

Muslims complete a number of set experiences which include:

1. Circling the Ka'ba
2. Walking between the hills of Mawah and Safa
3. Standing before God on the plain of Arafat
4. Collecting pebbles and hurling pebbles at Mina

A annual festival happens afterwards which is celebrated by all Muslims.

G. The Prophet Muhammad

He was orphaned at six years old but grew up as a shepherd and was known for his truthfulness and intelligence.

He later married a rich widow and had six children.

He struggled with the corruption and worship of idols in Makkah.

In the year 610 CE whilst praying, he was visited by the Angel Jibril and was ordered to recite the words of the Qur'an. These revelations continued for 23 years.

He tried to share his beliefs in Makkah but was met with opposition so left and journeyed to the city of Yathrib (Madinah)

He achieved success as a prophet, military commander and political leader. But decided to return to Makkah with an army, he took control of the city without a drop of blood being shed.

He is known as 'the Seal of Prophets' as he was the last one sent by Allah.

A. Challenge Tasks

1. Create 10 true or false statements on today's topic
2. Transform your learning into a series of images using up to 5 words
3. Plan an alternative lesson about what we have learnt today
4. Construct a timeline showing your learning through today's lesson
5. Produce a summary of today's lesson – then reduce the number of words used to a single sentence or three bullet points
6. Select 5 key terms that you have used today and create a summary using all the terms
7. Create 5 questions your teacher might ask about today's learning
8. Use a thesaurus to add more ambitious vocabulary into your work
9. If today's lesson were an album or a newspaper heading, what would it be called? What songs would be on it?
10. Add a justified conclusion to your evaluative writing

B. Research Challenge

Christianity

1. Research Christian festivals in greater detail
2. Research holy week in more detail
3. Research the different gospel accounts of Jesus' resurrection
4. Research the different Christian festivals in more detail.

C. Tricky Key Terms

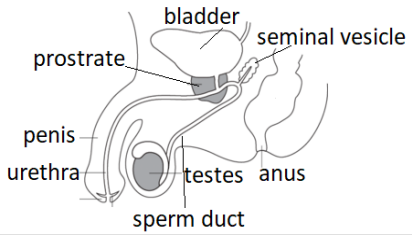
1. What does 'incarnation' mean?
2. What does 'atonement' mean?
3. What does 'blasphemy' mean?
4. What does 'crucifixion' mean?
5. What does 'resurrection' mean?
6. What does 'ascension' mean?

D. Evaluation Challenge

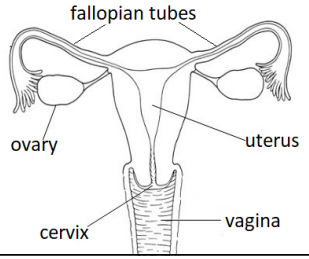
1. 'The story of Jesus is true'. Why would someone agree and why would someone disagree?
2. 'Jesus choose to enter Jerusalem at a time when he could create the greatest reaction'.
3. Why would someone agree? Why would someone disagree?
4. 'Judas is not fully responsible for Jesus' death'. Why would someone agree? Why would someone disagree?
5. 'The different gospel stories of the resurrection undermine Christian belief in resurrection'. Why would some agree or disagree?

(1) Key Terms	Definitions
a) Amniotic fluid	A fluid which surrounds the foetus and helps to cushion it.
b) Egg cell	The female sex cell (gamete).
c) Fertilisation	The fusing (joining) of the male sperm cell and female ovum.
d) Foetus	The unborn baby after around 8 weeks of pregnancy.
e) Gestation	The period between fertilisation and birth, also known as 'pregnancy'
f) Menstruation	The lining of the uterus breaks down every month if the egg is not fertilised. Also known as the period.
g) Ovary	The female reproductive organ that releases egg cells.
h) Oviduct	The tube the egg travels down, between the ovary and the uterus.
i) Placenta	The organ that allows substances (such as oxygen) to pass between the mother's blood and baby's blood.
j) Sperm Cell	The male sex cell (gamete)
k) Testes	The male reproductive organs which produce sperm cells.

(2) The Male Reproductive System

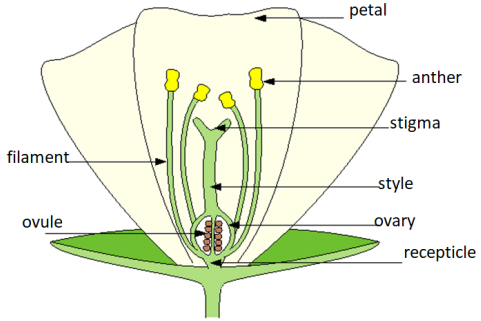


(3) The Female Reproductive System



(4) Menstrual Cycle

Day 1 – 5 The lining of the womb is shed.
Day 6 – 13 The uterus lining thickens in preparation. An egg matures in the ovary.
Day 14 An egg is released from the ovary and travels down the oviduct.
Day 15 – 28 The lining of the uterus is ready for fertilisation.



