THE BOURNE ACADEMY KNOWLEDGE ORGANISER

everyone is a learner, everyone is a teacher



Ambitious Self Confident Physically Literate Independent Resilient Emotionally Literate

Name: House:

The Bourne Academy Knowledge Organiser: Year 8 Summer Term



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Knowledge Organiser: Year 8 Summer Term

Excellence at The Bourne 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



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?



Knowledge Organiser: Year 8 Summer Term – Art



A. Plastic and the Environment	B. Artists	C. Elements of Art
Plastic in the Ocean:Around 13 million tonnes of plastic end up in the ocean every year, and plastic makes up 80% of all marine debris found from surface waters to deep-sea sediments. Marine species ingest or are entangled by plastic debris, which causes severe injuries and death.		Elements of art are stylistic features in a piece used to make the artwork interesting. Artists use a combination of these in their compositions/artwork: Line Shape Form Texture Pattern
D. Keywords• Primary Colour• Plastic• Secondary Colour• Pollution• Warm Colours• Crisis• Cool Colours• Ocean• Hue• Disposable• Tint• Single-use• Shade• Recycle• Outlines• Culture• Watercolour• Everyday Objects• Wax resist• Mass Production	 Texture Pattern Tone Surface Media Expression Contrast Proportion Perspective Negative Space Mandy Barker John Dahlsen Steve McPherson Angela Haseltine Pozzi Gilles Cenazandotti Dale Chihuly 	 Tone Surface Media Expression Contrast Proportion Perspective Negative Space Mark making Experiment Space Design Vibrant



- 1. Line a mark made using a drawing tool or brush. They can be thick, thin, horizontal, vertical, zigzag, diagonal, curly, curved, spiral etc.
- 2. Shape an area that is and created through lines; two-dimensional, flat, or limited in height and width.
- 3. Form an area that is three-dimensional and enclosed; includes height, width and depth (as in a cube, a sphere, a pyramid, or cylinder).
- 4. Texture how something feels. There are two types of texture; actual (tactile) texture and visual texture (that can be created).
- 5. Pattern a design in which lines, shapes, forms or colours are repeated. The part that is repeated is called a motif. Patterns can be regular or irregular.
- 6. Tone refers to the light and dark values used to render a realistic object. Shading is used to create shadows and create 'form'.
- 7. Surface the uppermost layer of a thing. The surface determines how a colour is reflected, absorbed or scattered, depending upon its texture.
- 8. Media the material and tools used by an artist, or designer to create a work of art, for example, 'pen and ink where the pen is the tool and the ink is the material.
- 9. Expression the ability to convey emotion or create a mood or feeling within a piece of art.
- 10. Contrast refers to the arrangement of opposite elements and effects. For example, light and dark colours, smooth and rough textures, large and small shapes.
- 11. Proportion refers to the dimensions of a composition and relationships between height, width and depth. Proportion also describes how the sizes of different parts of a piece of art or design relate to each other.
- 12. Perspective usually refers to the representation of three-dimensional objects or spaces in two dimensional artworks. Artists use perspective techniques to create a realistic impression of depth, and 'play with' perspective to present dramatic or disorientating images.
- 13. Negative Space is the space around and between the subject of an image. Negative space may be most evident when the space around a subject, not the subject itself, forms an interesting or artistically relevant shape.
- 14. Mark making describes the different lines, dots, marks, patterns, and textures we create in an artwork. It can be loose and gestural or controlled and neat.
- 15. Experiment a desire to extend the boundaries of the art in terms of materials or techniques, which can include novel and provocative ideas expressed through traditional or innovative techniques, to explore creative possibilities.
- 16. Space or 'positive space' in a work of art refers to a feeling of depth or three dimensions. It can also refer to the artist's use of the area within the picture plane.
- 17. Design refers to a visual look or a shape given to a certain object, to make it more attractive, make it more comfortable or to improve another characteristic.
- 18. Vibrant refers to the intensity of colour; they are bright and strong.

Knowledge Organiser: Year 8 Summer Term – Art



The ocean is said to be Earth's life support, with 97% of the world's water held by the ocean. We rely on it to regulate our climate, absorb CO2 and it is the number one source for protein for over a billion people.

However, at the rate we are polluting the ocean with around 12.7 million tonnes of plastic a year, the damage we are doing to marine life and our ecosystem is becoming irreparable. Our actions over the next 10 years will determine the state of the ocean for the next 10,000 years to come.

The plastic waste statistics below tell you everything you need to know about how much damage we are doing to the oceans' ecosystems, marine life and how it impacts humanity.

Shocking Ocean Plastic Statistics:

More than **1 million seabirds** and **100,000 marine animals die** from plastic pollution every year.

100% of baby sea turtles have plastic in their stomachs.

There are now 5.25 trillion macro and micro pieces of plastic in our ocean and 46,000 pieces in every square mile of ocean, weighing up to 269,000 tonnes.

Every day around 8 million pieces of plastic makes their way into our oceans.

The Great Pacific Garbage Patch is around **1.6 million square kilometres** – bigger than Texas.

The world produces **381 million tonnes** in plastic waste yearly – this is set to double by 2034.

50% of this is single-use plastic and only 9% has ever been recycled.

Over 2 million tonnes of plastic packaging are used in the UK each year.

88% of the sea's surface is polluted by plastic waste.

Between 8 to 14 million tonnes enters our oceans every year.

Britain contributes an estimated 1.7 million tonnes of plastic annually.

Knowledge Organiser: Year 8 Summer Term – Art



The US contributes **38 million tonnes** of plastic every year.

Plastic packaging is the biggest culprit, resulting in **80 million tonnes** of waste yearly from the US alone.

On UK beaches there are **5000 pieces of plastic and 150 plastic bottles** for each mile.

More than **1 million plastic bags** end up as rubbish every minute.

The world uses over **500 billion plastic bags** a year – that's **150 for each person on Earth.**

8.3 billion plastic straws pollute the world's beaches, but only 1% of straws end up as waste in the ocean.

Since 2020 the number of plastics in the sea is higher than the number of fish.

1 in 3 fish caught for human consumption contains plastic.

Plastic microbeads are estimated to be **one million times more toxic than the seawater** around it.

Products containing microbeads can release **100,000 tiny beads** with just one squeeze.



Knowledge Organiser: Year 8 Summer Term – Computing



1. Databases

a) Data Modelling - looking at data and using it to make future predictions/decisions

b) Data Dashboard - is a visual display of data providing information at a glance to track, analyse and gain a deeper understanding

c) Database - is an organised collection of structured information stored on a computer

d) Record - Collection of data held for each person

e) Field - Type of data collected, e.g. names

f) Sort - organises data, such as alphabetically

g) Filter - makes it easier to find specific data by only showing certain types of data

h) Data Formatting - what type of data is being used (e.g. currency, %, decimal places)

i) Entry - adding data into a database

j) Test Plan - this is used to make sure your database works with real-life examples

k) CSV - is a plain text file that contains a list of data. Can be imported into a spreadsheet

I) User Interface - how the user interacts with the database system, such as clickable buttons

2. The Internet



Software used to access the internet e.g. Microsoft Edge, Google Chrome

b) Website

Set of web pages under a single domain name e.g. https://www.youtube.com

c) Publish

Releasing a website onto the world wide web

d) WWW - world wide web

A giant network of connected computers. Uses HTTP protocol to transfer webpage data to your computer

e) Tim Berners-Lee

Invented the world wide web

f) Protocol

Set of rules (like the highway code for data) so information travels around the web getting to the right destination without data loss

g) URL - uniform resource locator

The address of your site e.g. http://www.bbc.co.uk

3. Creating Websites

a) HTML

The main language 'code' for webpages

It provides the structure of the page

b) CSS

Used to format the layout of the webpage

c) Tags

Code which commands how a browser displays text and image

d) DIV tags

Code which is used to split a webpage into different sections

e) House Style

Having the same consistent style throughout all pages of a website, such as colour scheme

f) HTML <html>

All html code for a webpage is positioned between the <head>...</head> tags

g) Body <body>

All web page content (text, images, etc) is positioned between the < body >...</body> tags

Knowledge Organiser: Year 8 Summer Term – Dance





Knowledge Organiser: Year 8 Summer Term – Dance



2. Key Skills

Physical Skills	Performance Skills	Technical Skills	Mental Skills	3. Choreographic Devices:
Posture Alignment Posture Balance Co-ordination Extension	Projection Focus Facial expressions Musicality Sensitivity Phrasing	Action Space Dynamics Relations Timing Rhythm	Repetition Mental rehearsal Feedback Movement memory	Canon Levels Repetition Directions Facings Speed Proximity Size Retrograde

4. Musical Theatre Vocabulary

- 3 Step-Turn: Turning using three steps.
- Bell kicks: Kicking heels together in the air.
- Pivot turns: One footsteps in front and then the body rotates in space.
- Jazz hands: Fingers are spread with lots of energy
- Kick ball change: Kick with one leg followed by two quick changes of weight from one ball of the foot to the other.