(5) Pollination

Pollination involves the transfer of pollen (male gamete) from the anther to the stigma (ovary of the flower).
Between different flowers, this is cross fertilisation. In the same flower, this is self-fertilisation

(1) Key Word	Definition
a) Acid	A substance with a pH less than 7
b) Alkali	A base which is soluble in water.
c) Alkaline	A substance with a pH greater than 7
d) Base	A substance that reacts with an acid to neutralise it and produce a salt.
e) Neutralise	Adding acid and an alkali together until the pH is 7 (neutral) and a salt is formed.
f) Neutral	A substance with a pH of 7. Water is a neutral substance.
g) Litmus Paper	An indicator that can be red or blue. Red litmus paper turns blue in alkalis, while blue litmus turns red in acids.
h) pH	A scale of acidic, or alkaline a substance is. A pH value below 7 is acidic, a pH value above 7 is alkaline.
I) Universal Indicator Paper	A paper which will change colour, depending on whether a substance is acidic or alkaline.

(2) Hazard Symbols

Toxic (Poisonous)

Corrosive (may cause burns)

Substance is an Irritant or is Harmful

Highly flammable Catches fire easily.

Explosive Substances that can self-react or detonate easily

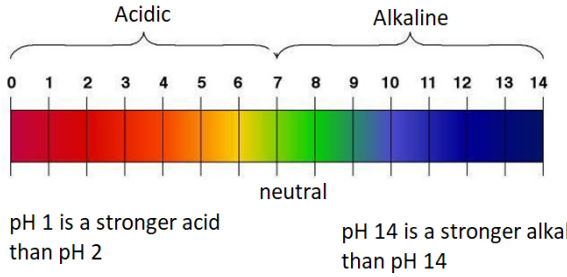
Environmentally Damaging Substances that can damage the environment

Biohazard Substances that pose a threat to human health.

Radiation Damaging to living tissue

(3) Facts to Learn

- Weak acids include vinegar (acetic acid) and lemon juice.
- Strong acids include hydrochloric acid (HCl)
- Weak alkalis include soap and washing up liquid.
- Strong alkalis include sodium hydroxide (NaOH)



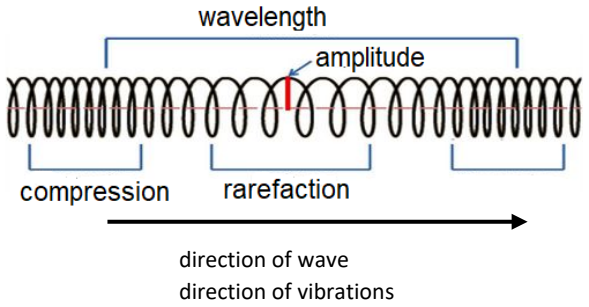
(4) The pH Scale

A scale of **acidity**, or **alkalinity** from 0 – 14.

Stronger acids have a lower pH. Stronger alkalis have a higher pH

(1) Key Word	Definition
a) Amplitude	The maximum height of a wave from the middle of the wave to its peak or trough.
b) Angle of Incidence	Angle between the normal and incident ray.
c) Angle of reflection	The angle between the reflected ray and the normal.
d) Compression	'Squash' The squashed part of the longitudinal wave.
e) Frequency	The number of waves produced each second. The unit of frequency is hertz (Hz).
f) Incident Ray	Light ray moving towards a surface or boundary (where the glass ends, and the air begins)
g) Medium	A medium is anything made of particles of a solid, liquid or gas. Also known as 'substance', or 'stuff'
h) Normal line	An imaginary line at right angles to the boundary.
i) Oscillation	The regular up and down, or back and forward movement of the wave. Also known as vibration.
j) Pitch	The frequency of a sound. Sounds with a high pitch have a high frequency.
k) Rarefaction	'Stretch' The stretched part of the longitudinal wave.
l) Reflected ray	Light ray leaving a surface or boundary.
m) Wavelength	The length of a single wave, measured from one wave peak to the next.

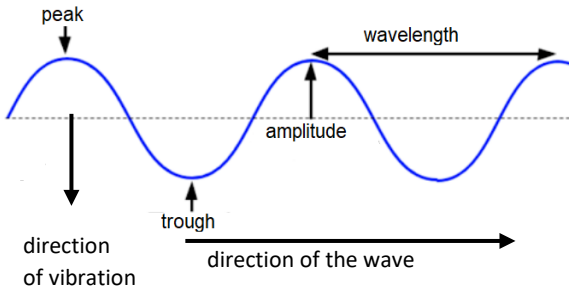
(2) Longitudinal Wave



In **longitudinal** waves, the vibrations are **parallel** to the direction of the wave.

Sound waves are longitudinal.

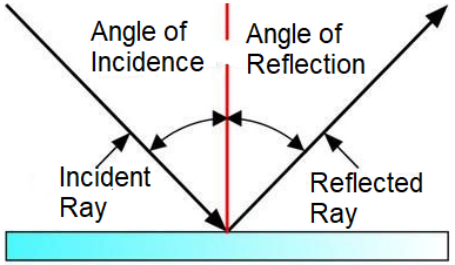
(3) Transverse wave



In **transverse** waves, the vibrations are at **right angles** to the direction of the wave.

Light waves, vibrations on a guitar string, and ripples on water are transverse.

(4) Reflection



A ray diagram shows how light travels, including what happens when it reaches a surface.

The angle of incidence is **equal** to the angle of reflection.

Remember – Always draw straight lines with a ruler and a pencil.

Key Terms (1)	Match the Definitions to Key Words
a) Amniotic fluid	The lining of the uterus breaks down every month if the egg is not fertilised. Also known as the period.
b) Egg cell	A fluid which surrounds the foetus and helps to cushion it.
c) Fertilisation	The organ that allows substances (such as oxygen) to pass between the mother's blood and baby's blood.
d) Foetus	The female reproductive organ that releases egg cells.
e) Gestation	The male reproductive organs which produce sperm cells.
f) Menstruation	A fluid which surrounds the foetus and helps to cushion it.
g) Ovary	The fusing (joining) of the male sperm cell and female ovum.
h) Oviduct	The unborn baby after around 8 weeks of pregnancy.
i) Placenta	The female sex cell (gamete).
j) Sperm Cell	The period between fertilisation and birth, also known as 'pregnancy'
k) Testes	The tube the egg travels down, between the ovary and the uterus.

(2) The Male Reproductive System

a) State the function of the testes.

b) Explain the travel of sperm during ejaculation.

(3) The Female Reproductive System

a) State the function of the uterus

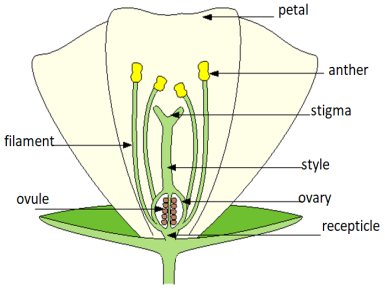
b) Where are egg cells produced?

c) Explain the travel of the egg cell during ovulation.

(4) Menstrual Cycle

1) Put the following statements in order and state when they occur.

a) An egg is released from the ovary and travels down the oviduct.
b) The lining of the womb is shed.
c) The lining of the uterus is ready for fertilisation.
d) The uterus lining thickens in preparation. An egg matures in the ovary.



(5) Pollination

a) Describe the process of pollination.

b) Explain the ways in which plants can reproduce.

c) Which type of fertillisation gives rise to genetic variation?

d) Evaluate the pros and cons of each type of fertilisation?

(1) Key Word	Match the Definitions to Key Words
a) Acid	A scale of acidic, or alkaline a substance is. A pH value below 7 is acidic, a pH value above 7 is alkaline.
b) Alkali	A paper which will change colour, depending on whether a substance is acidic or alkaline.
c) Alkaline	A substance with a pH of 7. Water is a neutral substance.
d) Base	A substance with a pH greater than 7
e) Neutralise	A base which is soluble in water.
f) Neutral	Adding acid and an alkali together until the pH is 7 (neutral) and a salt is formed.
g) Litmus Paper	A substance that reacts with an acid to neutralise it and produce a salt.
h) pH	A substance with a pH less than 7
I) Universal Indicator Paper	An indicator that can be red or blue. Red litmus paper turns blue in alkalis, while blue litmus turns red in acids.

(2) Facts to Learn

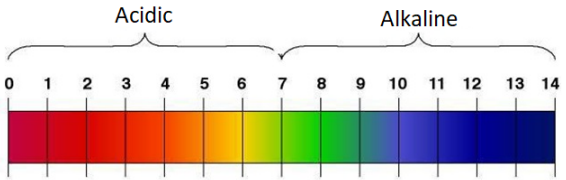
a) Give an example of a weak acid.
b) Give an example of a strong acid.
c) Give an example of a weak alkali.
d) Give an example of a strong alkali.
e) Research the difference between strong and weak acids.

(3) Hazard Symbols a) Draw or give the name for the following hazard symbols.

Toxic (Poisonous)

Biohazard Substances that pose a threat to human health.