5. The beginnings of Musical Theatre

The origins of Musical Theatre lie in Opera.

Opera was very fashionable with the upper classes in Europe in the 1700s and 1800s. In the late 1800s, a duo called Gilbert and Sullivan began writing short, comical operas designed for everyone, not just the upper classes. This continued to develop throughout the early 1900s.

6. The Golden Age 1943-1968:

This period is when the tradition of musicals was truly established in Britain and America. Many musicals written and premiered in this time are still loved and performed today.

7. 1970's to the present day

Over this period, audiences have seen musicals split into genres and subcategories. Musicals now often address very serious issues and are not just for entertainment. We have also seen many adaptations of films into musicals, and musicals based on the career of a group or artist. A strong musical tradition still exists in Britain and America, not just on Broadway or in London everywhere. Film has been greatly influenced by musicals.

Knowledge Organiser: Year 8 Summer Term – Drama



1. Performance Skills	
Characterisation	Creating a character which is different to yourself.
Facial expressions	Using your face to show how a character is feeling.
Levels	Using different heights to communicate meaning
Posture	The way you stand or sit.
Vocal clarity	Speaking clearly so that the audience can understand the stimulus.

2. Drama Techniques	
Narration	Providing the audience with a context/information about the scene.
Slow Motion	Moving at least 2 thirds slower than normal speed.
Still image	Creating a living picture
Thought-Tracking	Revealing a character's thoughts and feelings to the audience.

3. Dig Deeper QuestionsWhich techniques could be used to add interest to your work?How do you create a character?How might thought-tracking change an audience's opinion?What impact will narration have on your work?

Knowledge Organiser: Year 8 Summer Term – Drama



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Knowledge Organiser: Year 8 Summer Term – English – Poetry



1. Poetic Form	Definition
a) Form	The type of poem eg. sonnet, free verse, dramatic monologue.
b) Stanza	A group of lines in a poem. A poetic paragraph.
c) Quatrain	A stanza consisting of four lines.
d) Rhythm	The beat of a poem created by stressed and unstressed syllables
e) Syllable	A beat of spoken language. For example, water has two syllables- wa/ter.
f) Rhyme	Two words with the same sound, typically at the end of lines.
g) Rhyming couplet	A pair of lines that rhyme.
h) Alternate rhyme	When every other line rhymes.

2. Poetic Structure	Definition
a) Structure	The order of events and punctuation within the poem.
b) Tone	The mood of the writing. The feeling that the writer has created.
c) Enjambment	The continuation of one sentence into the next line of poetry.
d) Caesura	A pause near the middle of a line created with punctuation.
e) Speaker	The voice of the poem.

3. Poetic forms	Definition
a) Free verse	Any form of poetry which does not rely on consistent patterns of rhyme. Sounds like natural speech.
b) Dramatic monologue	A poem written in the form of a speech which gives an insight into the speaker's history and mind.

4. Language techniques	Definition	Example	
a) Hyperbole	Exaggeration for effect.	The lesson was <u>never-ending.</u>	
b) Oxymoron	Two contrasting words placed next to each other for effect.	The <u>deafening silence was</u> <u>bitter sweet.</u>	
c) Extended metaphor	A metaphor that is developed or returned to over the course of a sentence, a paragraph, or even an entire text	In 'Not My Business,' the yam is an extended metaphor for human impulse to cling to life.	
d) Imagery	When descriptive language is used to create a clear picture.	A host, of <u>golden daffodils</u> ; <u>Beside</u> the <u>lake</u> , <u>beneath</u> the <u>trees</u> , <u>fluttering</u> and <u>dancing</u> in the <u>breeze</u> .	
5. Tones	Examples		
Positive	Joyful, passionate, celebratory, calm, nostalgic		
Negative	Sad, angry, disappointed, tragic		

Knowledge Organiser: Year 8 Summer Term – Food – Hospitality and Catering



Kitchen operations and menu planning

1. Customer Needs	3. Kitchen Work Flow	4. Hospitality Staff
Customers have different needs for food. This can be due to special diets, health, and even your age. Special dietary needs to consider are: vegetarian, vegan, religious diets, allergies, coeliac's disease, food intolerances. If these considerations are not	A kitchen work flow refers to the way food and staff move around the kitchen when completing tasks such as preparing, cooking, and serving food. Work flow in a kitchen should follow a logical process so that it is efficient and hygienic. A successful work	There are two areas in the hospitality industry, front of house and back of house. Front of house refers to any staff the customer may see, e.g. a receptionist. Back of house refers to staff the customer may not see, e.g. a chef.
made when cooking a preparing food, there is a risk that someone could become ill. Nutrition through life differs mainly due to the need	safely and quickly. Here are the main operations (tasks) that happen in	Every member of front of house and back of house staff have their own responsibilities. They work as a team to ensure smooth running of the
for energy and protein for growth and development. Younger people are growing, so need more energy. Older adults only need to maintain their bodies, so	a standard commercial kitchen: Receiving: When food is delivered, it needs to be checked before it is stored to make sure the food is	kitchen and restaurant. Here is an example of the hierarchy (employee structure) in a restaurant. The staff closest to the
less energy is needed. You would need to consider the age of your customer in establishments such as retirement homes or schools.	in good condition and safe to eat. Storing: When storing foods there needs to be appropriate areas such as cold (fridge/freezer) and	top have more responsibilities, training and experience than the ones near the bottom.
2. Other considerations	dry storage. If foods are not stored correctly it increases the risk of food poisoning.	Restaurant Owner
Dietary needs are not the only considerations that should be made when planning a menu. It is important that your dishes are appealing and suited to the type of establishments they will be served in. Organoleptic means the qualities of food that people experience with their senses. There are 5 senses: sight, smell, taste, sound, and touch. All these senses should be considered to make food as appetising as possible.	 Preparation and cooking: Food preparation and cooking areas need to be suitable and hygienic. Separate areas for meat, fish, and vegetables is important to reduce the risk of cross-contamination. Holding and serving: Before serving, food may be kept on a hot plate. This keeps the food above 63 degrees which means the food is hot and safe to eat when served. This also makes the food accessible for the serving staff. Cleaning: Dedicated areas of the kitchen for 	Front of houseBack of houseRestaurantHead ChefManagerSous ChefBar managerChef de partieHead WaiterCommis ChefBar staff andApprentice
Some different types of service styles are: plate service, counter service, table service, silver service.	washing up and waste disposal is important to help create a hygienic and efficient kitchen.	Plongeur

Knowledge Organiser: Year 8 Summer Term – French – J'adore les fêtes!



(A) Point de départ	Introduction	(B) Quelle est ta fête préférée?	Opinions
J'adore	I love	Je porte un masque	I wear a mask
J'aime (beaucoup)	I like (a lot)	Je retrouve mes copains	I meet my friends
Je préfère	I prefer	Je regarde la parade	I watch the parade
Je n'aime pas tellement	I don't really like	Je finis mes devoirs	I finish my homework
Je n'aime pas	I don't like	Je choisis des vêtements	I choose clothes
Je n'aime pas du tout	I don't like at all	J'attends la fête avec impatience	I look forward to the party
Je déteste	I hate	Je rends visite	l visit
		J'entends la musique	I hear the music
C'est marrant	It's funny	Le matin	The morning
C'est bête	It's stupid	L'après-midi	The afternoon
C'est trop militaire	It's too militaristic	Le soir	The evening
C'est trop commercial	It's too commercial		
		Un défilé	A parade
		Un groupe de filles/garçons	A group of girls/boys
		Ils/Elles sont dans la rue/en ville	They are in the street/town
		Ils/Elles marchent	They are walking
		applaudissent	clapping
		portent des vêtement	wearing amazing
		incroyables	clothes
(C) Et avec ça?	Anything else?	(D) Et avec ça?	(E) Anything else?
Un chou-fleur	A cauliflower	Le poisson	The fish
Un citron	A lemon	Le fromage	The cheese
Un haricot	A bean	Le jambon	The ham
Une pomme	An apple	100 grammes de	100 grammes of
Une pomme de terre	A potato	Une tranche	A slice
Un œuf	An egg	Un morceau	A bit
		Ça fait combien ?	How much is it?

Knowledge Organiser: Year 8 Summer Term – French – J'adore les fêtes!