Radiation Damaging to living tissue

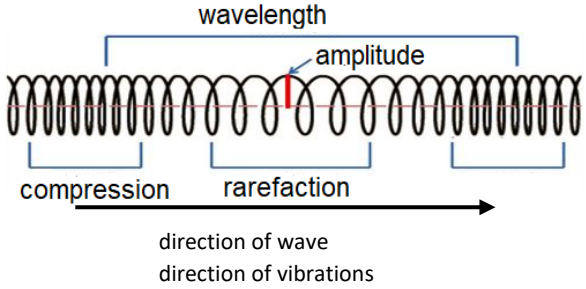


(4) The pH Scale

a) What pH value would you expect for soap? Explain why.
b) What pH value would you expect for hydrochloric acid? Explain why.

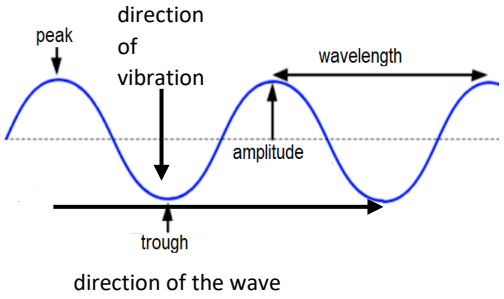
(1) Key Word	Match the Definitions to the Key Words
a) Amplitude	The regular up and down, or back and forward movement of the wave. Also known as vibration.
b) Angle of Incidence	Light ray moving towards a surface or boundary (where the glass ends, and the air begins)
c) Angle of reflection	'Stretch' The stretched part of the longitudinal wave.
d) Compression	Angle between the normal and incident ray.
e) Frequency	A medium is anything made of particles of a solid, liquid or gas. Also known as 'substance', or 'stuff'
f) Incident Ray	The frequency of a sound. Sounds with a high pitch have a high frequency.
g) Medium	The number of waves produced each second. The unit of frequency is hertz (Hz).
h) Normal line	Squash' The squashed part of the longitudinal wave.
i) Oscillation	The length of a single wave, measured from one wave peak to the next.
j) Pitch	An imaginary line at right angles to the boundary.
k) Rarefaction	Light ray leaving a surface or boundary.
l) Reflected ray	The angle between the reflected ray and the normal.
m) Wavelength	The maximum height of a wave from the middle of the wave to its peak or trough.

(2) Longitudinal Wave



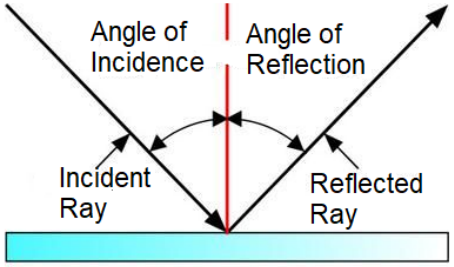
a) Provide the definition of a longitudinal wave.
b) Give an example of a longitudinal.
c) Explain whether a longitudinal wave will travel in space.

(3) Transverse wave



a) Provide the definition of transverse wave.
b) Give 2 examples of longitudinal waves.
c) If you increased the pitch of the wave to the left, describe how that would affect the amplitude, wavelength and frequency of the wave.

(4) Reflection



a) State the law of reflection.

b) If an incident ray was shone onto a smooth, shiny surface at 40^{O}, what angle will the reflected ray have? Explain your answer.

c) Compare diffuse and specular reflection and give an example where you could observe each.

Unit 9: Comparing people		
a	¿Cómo es tu mejor amigo/a?	*What is your best friend like?*
b	Él/Ella	*He/She*
c	Mis abuelo/abuela	*My grandfather/grandmother*
d	Mi amiga Ana	*My friend Ana*
e	Mi amigo Paco	*My friend Paco*
f	Mi hermano/hermana	*My brother/sister*
g	Mi hermanastro/hermanastra	*My stepbrother/stepsister*
h	Mi hijo/hija	*My son/daughter*
i	Mi madre/padre	*My mother/father*
j	Mi mejor amigo/amiga	*My best friend*
k	Mi novio/novia	*My boyfriend/girlfriend*
l	Mi primo/prima	*My cousin*
m	Mi tío/tía	*My aunt/uncle*
n	Mi perro	*My dog*
o	Mi gato	*My cat*
p	Mi pato	*My duck*
q	Mi tortuga	*My tortoise*
r	…es más (adjective) que	*…is more (adjective) than*
s	…es menos(adjective) que	*…is less (adjective) than*
t	…es tan (adjective) como	*…is as (adjective) as*
u	…son más (adjective) que	*…are more (adjective) than*
v	…son menos (adjective) que	*…are less (adjective) than*
w	…son tan (adjective) como	*…are as (adjective) as*
x	aburrido/a	*boring*
y	alto/a	*tall*
z	amable/simpatico/a	*kind*
aa	antipático/a	*mean/unkind*
ab	bajo/a	*short*
ac	cariñoso/a	*caring*
ad	débil	*weak*
ae	delgado/a	*slim*
af	deportista	*sporty*
ag	divertido/a	*fun*
ah	feo/a	*ugly*
ai	fuerte	*strong*
aj	gordo/a	*fat*
ak	guapo/a	*good-looking*
al	hablador/habladora	*talkative*
am	inteligente	*intelligent*
an	joven	*young*
ao	perezoso/a	*lazy*
ap	ruidoso/a	*noisy*
aq	trabajador/a	*hard-working*

Unit 4: ```````		
a	¿Qué haces en tu tiempo libre?	*What do you do in your free time?*
b	¿Qué hace tu amigo en su tiempo libre?	*What does your friend do in their free time?*
c	¿Qué deportes haces?	*What sports do you do?*
d	¿Haces otra actividad?	*Do you do another activity?*
e	¿Con qué frecuencia haces deporte?	*How often do you do sport?*
f	A menudo	*Often*
g	A veces	*Sometimes*
h	Casi nunca	*Almost never*
i	Cuando hace buen tiempo	*When it is nice weather*
j	Cuando hace mal tiempo	*When it is bad weather*
k	Raramente	*Rarely*

l	Todos los días	*Every day*	**ap**	a la playa	*to the beach*
m	Dos veces por semana	*Two times a week*	**aq**	al gimnasio	*to the gym*
n	(yo) juego	*I play*	**ar**	al parque	*to the park*
o	mi amigo/a juega	*mfriend plays*	**as**	al polideportivo	*to the sports centre/leisure centre*
p	al ajedrez	*chess*	**at**	de marcha	*for a walk*
q	al baloncesto	*basketball*	**au**	de pesca	*fishing*
r	a las cartas	*cards*	**av**	en bici	*by bike*
s	al fútbol	*football*	***Unit 5: Things I like/dislike: Free time***		
t	al tenis	*tennis*	**a**	¿Qué te gusta hacer en tu tiempo libre?	*What do you like doing in your free time?*
u	con mis amigos/as	*with my friends*	**b**	Cuando tengo tiempo	*When I have time*
v	(yo) hago	*I do*	**c**	En mi tiempo libre	*In my free time*
w	mi amigo/a hace	*my friend does*	**d**	me encanta	*I love*
x	ciclismo	*cycling*	**e**	me gusta	*I like*
y	los deberes	*homework*	**f**	no me gusta	*I don't like*
z	deporte	*sport*	**g**	jugar	*to play*
aa	equitación	*horseriding*	**h**	a la Play	*the playstation*
ab	escalada	*climbing*	**i**	a videojuegos	*videogames*
ac	esquí	*skiing*	**j**	al ajedrez	*chess*
ad	footing	*jogging*	**k**	a las cartas	*cards*
ae	natación	*swimming*	**l**	al baloncesto	*basketball*
af	pesas	*weightlifting*	**m**	al fútbol	*football*
ag	senderismo	*hiking*	**n**	al tenis	*tennis*
ah	(yo) voy	*I go*	**o**	en el ordenador	*on the computer*
ai	mi amigo/a va	*my friend goes*	**p**	hacer	*to do*
aj	a casa de mi amigo/a	*to my friend's house*	**q**	ciclismo	*cycling*
ak	a la montaña	*to the mountain*	**r**	deporte	*sport*
al	a la piscina	*to the swimming pool*	**s**	equitación	*horseriding*

t	footing	*jogging*
u	natación	*swimming*
v	senderismo	*hiking*
w	ir	*to go*
x	a casa de mi amigo	*to my friend's house*
y	al centro comercial	*to the chopping centre*
z	al gimnasio	*to the gym*
aa	al parque	*to the park*
ab	al polideportivo	*to the leisure centre*
ac	a la piscina	*to the swimming pool*
ad	de paseo	*for a walk*
ae	de pesca	*fishing*
af	con mi amiga Ana	*with my friend Ana*
ag	con mi amigo Pedro	*with my friend Pedro*
ah	me gusta	*I like (it)*
ai	no me gusta	*I don't like(it)*
aj	porque	*because*
ak	es/no es	*it is/it isn't*
al	aburrido	*boring*
am	agotador	*tiring*
an	divertido	*fun*
ao	emocionante	*exciting*
ap	interesante	*interesante*
aq	saludable	*healthy*