(D) Miam-miam, c'est bon!	Yummy!	(E) Tu vas faire un voyage scolaire?	Are you going to go on a school trip?
Une salade niçoise	A tuna and olive salad	Je vais aller en Alsace	I'm going to go to Alsace
Les moules-frites	Mussels and chips	Je vais visiter les marchés de Noel	I'm going to visit the Christmas markets
La quiche lorraine	Bacon quiche	Je vais choisir des cadeaux	I'm going to choose presents
La bouillabaisse	Fish stew	Je vais admirer les maisons illuminées	I'm going to admire the illuminated houses
Les crêpes Suzette	Pancakes with orange sauce	Je vais écouter des chorales	I'm going to listen to the choirs
Le beurre	Butter	Je vais gouter du pain d'épices	I'm going to try gingerbread
Le vin blanc/rouge	White/red wine		
L'ail	Garlic		
Une spécialité	A specialty		
Adjectifs :	Adjectives:		
Savoureux	Tasty		
Léger	Light		
Salé	Salty		
Sucré	sweet		
(F) Bonne année!	Happy new year!	Les mots essentiels	High-frequency words
Je joue sur mon portable	I play on my phone	Qu'est-ce que?	What?
Je finis mes devoirs à la recrée	I finish homework at break	Comment?	How?
Je n'aide pas mes parents	I don't help my parents	Avec qui ?	Who with?
Je fais la grasse matinée	I have a lie-in	Pourquoi?	Why?
Je ne suis pas sympa avec	I'm not kind to	Où?	Where?
		Quand?	When?

Knowledge Organiser: Year 8 Summer Term – Geography – UK Geography Part 1



1. Key Vocabulary		2. The Air Masses	3. Types of Rain		
Temperate Climate	Average monthly temperatures above 10°C in their warmest months and above –3°C in their colder months	Met Office Arctic Maritime Air Mass Polar Maritime Air Mass Your Greenland / Arctic Sea Yet, cold air brings cold showery weather Polar Continental Air Mass From: Central Europe	This is	Rising air cools, condenses and forms clouds	
Global Atmospheric Circulation	A description of how air move in the atmosphere from the equator to the poles.	Returning Polar Maritime From: Greenland / Arctic wia North Atlantic Moist, mild and unstable air bringing cloud and rain showers.	convectional rainfall	Warm, moist pockets of air (convection urments) rise rapidy The warm ground heats the a shallow layer of the air above. Moisture on the ground evaporates	
Cyclone	Low pressure converging air	From: Atlantic From: North Africa Warm, moist air brings cloud, rain and mild weather. Hot, dry air brings hot weather in summer.		S internet geograp	
Anticyclone	High pressure diverging air	4. Climate Graphs		forms clouds	
Jet Stream	Fast flowing air currents that control air masses	Climate graphs are used to give us an idea of the	This is frontal		
Air Masses	Pockets of air coming from different directions.	weather and long term climate conditions in a place. Data on these graphs includes: temperature and	rainfall		
Relief Rainfall	Rain caused by air forced to rise over mountains.			Warm air forced to It rains heavily	
Frontal Rainfall	Rain caused as air is forced to rise over another air mass.	100 90 70 50 50 50 50 50 50 50 50 50 50 50 50 50	This is relief	Rain shadow Air cools and condenses, brite shadow Werm, molet alt rises over	
Convectional Rainfall	Rain caused by air forced to rise due to warm ground.		raintali	high ground Precipitation Wind	
Depression	Area of low pressure.	0 J F M A M J J A S O N D Months		Werm Crean G Internet geography	

Knowledge Organiser: Year 8 Summer Term – Geography – UK Geography Part 2



4. Key Vocabulary		5. The Formation of a Stack		6. The process of Longshore Drift		
High energy Coastline	Coastlines that are formed from waves with high energy.	1. Large crack, 3. The cave 5. The arch is opened up by becomes eroded and hydraulic action larger collapses	7. The stac is eroded forming a stump	Longshore drift is the movement of swash along the shoreline which is driven by the prevailing wind in that area.		
Low Energy Coastline	Coastlines that are formed from low energy waves.	Headland Direct Cliff r	ation of etreat			
Erosion	The wearing away of surfaces or sediments by water.	2. The crack grows into a cave by hydraulic action and abrasion 4. The cave breaks through the headland forming a natural arch a tall rock	aves stack	npdrift Direction Direction	a wind op	
Weathering	The wearing away of surfaces by weather.		7. Hu	Iman Influences on the UK Coastline		
Deposition	When pebbles or other sediments are dropped by water.	Residential – Over 50% of the		g – Over 50% of the ocean's	Energy source – The UK coastline is	
Constructive Waves	Low energy waves that beaches and spits.	world's population lives along the coastline. It's estimated	wildlife coastli	e can be found along the ne, which provides great tunity for ficherman, Over 24,000	climate. Strong offshore winds are responsible for generating 7% of	
Destructive Waves	High energy waves that are created in storm conditions.	live along the coastline. peop Industriation people in the ok oppo Industriation people in the ok oppo		e in the UK work for the fishing ry. The industry is worth \$1.4	the UK's electricity through wind turbines.	
Swash	The movement of a wave up the shore.	Tourism – Millions of tourists visit the UK coastline to enjoy the scenery. The tourism industry employs 200,000 terri people along the UK coastline. The jobs tend to be seasonal.Milit coast coast terri coast terri coast terri		r y – The Navy uses our UK ne for training. They also patrol	Industry – 50% of trade in Europe	
Backwash	The movement of a wave back into the ocean.			I waters to ensure that our ry is being protected. Submarines	UK is an island most trade is done by the sea. This helps cities and	
Prevailing Wind	The most influential wind in a given area.			as Trident) with nuclear missiles found near the coast of Scotland.	towns such as Southampton which is the 2nd largest port in the UK.	



Section A. Holocaust Overview What was it? The Holocaust was a genocide that took place during World War II, in which up to 17 million people were systematically exterminated by Nazi Germany and its collaborators. Around 6 million Jews were killed, in addition to Romanian people, ethnic Poles and Slavs, homosexual men, and many other groups. The Holocaust took place in several stages: Stage 1: Removal of Rights **GERMANY HOLDS** The Nuremberg Laws (1935) meant that Jews were fired **JEWS HOSTAGES** from jobs, forced to wear a yellow Star of David, stripped of German citizenship, and banned from German schools. LEADERS WON'T COMMENT ON **NEW CITIZENSHIP LAWS** OF REICHSTAG By BORIS SMOLAR Stage 2: Segregation Jews were forced out of their homes and into ghettos. The ghettos were filthy, with poor sanitation, and were extremely overcrowded. Food supplies were low, and many people starved to death **Stage 3: Extermination** Victims were sent to concentration camps, where many were forced to work in hellish conditions, where many died. Others were sent to the gas chambers. Later, camps opened for the sole purpose of extermination



Section B. Key Words	
1. Adolf Hitler	Leader of the Nazi Party and Germany from 1930-45 whose ideas encouraged members of his party to plan extermination of the Jews in Europe
2. Antisemitism	Discrimination, hatred or hostility towards Jews.
3. Aryan Race	The belief that Germans were descended from a 'Master Race' and all others were subhuman.
4. Auschwitz	Opened in 1940, one of the largest of the Nazi concentration and death camps where over a million Jewish people and other enemies of the Nazi state were exterminated
5. Book burning	Where books by anti-Nazi or Jewish authors were burned on public bonfires. A form of censorship.
6. Concentration Camp	Prisons established by the Nazis in WWII as a place to hold Jews, political, opponents and gypsies such as Dachau .
7. Einsatzgruppen	Nazi death squads that hunted and exterminated Jews during WWII
8. Eugenics	The study of 'hereditary improvement 'of the human race by selective breeding and avoiding inferior races.
9. Genocide	The complete extermination of a race of people
10. Ghetto	An overcrowded and unhygienic section of a city, sometimes walled, where all Jews were required to live.
11. Hitler Youth	An after-school youth organisation set up by the Nazis for young people in Germany aged 14 - 18. Designed to indoctrinate young people with Nazi ideas and prepare boys for military service.
12. Holocaust	The attempt by the Nazis and their collaborators to murder all the Jews in Europe from 1939-45. Also known as the Final Solution.
13. Jew	A person whose religion is Judaism. Normally of Jewish ethnicity
14. Nuremberg Laws 1935	Discrimination laws which banned marriage between Jews and Germans and removed Jewish citizenship and the right to vote.
15. Synagogue	A Jewish place of worship
16. Untermenschen	'Subhuman.'It is a term from Nazi racial ideology used to describe 'inferior people', especially 'the masses from the East,' that is Jews, Gypsies, Poles and Russians



Section C. Timel	Section C. Timeline					
1. November 11, 1919	Germany signs the armistice in WW1 and accepts defeat. Later punished by the Treaty of Versailles .					
2. Late 1930's	Hitler and the Nazi Party start to gain seats in parliament after the Wall Street Crash of 1929					
3. January, 1933	Hitler is elected Chancellor of Germany					
4. March, 1933	Concentration camps like Dachau are opened to jail enemies of the Nazis. Disabled people begin to be forced to have operations that prevent them from having children					
5. 1935	Nuremberg Laws are passed which restrict Jewish rights and marriage					
6. 1938	Kristallnacht / Night of Broken Glass: Across Germany, a night of violence against Jewish property results in nearly 100 murders.					
7. 1939	Jews are forced into ghettos in the towns to make it easier to control and later deport them.					
8. April, 1940	Auschwitz is built as a concentration camp but would later be modified to become an extermination (death) camp in 1942 called Birkenau . Almost 1,000,000 Jews would die in gas chambers as well as Slavs, gypsies and other people deemed subhuman.					
9. October 1940	The Warsaw Ghetto was the largest of all of the Jewish ghettos in German-occupied Europe during WWII. 400,000 Jews were imprisoned in only 1.3sq mi. of space and most did not survive the war.					
10. June, 1941	Invasion of the Soviet Union. Many Jews and more than 100,000 Roma are shot and put into mass graves by the Einsatzgruppen.					
11. January, 1942	A decision is made at the Wansee Conference to extend the mass killings of Jews in the occupied Soviet Union to the murder of every Jewish man, woman and child in Europe using extermination camps.					
12. April 1945	Hitler commits suicide as Soviet armies enter Berlin and the WWII in Europe ends soon afterwards					

Knowledge Organiser: Year 8 Summer Term – History – The Holocaust



	Section D. Key People					
1. Adolf Hitler		Leader of the Nazi Germany between 1933 and 1945. He had strong views antisemitic view which led to descrimination and extermination for Jewish people during WWII.				
2. Anne Frank		A German-born Jewish girl, who wrote a diary about the time that her family fled Germany and hid in an attic, in Amsterdam in the Netherlands. After years in hiding, they were arrested, and taken to concentration camps. Anne died of Typhus in Bergen-Belsen, only weeks before the concentration camps were liberated.				
3. Dietrich Bonhoeffer		Protestant theologian and member of the snti-Nazi Confessing Church in Germany who was executed on April 9, 1945 for his role in the resistance against Hitler.				
3. Heinrich Himmler		As Hitler's deputy, he was responsible for the formation of both the Nazi death squads and the extermination camps. A committed anti-Semite himself, it is believed that many ideas involving the Holocaust were actually Himmler's. He was captured and committed suicide in British custody.				
4. Oskar Schindler		An industrialist and member of the Nazi party, who is credited with saving 1,200 Jews during the Holocaust. He initially employed Jews in the interests of profit, but soon forged bonds with them, and showed initiative, courage, and dedication to save them. As time went on, he had to give Nazi officials increasing bribes to keep his workers safe.				



a. Quantitative data Numerical data Number of trees, distance travelled b. Qualitative data Text-based data that describes something Eye colour, car colour, mood c. Discrete data Numerical data that can only take certain values. Shoe sizes, number of pets, only take certain values. a) For each of the following state whether the data collected would be qualitative or quantitative. d. Continuous data Numerical data that can only take certain values. Shoe sizes, number of pets, of numbers. b) What is your favourite season? d. Continuous data Numerical data that can only take certain values. Height, mass, time. b) What is your favourite film? e. Mean The 'central' value of a set of numbers. What is the mean of 2, 7 and 9? 2, 2, 2, 3, 4, 8, 10 Answee g. Median The mode is the value that 1, 2, 2, 2, 3, 4, 8, 10. The mode is 2. Immedian of this list of numbers is 13 h. Frequency Table/ Tally chart A table used for counting and comparing. Immedian of this list of numbers is 13 Immedian of this list of numbers. Immedian of this list of numbers is 13 j. Pie Charts Used to compare discrete is to spony drawn using rectangular bars to show how large each value. Immedian of this list of numbers is 14 Immedian of this list of numbers is 13 j. Pie Charts Used to represent groups of data by being di	1.	Keywords	Definition	Example	2.Worked Examples
 b. Qualitative describes something c. Discrete data describes something c. Discrete data (hat can only take certain values. Only take the value take the value take take the value take take take take take take take tak	а.	Quantitative data	Numerical data	Number of trees, distance travelled	a) For each of the following state whether the data
c.Discrete data only take certain values. only take certain values. dataShoe sizes, number of pets, only take certain values. Height, mass, time. Height, mass, time.C) HOW many minutes does it take you to get to school? d) How long did you spend doing your homework yesterday: e) What is your favourite film?d.Continuous dataNumerical data that can take any value within a given range.Height, mass, time. What is the mean of 2, 7 and 9? 2 + 7 + 9 = 18 18 ± 3 = 6 So the mean is 6 1, 2,2,2,3,4,8,10 The mode is 2.Answer (2 + 7 + 9 = 18) 1, 2,2,2,3,4,8,10 The mode is 2.Answer (2 + 7 + 9 = 18) (2 + 7 + 9 = 18) 1, 2,2,2,3,4,8,10 The mode is 2.I) Which response has the highest frequency?g.MedianThe 'middle' of a sorted list of numbers.10, 11, 13, 15, 16 The mode is 2.I) Which response has the highest frequency?a.A table used for counting a nd compareing.Intervention of this list of numbers is 13IIh.Frequency Table/ Tally chartVised to compare discrete data. It is a graph drawn using rectangular bars to show how large each valueImage and table used for counting a fable used for counting a fable used for counting a fable.Image and table used for counting a fable.Image and table used for counting a fable.j.Pie ChartsUsed to compare discrete diata. It is a graph drawn using rectangular bars to show how large each value.Image and table used for counting a fable.Image and table used for counting a fable.j.Pie ChartsUsed to represent groups of data by being divided into sectors, where each secto	b.	Qualitative data	Text-based data that describes something	Eye colour, car colour, mood	b) What is your favourite season?
d. Continuous data Numerical data that can take any value within a given range. Height, mass, time. e. Mean The 'central' value of a set of numbers. What is the mean of 2, 7 and 9? 2 + 7 + 9 = 18 18 + 3 = 6 So the mean is 6 Answe f. Mode The mode is the value that 12,2,2,3,4,8,10 The mode is 2. Used to counting and comparing. Mala 1,2,2,2,3,4,8,10 The median of this list of numbers is 13 1) Which response has the highest frequency? h. Frequency Table/Tally chart A table used for counting and comparing. Image: Table Prequency 2 if it if it is a graph drawn using rectangular bars to show how large each value is. Image: Table Prequency is a graph drawn using rectangular bars to show how large each value is. Image: Table Prequency is a graph drawn using rectangular bars to show how large each value. Image: Table Prequency is a graph drawn using rectangular bars to show how large each value. Image: Table Prequency is a graph drawn using rectangular bars to show how large each value. Image: Table Prequency is a graph drawn using rectangular bars to show how large each value. Image: Table Prequency is a graph drawn using rectangular bars to show how large each value. Image: Table Prequency is a graph drawn using rectangular bars to show how large each value. Image: Table Prequency is a graph drawn using rectangular bars to show how large each value. Image: Table Prequency is a graph drawn using rectangular bars to show how large each value. Image: Table Prequency is a graph drawn using rectangular bars to show how large each value. Image: Table Preq	с.	Discrete data	Numerical data that can only take certain values.	Shoe sizes, number of pets,	c) How many minutes does it take you to get to school?d) How long did you spend doing your homework yesterday?
 e. Mean The 'central' value of a set of numbers. g. Median The mode is the value that occurs most often. g. Median The 'middle' of a sorted list of numbers. h. Frequency Table/ Tally chart i. Bar charts Used to compare discrete data. It is a graph drawn using rectangular bars to show how large each value is. j. Pie Charts Used to represent groups of data by being divided into sectors, where each of sector shows the relative size of each value. j. Pie Charts 	d.	Continuous data	Numerical data that can take any value within a given range.	Height, mass, time.	e) What is your favourite film?
f. Mode The mode is the value that occurs most often. 1,2,2,2,3,4,8,10 g. Median The 'middle' of a sorted list of numbers. 10, 11, 13, 15, 16 h. Frequency Table/ Tally chart A table used for counting and comparing. 10, 11, 13, 15, 16 The median of this list of numbers is 13 i. Bar charts Used to compare discrete data. It is a graph drawn using rectangular bars to show how large each value is. Image: Chart of the statements below are true of also of data by being divided into sectors, where each sector shows the relative size of each value. Used to represent groups of data by being divided into sectors, where each sector shows the relative size of each value. Image: Charts of the statements below are true of the statements is 3 j. Pie Charts Used to represent groups of data by being divided into sectors, where each sector shows the relative size of each value. Image: Chart of the statements below are true of the statements below are true of the statements is 3 j. Pie Charts Used to represent groups of data by being divided into sectors, where each sector shows the relative size of each value. Page: Chart of the statements is 3 Answers: a) True b) False c) False d) False c)	e.	Mean	The 'central' value of a set of numbers.	What is the mean of 2, 7 and 9? 2 + 7 + 9 = 18 18 ÷ 3 = 6 So the mean is 6	a) qualitative b) quantitative c) quantitative d) qualitative.
g. MedianThe 'middle' of a sorted list of numbers.10, 11, 13, 15, 16 The median of this list of numbers is 13h. Frequency Table/ Tally chartA table used for counting and comparing.Exercise of the median of this list of numbers is 13Image: the median of this list of numbers is 13i. Bar chartsUsed to compare discrete data. It is a graph drawn using rectangular bars to show how large each value is.Image: the median of the statements below are true of the statements are of the statements below are true of the statements below are t	f.	Mode	The mode is the value that occurs most often.	1,2,2,2,3,4,8,10 The mode is 2.	1) Which response has the highest frequency?
h. Frequency Table/ Tally chart A table used for counting and comparing. A table used for counting and table an	g.	Median	The 'middle' of a sorted list of numbers.	10, 11, 13, 15, 16 The median of this list of numbers is 13	Response Tally Frequency Maths 3
 i. Bar charts Used to compare discrete data. It is a graph drawn using rectangular bars to show how large each value is. j. Pie Charts Used to represent groups of data by being divided into sectors, where each sector shows the relative size of each value. j. Pie Charts Used to represent groups of data by being divided into sectors, where each sector shows the relative size of each value. j. Pie Charts 	h.	Frequency Table/ Tally chart	A table used for counting and comparing.	Response Tally Frequency O \mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm	English IIII 9 Science IIII First Science IIII 9 History 10 Computing 10 Computing 10 Then identify the response with the Then identify the response with the
 j. Pie Charts Used to represent groups of data by being divided into sectors, where each sector shows the relative size of each value. b) 4, 3, 9, 5, 3 The median is 9 c) 10, 3, 1, 5, 4 The range is from 6 d) 4, 3, 9, 5, 3 The median is 9 c) 10, 3, 1, 5, 4 The range is from 6 d) 4, 3, 1, 4 The mean is 3 Answers: a) True b) False c) False d) False 	i.	Bar charts	Used to compare discrete data. It is a graph drawn using rectangular bars to show how large each value is.	8 6 4 2 0 0 1 2 3 4 5 Number of lunchtime clubs attended last week	3) Decide whether each of the statements below are true or false a) 5, 3, 5, 4, 3, 5 The mode is 5
	j.	Pie Charts	Used to represent groups of data by being divided into sectors, where each sector shows the relative size of each value.	Purple Red Green Blue Orange Total: 24	 b) 4, 3, 9, 5, 3 The median is 9 c) 10, 3, 1, 5, 4 The range is from 6 d) 4, 3, 1, 4 The mean is 3 Answers: a) True b) False c) False d) False