Unit 12: Talking about my daily routine

a	Háblame de tu rutina diaria	*Tell me about your daily routine*
b	¿A qué hora te levantas?	*What timedo you get up?*
c	¿Cómo vas al colegio?	*How do you go to school?*
e	¿Qué haces después del colegio?	*What do you do after school?*
f	Almuerzo	*I have lunch*

g	Ceno	*I have dinner*
h	Desayuno	*I have breakfast*
i	Descanso	*I relax*
j	Hago mis deberes	*I do my homework*
k	Juego en el ordenador	*I playo n the computer*
l	Me acuesto	*I go to bed*
g	Me lavo los dientes	*I clean my teeth*
h	Me levanto	*I get up*
i	Me visto	*I get dressed*
j	Salgo de casa	*I leave the house*
k	Veo la tele	*I watch TV*
l	Vuelvo a casa	*I return home*
m	Voy al colegio	*I go to school*
n	a pie	*on foot*
o	en autobús	*by bus*
p	en coche	*by car*
q	luego	*later*
r	después	*afterwards*
s	finalmente	*finally*
t	a la una	*at one o'clock*
u	a eso de las dos	*at around two o'clock*
v	a las cuatro	*at four o'clock*
w	a las cinco y cinco	*at five past five*
x	a las cinco y diez	*at ten past five*
y	a las cinco y cuarto	*at quarter past five*
a	a las cinco y veinte	*at twenty past five*
aa	a las seis y veinticinco	*at twenty-five past six*
ab	a las siete y media	*at half past seven*
ac	a las ocho menos veinticinco	*at twenty-five to eight*
ad	a las nueve menos veinte	*at twenty to nine*

ae	a las diez menos cuarto	*at a quarter to ten*
af	a las once menos diez	*at ten to eleven*
ag	a las dos menos cinco	*at five to two*
ah	de la mañana	*in the morning*
ai	de la tarde	*in the afternoon*
aj	de la noche	*at night*
ak	a mediodía	*at midday*
al	a medianoche	*at midnight*

5. Gramática – Key rules and terms

Infinitive

The basic form of the verb showing simply the action, but nothing about the tense, person or mood; in English this is shown as "to do", "to play" etc.

In Spanish, infinitives end in either **er/ir** or **ar**. For example:

1. **vivir**=to live
2. **jugar**=to play
3. **hacer**=to do
4. **ir**=to go
5. **ser**=to be
6. **tener**=to have
7. **ver**=to see

Opinions with infinitives

When you give an opinion about a verb, the verb needs to stay in the infinitive. For example

Me gusta vivir en Bournemouth = I like living in Bournemouth
Me encanta hacer deporte=I love doing sport
No me gusta nada ver la tele=I really don't like watching TV

Conjugation

The change that takes place in a verb to express tense, mood, person etc.

For most verbs in Spanish, in the present tense, you conjugate by

Step 1) Take the infinitive – e.g. llevar=to wear
Step 2) Remove the infinitive ending – e.g. llev~~ar~~
Step 3) Add the relevant ending, depending on who the verb relates to e.g. - llev**o**=I wear, llev**as**=you wear

	llevar (to wear)	**comer (to eat)**	**vivir (to live)**
Yo (I)	llev**o**	com**o**	viv**o**
Tú (you)	llev**as**	com**es**	viv**es**
él/ella (he/she)	llev**a**	com**e**	viv**e**
nosotros/as (we)	llev**amos**	com**emos**	viv**imos**
vosotros/as (you pl)	llev**áis**	com**éis**	viv**ís**
ellos/ellas (they)	llev**an**	com**en**	viv**en**

Irregular Verbs – These verbs do not follow the rules stated above.

	ser=to be	**tener=to have**	**ir=to go**
Yo (I)	soy	tengo	voy
Tú (you)	eres	tienes	vas
él/ella (he/she)	es	tiene	va
nosotros/as (we)	somos	temenos	vamos
vosotros/as (you pl)	sois	tenéis	vais
ellos/ellas (they)	son	tienen	van

The Bourne Academy Scholars Programme

Knowledge Organiser: Year 7 Summer Term Spanish

1. Grammatical vocabulary .

i. Define the term conjugation.
ii. What changes in regular verbs when we conjugate them in the present tense in Spanish?

2. Spanish Cultural Research – use one of the tablets in HU6 to write a paragraph about the following.

i. Who is he?
ii. What is he famous for?
iii. Where did he come from?

Salvador Dali

3. Dictionary skills

Find out the following information about a bilingual Spanish dictionary.
Look up the word "**wave**" in the dictionary. You will see that there are several options, depending on how it is used. Please fill in the appropriate versions below.

wave (verb)_____ wave (noun - gesture)_____ wave (noun – sea)_____

Why do you think online translators can be flawed? Write a response in your book.