Knowledge Organiser: Year 8 Summer Term – Mathematics 3b Y9 U2 – Probability



1. Keywords	Definition	Example	2. Worked examples
a. Probability scale	All probabilities must lie between 0 (impossible) and 1 (certain).	0 0.5 1 Impossible Evens Certain	1) Place these words on the probability scale Impossible, certain, evens, likely, unlikely
b. Event	One or more outcomes of an experiment.	When flipping a coin the probability of getting tails is p(tails)	Answers
c. Chance	Used to describe the chance of something happening.	The probability of it raining this month is likely.	impossible unlikely evens likely certain
d. Probability	number of outcomes that satisfy the event number of possible outcomes	The probability of getting a 3 is $\frac{3}{6} = \frac{1}{2}$	 2) Work out the probability of selecting pink in the bag
e. Theoretical probability	A number between 0 and 1 of something occurring.	P(yellow) = $\frac{1}{5}$ or 20% or 0.5	Bag B
f. Experimental probability	An estimated probability based on the results of an experiment.	I survey 100 cars, 24 of them are blue. The experimental probability of the next car being blue is $\frac{24}{100}$	Answer= $\frac{three \ pink \ counters}{7 \ counters \ altogether} = \frac{3}{7}$ 3) Place the information below into a frequency tree.
g. Independent	When the probability of one event	If I roll a 6 on a dice, the probability of	32 students were given maths homework and a maths test.
event	does not depend on the outcome of another event.	rolling another 6 is still $\frac{1}{6}$.	28 students did their homework. 7 people failed their test.
h. Dependent event	An event that depends on the outcome of another event.	If you miss the bus, the probability of being late for school increases.	2 people who didn't do their homework passed the test Answer
i. Sample space	A way of recording all the outcomes of two events.	The sample space diagram* 1 2 3 4shows the different1 1 2 3 4outcomes when a spinner3 3 6 9 12with 4 sides are multiplied together.	Maths homework Maths test
j.Frequency Tree	Frequency trees show the actual frequency of different events They can show the same data as a two-way table, but frequency trees are clearer	Maths homewark Maths test	
Sparx Independent Learning		IVI655 IVI941 IVI938 IVI755 IVI206	MI/18

Knowledge Organiser: Year 8 Summer Term – Mathematics 3b Y9 U3 – Sets and Venn diagrams



1.Keyword	Definition	Example	2. Worked examples
a. Venn Diagrams	The relationship between a group of different things and how they overlap.	Factors of 12 6 1 10 Factors of 20 3 4 20 6 20 12 12 12 12 12 12 12 12	 (1)ξ = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16} A = multiples of 3 B = multiples of 5 a) Complete the Venn diagram to show this
b. Universal Set ξ	ξ means the 'universal set' (all the values to consider in the question).	 ξ = integers less than 10 1, 2, 3, 4, 5, 6, 7, 8, 9, 	information b) A number is chosen at random from the universal set, ξ Find the probability that this
c. Intersection ∩	A ∩ B means the parts that belong to A and B	$\left \begin{array}{cccccccccccccccccccccccccccccccccccc$	number is in the set A ∩ B Answer 1a) Write all the number in set A multiples of 3 {3,6,9,12, 15, } Write all the multiples in set B
d. Union ∪	A U B means both A and B		$\{5, 10, 15\}$ A \cap B = 15 The remaining numbers in the set appear in the
e. Complement	A' means 'not in set A' (called complement).	 The numbers 9 and 1 are in the intersection The numbers 12,7,3,9,1,17 and 6 are the union between set A and B. The complement of A are 17, 6, 8, and 5 	rectangle but not in the circles.
f. AND rule for Probability	When two events, A and B, are independent: $P(A \text{ and } B) = P(A) \times P(B)$	What is the probability of rolling a 4 and flipping a Tails? $P(4 \text{ and Tails}) = P(4) \times P(Tails) = \frac{1}{6} \times \frac{1}{2} = \frac{1}{12}$	$ \begin{vmatrix} 3 & 6 \\ 9 & 15 \\ 12 & 10 \end{vmatrix} $
g. OR rule for Probability	When two events, A and B, are mutually exclusive: P(A or B) = P(A) + P(B)	What is the probability of rolling a 2 or rolling a 5? $P(2 \text{ or } 5) = P(2) + P(5) = \frac{1}{6} + \frac{1}{6} = \frac{1}{3}$	12 1 2 4 7 8 11 13 14 16 1b) Write down P (A \cap B) = $\frac{1}{15}$
Sparx Independent Learning		M829 M419 M834	

The Bourne Academy Knowledge Organiser: Year 8 Summer Term – Mathematics 3a Unit 10 – Bivariate data



1.	Keyword	Definition	Example		2	. Worke	d Exa	mpl	es		
а.	Bivariate data	Data for two variables (usually two types of related data).	Ice cream sales versus th temperature on that day	le ,	1a) V 1b) V 1c) V	Vhat type Vho score Vhat Engli	of co ed the ish sc	orrel e hig ore (ation i hest fo did Leo	is sh or M o ge	own below? laths and English? t?
b.	Two- way tables	Two-way tables are a way of sorting data so that the frequency of each category can be seen quickly and easily.	ConsoleMobilePCEnglish375French165German1238		80				× Hope	× Ali	 Answers 1a) Positive correlation. The higher the English
c.	Positive Correlation	The measure of the strength of a linear relationship between two sets of data. As one variable increases so does the other.			20-	× Sam	Leo X Pia		Jin	λ	maths score. 1b) Nat 1c) 40 marks
d.	Negative Correlation	The measure of the strength of a linear relationship between two sets of data. As one variable increases the other decreases.	▲ ++ +++ +++		$\begin{array}{c c} \hline & J_{\text{ohn}} \\ 0 \\ 20 \\ Maths marks \\ \hline \\ \end{array} \\ \hline \\ \hline$						
e.	No Correlation	This shows there is no clear relationship between a set of points.			 a) How many Year 7's have brothers but no sisters? b) What is the total number of students in year 8? c) How many students have no siblings in Year 7, 8 and 9? 			ers but no sisters? udents in year 8? blings in Year 7, 8 and 9?			
f.	Line of best	A line segment on a graph						Year			
	fit	showing the general direction					7	8	9	Ar	nswers
		points follow.				Brothers but no sisters	45	52	49	2a) 45
g.	Outlier	A point on the graph that does	The two	red	ings	Sisters but no brothers	62	39	54	2b) 52 + 39 + 48 + 46 = 185 students
		not fit with the trend of the data.	points are	e	Sibl	Brothers and sisters	51	48	31	i	n year 8.
Sp	arx Independe	ent Learning	M769 M596 M945 I	M450		No siblings	34	46	50	2c a) 34 + 46 + 50 = 130 students Iltogether have no siblings.