4. Key Verbs

Revise and learn by heart the following irregular verbs from memory.

ser=to be	**ir=to go**	**tener=to have**	**jugar=to play**
soy=I am	voy=I go	tengo=I have	juego=I play
eres=You are	vas=you go	tienes=you have	juegas=you play
es=He/she is	va=he/she goes	tiene=he/she has	juega=he/she plays
somos=We are	vamos=we go	tenemos=we have	jugamos=we play
sois= You (pl) are	vais=you (pl) go	tenéis=you (pl) have	jugáis=you (pl) play
son = They are	van=they go	tienen=they have	juegan=they play

5. Spot the mistake!

Circle/highlight the mistake in each sentence, then re-write the sentence correctly.

a. Mi hermano tengo el pelo marrón. _____
b. Me gusta juego al baloncesto _____
c. Cuando hace sol yo vas a la playa _____
d. Me gusta voy al polideportivo _____
e. Mi padrastro es más alta que mi madre _____

The Bourne Academy

Knowledge Organiser: Year 7 Summer Term - TED

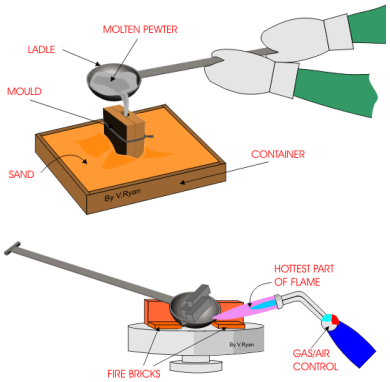
1. Pewter Casting

Casting is a **manufacturing process** used for making 3D shapes out of metal.

Metal is placed into a ladle and heated to its **melting point** using a gas torch.

When the metal reaches its melting point it becomes a liquid. Then it is poured into a **mould**: it goes through the **sprue** and into the **cavity**.

When the metal has cooled the mould is opened and the shape is released.



2. Metals

There are three main groups of metals:

Ferrous metals contain iron. They are magnetic and will rust (corrode). Types of ferrous metals include mild steel.

Non-ferrous metals do not contain iron. They are non-magnetic and will not rust (corrode). Types of non-ferrous metals include aluminium.

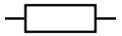
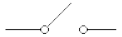
Alloys are a mix of metal. This means alloys have improved properties and are suitable for a range of different products. Types of alloys include **pewter,** which is used in casting.

3. Electronics

Different components have different functions:

Input Components : The input is what sets an electrical circuit in action. It allows the first signal to be sent.

Output components : The output is what the circuit results in and ultimately does.

Batteries		Store and release electrical energy.
Resistors		Reduced the flow of electrical current.
Switches		Makes or breaks a electrical circuit.
LED		Emits light when an electrical current in run up its Anode and down its Cathode.

4. Product Analysis

A product analysis looks at current products and assesses whether they are successful or require improving.

When carrying out a successful product analysis you always ask yourself the following questions in relation to the product you are looking at….

Medium

Hot

1. Who is the product designed for? How do you know this?
2. How has the designer made the product easy to use?
3. What features does the product have which makes it a good product?
4. What features does the product have which could make it hard to use?
5. What materials have been used and why?
6. How would you improve the product?

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Knowledge Organiser: Year 7 Summer Term - TED

5. Timbers

Hardwoods are durable and often used in expensive furniture. Hardwoods tend to have a close grain so look aesthetically better. They grow slowly. Example= Oak, Mahogany, Teak and Beech.

Softwoods are cheaper than hardwoods. They grow quickly. IKEA use softwood from sustainable forests, meaning that for every tree cut down they plant one in its place, a softwood tree takes 2—30 years to grow. This is better for the environment. They have very visible grain. Examples= Pine and Spruce.

Manufactured boards are timber sheets which are produced by bonding wood layers or wood fibres together. They are manmade. Examples are Plywood and MDF.

6. Sustainability

Reduce — Using less materials and energy. Reducing the amount of packaging in products.

Reuse — Designing reusable products that do not need to be thrown away straight after use.

Recycle — Recycling products into new materials to be used again. Choosing recyclable materials.

Sustainability is about designers and manufacturers working together to minimise the impact products have on the environment. It is about being environmentally friendly.

7. New and Digital Technologies

CAD stands for **Computer Aided Design**. CAD software allows designers and engineers to design and model their products on computers. Designs are more easily to edited.

CAM stands for **Computer Aided Manufacture**. CAM processes include Laser Cutting, 3D Printing and Robotics. It is quicker, more accurate and creates intricate items.

8. Quality Control

8. Quality Control is when engineers and designs make regular checks to ensure what they are doing is correct.

Quality control checking reduces mistakes, waste materials and wasted time.

9. Working safely

PPE stands for **Personal Protective Equipment.**

PPE you will wear:

- An apron
- Safety goggles
- Leather Gloves

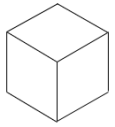
10. Design Communication

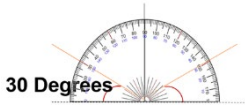
It is important all ideas are communicated clearly through drawings and annotation.

Annotation is the labelling of your work to fully explain it.

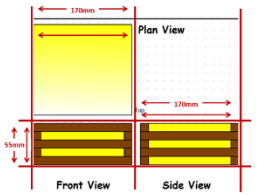
Types of drawing include:

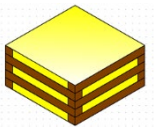
Isometric 3D drawing:



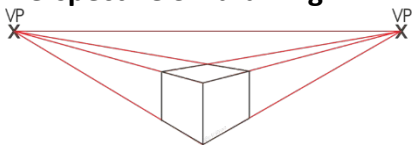


Orthographic 2D drawing:





Perspective 3D drawing:



Free hand sketching:

11. Project Tools and Equipment

Wire Cutters

Soldering iron

Soldering iron Holder

Wet sponge

Solder sucker

Solder

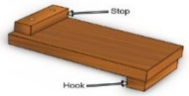
Metal Vice

Hacksaw

File

Engineer's Square

Bench Hook



Tenon Saw

12. Material Properties

Material properties are the characteristics of materials and the way they perform.

Durable: Withstands wear and tear over time.

Hard: Withstands scratching.

Tough: Withstands sudden impact.

Strength to Weight ratio: Strong but still lightweight.

Ductile: Can be stretched.

Conductor: Allows passage of heat or electricity.

Insulator: Does not conduct heat or electricity.

Corrosion resistance: Resistance to rust and UV light.

Malleable: Can be shaped, pressed and moulded.

13. Engineering Sectors

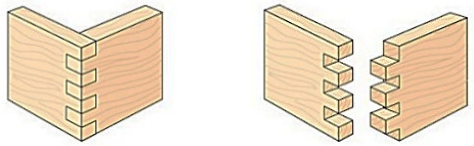
Sectors are different job areas within engineering. This includes:

Electrical, Mechanical, Automotive, Aeronautical, Architectural and Design Engineering.

Each sector carries out different engineering tasks.

14. Joining Materials

Comb joints are used in furniture construction, especially when making drawers. They provide extra strength to the corner of wooden products. Comb Joints interlock to fit components together.



PVA adhesive is used to join timbers. The glue takes 24 hours to fully dry before joints are secured.

Soldered or welded joints are used for metal components. They heat two metal components and join them with a filler metal that hardens and holds them together.

15. Materials

Timbers: MDF, Pine, Ply, Oak

Polymers: Acrylic, Rubber, HIPS

Metals: Aluminium, Mild Steel, Pewter.

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Bourne Scholars Knowledge Organiser: Year 7 Summer Term – TED

1. Higher Order Thinking: Putting knowledge into context.

Pick an everyday object or product. Now keeping that object or product in mind, pick one of the questions below to discuss it in more depth. Each question is worth 6 marks.

Workshop tools and processes:

Research using the internet or think back to workshop skills you have learnt. Can you discuss any ways the product could be manufactured? What tools and processes could be used?

Material properties:

Identify which properties are required for this product to function at its best? Evaluate why these properties are important in helping the product perform well?

Sustainability and Renewable Energy:

Discuss how could you make the product more environmentally friendly? Explain what you could change?

Aesthetics:

Is the product visually appealing? Will it appeal to its user? Discuss how could you develop the product to be aesthetically pleasing and suitable for its target user group?

2. Challenge Tasks: Research, Report, Create.

1) Design a solution to help a football coach carry 12 drinks bottles easily.

2) Research smart materials and suggest ways smart materials can improve everyday products in your home.

3)Design a top tips/ health and safety poster for your current TED project.

4) How can Coca Cole become a more sustainable company? Write to them highlighting ways they can be more environmentally friendly.

5) Research and discuss the life cycle of a plastic bottle. Create a poster.

6) How can everyday products be made easier to use for people with mobility problems. Redesign items in your home to make them more ergonomic and easier to use.

7) Research different Engineering jobs. Create a skills list for at least 5 job sectors.

3. Visit, Watch, Do.

Visit this link to a sketch-a-day YouTube channel. Pick a video tutorial and develop your drawing skills by following the instructions and demos.

https://www.youtube.com/channel/UCBtSgEZk914z5InEs_U2J3w

4. Analyse and Develop

1. Who is the product designed for? How do you know this?
2. How has the designer made the product easy to use?
3. What features does the product have which makes it a good product?
4. What features does the product have which could make it hard to use?
5. How would you improve the product? Why would you make that change?

Notes

Notes

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Hadow Road, Bournemouth, Dorset. BH10 5HS
www.thebourneacademy.com
Tel: 01202 528554