Knowledge Organiser: Year 8 Summer Term – Music – Minimalism and Film Music



1 Keywords and definitions		2 Note Durations		
Note	A symbol/shape that indicates a musical sound. (Example: The notes of the scale are C, D, E, F, G, A, B).	Note Name	Symbol	Note Duration
Pitch	How high or low a note is. (Example: The piano played a high- pitched note).	Semibreve	Ο	4 beats
Duration	How long a pitched note is played for. (Example: The duration of that note is 2 beats long).	Minim		2 beats
Beats	A measure of time in music. (Example: Count 4 beats then start playing the song).		d	
Stave	5 horizontal lines on which music is written. Each line and space has its own pitch. You place a note on the pitch you wish it to be played on. This note talls you the pitch and the	Crotchet		1 beat
	duration it is played for.	Quaver	N	½ a beat
Тетро	The speed of the music (Example: The tempo of the music		e	
Dynamics	How loud or soft the notes are played (Example: Make sure	Pair of Quavers		2x½ beat = 1 beat
Dynamics	the dynamics for this melody are played softly).		••	

3 Note Pitches on the Stave and Keyboard

'Every note has its place, on a line or in a space'. Starting on Middle C, all the white notes going up is a scale.







4 Minimalism Keyword	ls and definitions	5 The Purpose of Film Music
Motif	A short musical idea, melody or rhythm.	Film music is a type of descriptive instrumental music that helps to support the emotions, a character or the action on screen
Looping	Repeating the motif.	Create or enhance a mood
Augmentation	Doubling the note values of a motif.	• To emphasise a gesture
Diminution	Halving the note values of a motif.	Provide unexpected juxtaposition/irony
Phase Shifting	When two or more motifs begin in UNISON and gradually become "out of sync" with each other.	Link one scene to another providing continuity
Metamorphosis	Tiny changes are made over time to one note or to one part of the rhythm.	 Influence the pacing of a scene making it appear faster/slower Give added commercial impetus (released as a soundtrack)
Retrograde	The original motif played backwards.	• Illustrate the geographic location (using instruments associated with a particular country) or historical period (using music 'of the time')
6 How the Elements of	Music can influence film music	7 Film Music – Key Features
Pitch and Melody	Rising melodies are often used for increasing tension, falling melodies for defeat.	 Leitmotif – A frequently recurring short melodic or harmonic idea which is associated with a character. It is used throughout a film to remind you of that character.
Dynamics	Loud dynamics to represent power; Soft dynamics to represent weakness/calm/resolve.	2. Diegetic film music – Music within the film for both the characters and audience to hear e.g. a car radio, a band in a nightclub or sound effects.
Duration	Long and short notes can create tension in different ways.	3. Non-diegetic film music – Music which is put "over the top" of the action of a film for the audience's benefit and which the characters within a film can't hear – also known as UNDERSCORE or INCIDENTAL
Tonality	Major – happy; Minor – sad. Consonant harmony or chords for "good" and Dissonant harmony or chords for "evil"	

Knowledge Organiser: Year 8 Summer Term – Physical Education



1. Striking and Fielding	Definition
(a) Batting	Your body should be turned sideward on and feet shoulder width apart with a slight bend in the knee. Swing through the ball. Techniques can be different in other sports.
(b) Bowling	There are many techniques in bowling. Aim is to get the batsman out striking them out or hitting the wicket.
(c) Fielding	This is one of the most important roles in the team, you need to be able to catch a high and moving ball. You always must be on your toes and ready to get the ball back to the bowler if you have failed to catch.
(d) Catching	Hand-eye-coordination is key. You need to watch the ball carefully and follow the direction of the ball. Close your hand tightly around the ball so that it does not fall out and hit the ground.
(e) Spin	Using fingers or wrist to literally turn the ball off the pitch.
(f) Communication	We need to communicate to give and receive information from our team mates. Verbally and through body language.

2. Athletics	Definition
(a) Long Jump	The athletes would take a short run up and jump into
	an area of dug up earth, with the winner being the one
	who jumped farthest.
(b) Shot put	Place the shot under the chin and touching the neck.
	Keep the throwing arm elbow high and the arm parallel
	to the floor. You push a shot you do not throw it.
(c) Javelin	Hold the javelin in the fold of the hand along the length
	of the palm.
(d) 100m Sprint	Runners start the race from a standing position along a
	straight starting line and, after hearing the starting
	pistol, the race begins.
(e) Middle	Runners start the race from a standing position along a
Distance	curved starting line and, after hearing the starting
	pistol the race begins. Track events: 800 metres, 1500
	metres.
(f) Long Distance	Runners start the race from a standing position along a
	curved starting line and, after hearing the starting
	pistol the race begins. Track events: 3000 metres, 5000
	metres and 10,000 metres.









Knowledge Organiser: Year 8 Summer Term – Physical Education





5.	Description	
(a) Synovial Joint	The bones are joined together with a fibrous joint capsule that	
	surrounds the ends of the bones forming the joint.	
(b) Involuntary Muscles	Muscles that are not under our conscious control. For	
	example, the intestines and liver.	
(c) Voluntary muscles	Under our conscious control. For example, skeletal bicep	
	muscle.	
(d) Ligament	Elastic tissue that joins bone to bone.	
(e) Tendon	Elastic tissue that joins muscle to bone.	
6.	Description	
(a) Isotonic	Muscle action where the muscle changes length.	
(b) Concentric	Isotonic contraction where muscles shortens.	
(c) Eccentric	Isotonic Contraction where the muscles lengths.	
7.	Description	
(a) Diffusion	Movement of gases (carbon dioxide and xygen) from a high	
	concentration to a lower concentration.	
(b) Vasoconstriction	When arteries diameter constricts (gets smaller).	
(c) Vasodilation	When arteries diameter dilates (gets bigger).	
8.	Description	
(a) Aerobic energy	Dependant on oxygen: used for long duration, low intensity activities.	
(b) Anaerobic energy	Not dependant on oxygen used for short/ high intensity activities.	

Knowledge Organiser: Year 8 Summer Term – Religious Studies – Creation



4. The Big Bang

About 13.8 billion years ago, the whole universe was a very small, extremely hot and dense region.

From this tiny point, the whole universe expanded outwards to what exists today.

5. Evolution

Charles Darwin observed that although individuals in a species shared similarities, they were not exact copies of each other; there were small differences or variations between them

He also noticed that everything in the natural world was in competition.

The winners were those that had characteristics which made them better adapted for survival



Geospita magalass
 Geospita portula.

2. Christian Creation Story according to 3. Islam Genesis 1 Allah is the Creator and Sustainer of life. God is the only creator. Muslims believe Allah created God existed before he created the world. the heavens and the earths from formless matter over six The world was well planned and is long periods of time. sustained by God. He created humans out of God blessed creation. which means that clay, moulding Adam and all creation is holy. breathing life and power into him. God created everything in heaven and on earth in six days. He took Adam to paradise and made for him a wife.

ight and sky Day 1-2

On the seventh day, God rested.

6. William Paley's Watch Analogy

He suggested that if you were walking and found a watch, by accident, you would think that it must have been designed by a watchmaker.

Genesis

In the same way, when looking at the world with its complex patterns and structures you would conclude that there must be a cosmic world maker, a designer God.

1. Key Words

- a) Creation: Explanation of how the world was created
- b) Evolution: Process by which different living creatures are believed to have developed from earlier, less complex forms.
- c) Big Bang: Explosion which created the universe
- d) Literal Christians: Believe the Bible should be understood word for word
- e) Liberal Christians: Believe people should be free to understand the holy books how they choose.
- f) Design Argument: William Paley argued that the design which can be identified in the world, suggests a designer.

baby's body.

Knowledge Organiser: Year 8 Summer Term – Religious Studies – Life After Death



3. Humanist attitudes 1. Key Words 2. Christian attitudes towards life after death a) Humanists reject the idea or belief in a) **Heaven:** Heaven is described as eternity in the presence of a) Afterlife: Life after death; the a supernatural being such as God. God, as Heaven is a state of being rather than a physical belief that existence continues This means that Humanists class place. Heaven is the ultimate aim for all Christians, for their themselves as agnostic or atheist. after physical death soul to be reunited with God and united with Christ b) Hell: Hell has traditionally been depicted as a place of b) Humanists have no belief in an eternal fire that symbolises pain and suffering. This is seen b) Soul: The spiritual aspect of a afterlife, and so they focus on as the result of the refusal to accept the happiness that being; that which connects seeking happiness in this life. They God wants people to share with him. Hell is the opposite of someone to God. The non-physical rely on science for the answers to Heaven - it is eternity in the absence of God. part that lives on after death, in questions such as creation, and base c) **Purgatory:** is the place where Roman Catholics believe the afterlife. their moral and ethical decisionthe spirits of dead people are sent to suffer for their sins making on reason, empathy and before they go to heaven. compassion for others. Dualism: belief we are made of c) 5. Buddhist attitudes two separate parts: a physical a) Buddhists believe that people live body and a spiritual body. The soul 4. Muslim attitudes through lots of cycles of birth and (spirit) lives in a physical body. The a) **Akhirah:** Is the word Muslims use to refer to life after death. rebirth. This means when you die, soul is the inner part of us, that Belief in an afterlife encourages Muslims to take you will be born again into another lives on. life. This cycle is known as samsara. responsibility for their actions. They know God will hold How good or bad the next life will be them accountable and reward or punish them accordingly. d) Materialism: View that nothing is decided by how well a person b) Jannah: Muslims believe in the concept of Paradise follows their duties on Earth. These else exists apart from matter -(Jannah), which is where people go if they have lived a good duties are called their dharma. there is no soul. life. b) **Karma** is a kind of cosmic judgement c) Jahannem: Hell is described as a place of fire and system: good actions collect good torment. Jahannam is a place of scorching fire pits and karma, which help to ensure an e) Ensoulment – moment when the enjoyable and happy next life and boiling water, a place of physical and spiritual suffering. human soul is said to enter the bad actions collect bad karma, which

d) **Barzakh**: is a place of waiting, after death, before Judgement Day comes.

will result in a future life that is not

as positive or joyous.



(1) Key Word	Definition
a) Consumer	An animal that eats other animals, or plants
b) Continuous variation	Differences between living things change gradually over a range of values, for example height or weight.
c) Decomposer	Organism that breaks down dead plant and animal material, allowing nutrients to return to the soil.
d) Discontinuous variation	Differences between organisms can only be a limited number of values, for example sex, or eye colour.
e) DNA	A molecule found in the nucleus of a cell that carries genetic information.
f) Ecosystem	The living things (plant, animal, etc.) in a given area.
g) Environment	The surrounding air, water and soil where an organism lives.
g) Food chain	Part of a food web. It starts with a producer and ends with a consumer.
h) Food web	Shows how food chains in an ecosystem are linked.
i) Gene	A section of DNA that determines an inherited characteristic.
j) Inherited characteristics	Features that are passed from parents to their offspring
k) Species	A group of living things that have more in common with each other than with other groups.
l) Variation	The differences within, and between species
(2) Variation	

There is **variation** between individuals of the same species. Some variation is **inherited**, and some variation is caused by the **environment**. Variation is important for the survival of a species in a constantly changing environment.

(3) Chromosomes, DNA and genes

The nucleus of all cells (except red blood cells) contains structures called **chromosomes**. Chromosomes are made of long, tightly coiled

strands of DNA. Organism



A gene is a section of DNA that is responsible for a particular characteristic, like eye colour. Humans have about 20, 000 genes.

(4) Inherited characteristics

Human body cells have 23 pairs of chromosomes, half of which are from each parent. Human gametes (sex cells) each contain 23 chromosomes. When fertilisation occurs, the fertilised egg becomes a cell with 23 pairs of chromosomes, half from each parent. This is how characteristics are passed to offspring.

(5) Continuous and discontinuous variation



Continuous variation varies over a range of values, for example weight, height, skin colour. Continuous variation often shows a smooth distribution curve.



Discontinuous variation can only have certain values, for example tongue rolling, or blood type.

The Bourne Academy Knowledge Organiser: Year 8 Summer Term – Science C6a – Atmosphere and Earth



(1) Key Word	Definition	(3) The Carbon Cycle
a) Atmosphere	The thin layer of gases that surround the planet.	removal and release of carbon dioxide in the atmosphere
b) Carbon cycle	The processes that remove and release carbon into the atmosphere.	respiration combustion (removes)
c) Climate	The average weather conditions over long periods and large areas.	the second secon
d) Combustion	Burning in oxygen.	food former food
e) Electrolysis	Breaking apart a substance using electricity.	decay fuels to the second decay (releases)
f) Extraction	Separating a metal from its ore.	• Photosynthesis and consuming food remove carbon from the atmosphere.
g) Finite resource	Finite resources are non-renewable and will eventually run out.	• Respiration, combustion and decay releases carbon into the atmosphere.
h) Fossil fuels	Remains of dead organisms that are burned as fuel and release carbon dioxide.	(4) Global Warming and the Greenhouse Effect
i) Global warming	The gradual increase in the average temperature of the Earth.	Greenhouse gases like CO_2 help to keep the planet warm by absorbing IR radiation and scattering it back to the Earth's surface
j) Greenhouse Effect	Energy from the sun is transferred to the gases in the atmosphere	Unfortunately, the levels of CO_2 in the atmosphere have increased, and now
k) Natural resources	Materials that occur naturally (for example wood), that we can make use of.	much more IR radiation is absorbed and scattered back to Earth. This has led to 'global warming' – an average increase in temperature on the surface of the
I) Recycling	Processing materials, so that we can use them again.	planet.
(2) Composition of the Atmosphere		(5) Recycling and Reusing
Earth's atmosphere contains 78% nitrogen (N_2), 21% oxygen (O_2) and less than 1% carbon dioxide (CO_2) and other gases.		Recycling materials, such as metals uses less of the Earth's limited resources. It takes less energy to recycle metal than to extract it, so less carbon dioxide is released into the atmosphere. Less rubbish is sent to landfill as well, which means that less methane (CH_4) is released into the atmosphere.



(1) Key Word	Definition	(3) The Rock Cycle
a) Erosion	The movement of rock by water, ice or wind	PMetamorphic rock
b) Igneous rocks	Formed from cooled magma	Heat and Pressure Sedimentary rock
c) Metamorphic rocks	Formed from existing rocks which have been exposed to heat and pressure for a long time.	Weathering and Erosion Pressure
d) Minerals	The chemicals that rocks are made from.	Compacting Weathering and Eracion Melting Cooling
e) Rock cycle	The processes that change rocks from one type to another.	P Sediment
f) Sediment	Small fragments of rock and soil that form layers.	Weathering
g) Sedimentary rocks	Rocks formed from layers of sediment - they may contain fossils.	The rock cycle involves changing the three types of rock (igneous,
h) Strata	Layers of sedimentary rocks.	sedimentary and metamorphic) from one to another.
i) Weathering	Wearing down of rocks by weather, or chemical processes.	 Igneous rocks are broken down by weathering into sediment, and then compressed by heat and pressure into metamorphic rocks (metamorphic means that there has been a chemical change).

(2) Composition of the Earth

- The **crust** is a hard, thin, rocky layer.
- The **mantle** has some of the properties of a solid but can flow very slowly.
- The **core** is made of liquid iron and nickel. It produces the Earth's magnetic field.



- Metamorphic rocks are deep under the earth and can eventually melt to become magma.
- Magma erupts from volcanoes and cools down to form igneous rock.

The rock cycle is a continuous process that takes millions of years to complete, and never stops.

Weather and other processes break rocks down and build them up into new forms.



(1) Key	Definition
Word	
a) Artificial	An object, such as a communication satellite
satellite	
b) Day	The time it takes for the Earth to turn once on its axis.
c) Light year	The distance light travels in a year (over 9 million, million km).
d) Orbit	The path taken by a satellite, planet, or star as it moves
	around a larger body.
e) Satellite	Any object that is in orbit around a larger body.
f) Stars	Bodies which emit (give out) light, and which may have a solar
	system of planets.
g) Weight	The force acting on an object due to the gravitational field
	strength (GPS) of a large body like the Earth, or the Sun.
h) Year	The time it takes for a planet to make a complete orbit around
	the sun
(2) Gravity a	nd the Universe

The Sun is a star at the centre of our Solar System. Its gravitational field holds the planets in orbit around it. The more mass an object has, the stronger its gravitational field.

The Sun is one of millions of stars in the Milky Way – our galaxy. All of the stars in the Milky Way are held together by gravitational forces.

(3) Gravity and Weight – Revision

W (N) = mass (kg) x g (N/kg)

On Earth, gravitational field strength is 10 N/kg

(4) The rotation of the Earth on its axis

The Earth takes 24 hours to complete one rotation on its axis. The Earth has a tilt on its axis which causes the seasons.

In the summer, the northern hemisphere (half of the Earth) is tilted towards the sun but in the winter, it is tilted away from the sun.



In summer	In winter
The Earth spends more time in	The Earth spends less time in
sunlight.	sunlight.
More sunlight is focused on a	Less sunlight is focused on a
smaller area	larger area.
Warmer, longer days	Colder, shorter days

(5) Light travels at 300, 000 km/s but it takes over 8 minutes for light to travel from the Sun to the Earth. We measure distances in space in 'light years' – the distance light can travel in one year (9.46 trillion km). Space is huge!



(A) De vacaciones	On holiday	(B) ¿Qué hiciste?	What did you do?
¿Adónde fuiste de vacaciones?	Where did you go on holiday?	¿Qué hiciste en tus vacaciones	What did you do on your
el año pasado	last year	de verano?	summer holiday?
el verano pasado	last summer	Bailé.	I danced.
Fui a	I went to	Compré una camiseta.	I bought a T-shirt.
Escocia	Scotland	Descansé en la playa.	I relaxed on the beach.
España	Spain	Mandé SMS.	l sent texts.
Francia	France	Monté en bicicleta.	I rode my bike.
Gales	Wales	Nadé en el mar.	I swam in the sea.
Grecia	Greece	Saqué fotos.	I took photos.
Inglaterra	England	Tomé el sol.	I sunbathed.
Irlanda	Ireland	Visité monumentos.	I visited monuments.
Italia	Italy	No nadé en el mar.	I didn't swim in the sea.
¿Con quién fuiste?	Who did you go with?	El último día de tus vacaciones,	What did you do on the last
Fui con	I went with	¿qué hiciste?	day of your holiday?
mis amigos/as	my friends	Bebí una limonada.	I drank a lemonade.
mi clase	my class	Comí paella.	l ate paella.
mi familia	my family	Conocí a un chico/a guapo/a.	I met a good-looking/attractive
mis padres	my parents		boy/girl.
¿Cómo fuiste?	How did you get there?	Escribí SMS.	l wrote texts.
Fui/Fuimos en	I/We went by	Salí con mi hermano/a.	I went out with my
Autocar	Coach		brother/sister.
Avión	Plane	Vi un castillo interesante.	I saw an interesting castle.
barco	boat/ferry		
coche	car		
tren	train		
No fui de vacaciones.	I didn't go on holiday.		



(C) Exclamaciones	Exclamations	(D) ¿Cómo te fue?	How was it?
¡Qué bien!	How great!	Fue divertido.	It was fun/funny.
¡Qué bonito!	How nice!	Fue estupendo.	It was brilliant.
¡Qué divertido!	What fun!/How funny!	Fue fenomenal.	It was fantastic.
¡Qué guay!	How cool!	Fue flipante.	It was awesome.
¡Qué rico!	How delicious!/How tasty!	Fue genial.	It was great.
¡Qué suerte!	What luck!/How lucky!	Fue guay.	It was cool.
¡Qué aburrido!	How boring!	Fue regular.	It was OK.
¡Qué horror!	How dreadful!	Fue un desastre.	It was a disaster.
¡Qué lástima!	What a shame!	Fue horrible.	It was horrible.
¡Que mal!	How bad!	Fue horroroso.	It was terrible.
¡Qué rollo!	How annoying!	Fue raro.	It was weird.
		Me gustó.	l liked (it).
		Me encantó.	l loved (it).
		¿Por qué?	Why?
		porque	because
		Hizo buen tiempo.	The weather was good.
		Comí algo malo y vomité.	I ate something bad and vomited.
		Llovió.	It rained.
		Perdí mi pasaporte/mi móvil.	I lost my passport/my mobile.
(E) ¿Cuándo?	When?	(H) Palabras muy frecuentes	High-frequency words
Luego	Then	a/al/a la	to (the)
más tarde	Later	en	by
después	Afterwards	con	with
el primer día	(on) the first day	¿Cómo?	How?
el último día	(on) the last day	¿Dónde?	Where?
otro día	another day	¿Adónde?	Where to?
por la mañana	in the morning	¡Qué!	How!
por la tarde	in the afternoon	Además	in addition, furthermore
		pero	but

Knowledge Organiser: Year 8 Summer Term – TED



1. Ergonomics and Anthropometrics

Ergonomics relates to how people comfortably and effectively use products, the 'fit' between the users and products they use.

An ergonomic phone would be easy to hold, have buttons shaped to be comfortable and easy to press, its edges will be rounded and the ear and mouth pieces will be at suitable distances from your ear and mouths.

Anthropometrics are human body measurements.

Anthropometric Data comes in the form of charts and tables, sizes such as height, finger lengths and hand spans and average group sizes for people of different age ranges.

2. Branding

A strong brand makes a product:

- Easy to recognise
- Easy to remember
- Appealing to its target market
- Sets itself apart from competitors
- Explains what the product is clearly.

3. Marketing and Market Research Methods

Online Surveys- email and social media

Focus Groups- discuss needs and wants with potential primary users. Telephone survey- Cold call potential primary users

Product Analysis- Review current products on the market to see how competitors can be beaten.

4. New Technologies

These technologies often disrupt current design and manufacturing techniques and force industry to change.

These include:

Laser cutter

3D Printer

CAD Software

CNC Lathe

Robotics

Automated Manufacture

5. Life-cycle assessment (LCA)

LCA evaluates the environmental impact of a product from 'cradle to grave' – from the extraction of raw materials required to manufacture the product to end of use and disposal.

In the case of a plastic bottle the raw material is crude oil.

6. Product Analysis

Medium

Hot

A product analysis looks at current products and assesses whether they are successful or require improving. A good Product Analysis informs designers how products can be developed.

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

- 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? Why Are their properties suitable for the product?
- 6. How would you improve the product? What would you develop further? Why would you make that change?

Knowledge Organiser: Year 8 Summer Term – TED



7. Sustainability

Sustainability is the measure of how much manufacturing, materials and use of energy damages the environment.

Sustainable Materials can be recycled, reused and disposed of with minimal impact on the environment.

Sustainable Energy is energy that is created and used without a big negative impact on the environment.

Sustainable Design and Manufacturing is the planning for products to be manufactured to have a minimal negative effect on the environment.

Sustainability aims to reduce the impact products have on the environment. Designers and manufacturers can do this by following the rules of the **6 R's**:

Reduce, Reuse, Recycle, Repair, Rethink, Refuse.

8. Electronic Components

Different components have different functions:

Input Components- sets an electrical circuit in action. (Switch, Sensor)

Process Components- work together to ensure current and signals are sent between input components and output components. (Microchip, PIC Chip)

Output components- is what the circuit results in and ultimately does. (LED, Motor, Buzzer, Speaker)

9. 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 and lightweight.

Ductile- Can be stretched.

Conductor- Conducts 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.

10. A **risk assessment** helps you work safely in the workshop. It evaluates how safe a task is.

Hazards are accidents that can occur.

Risk is how likely the hazard will happen.

Control measures are what you can do to avoid being injured.

11. Forces

Force is when pressure is applied to an object. A force can be a push or a pull.

We need to understand how forces work to design structures.

Shear A good example of shear force is seen with a simple scissors. The two handles put force in different directions.

Tension is a pulling force.

Compression is a force that presses against an object from opposite directions.

Torsion is a twisting force.

12. A **prototype** is an early sample, model, or release of a product built to test a concept or process or to act as a thing to be replicated or learned from. These can be 2D or 3D and use a range of materials from cardboard to styrofoam and foam board.

13. A **technical specification** is a set list of criteria and requirements that a material, design, product or service must achieve and satisfy.

Knowledge Organiser: Year 8 Summer Term – TED



14. PPE

PPE stands for Personal Protective Equipment. This equipment keeps you safe during practical work.

PPE includes:

Goggles	Aprons
Protective footwear	Visors

15. CAD/CAM

CAD stands for **C**omputer **A**ided **D**esign- it is used in lots of different industries such as construction, engineering and product design.

It is used because it is accurate, quick, easy to use, easy to correct mistakes without having to draw a drawing all again, and CAD drawings can be sent all over the world.

CAM stands for **C**omputer **A**ided **M**anufacturing, it is when machines are controlled by computers to make/produce/manufacture products.

It is used because it is quicker, more accurate, reduces waste, never needs a break and can produce thousands of the same identical product per hour day in day out.

16. Electronic Circuit symbols

Resistors control the flow of current within a circuit. They stop ______ high rates of current damaging electronic components.

Capacitors Smooth the flow of current in an electrical circuit. They store and release energy.

PIC Chips are programmed to send signals. Between inputs and outputs. They control circuits.

Batteries act as power source for + circuits. They store electrical - current.

Speakers turn electrical signals into sound waves.

Switches are used to turn circuits on and off. They control when power enters a circuit and either complete or break the flow of current.

An LED is a type of bulb and emits light when current runs through it. LED stand for Light Emitting Diode.



A structure is something that will support an object or a load.

Frame structures are made from many small parts joined together. They are called members. They achieve most of their strength from the way they are assembled. Triangles make very strong and rigid structures and are often used in frames.

Shell structures ,the strength of a shell structure depends on its form. they are usually lighter than frame structures. A good example is an egg it's a monoque structure (one piece).

Mass structures are created by piling up similar materials into a particular shape or design. They achieve strength by being heavy enough to stay in place, Often wider at bottom,

materials compacted, examples are a sandcastle, a wall.





Notes



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