THE BOURNE ACADEMY KNOWLEDGE ORGANISER everyone is a learner, everyone is a teacher

Vear 8 Autumn Term 2023-24 Ambitious Self Confident Physically Literate Independent Resilient Emotionally Literate

Name:

House:

Contents

Excellence at The Bourne Academy: Using your Knowledge Organisers	1
How do we revise with our Knowledge Organisers?	2
Art & Design	3
Computing	7
Dance	9
Drama	13
English	16
Food	19
French	21
Geography	24
History	27
Mathematics	30
Music	35
Physical Education	38
Religious Studies	41
Science	44
Spanish	50
TED	53

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.
- 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







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.





The Bourne Academy Knowledge Organiser: Year 8- Autumn Term

HOW DO WE REVISE WITH OUR KNOWLEDGE ORGANISERS?



Knowledge Organiser: Year 8 Autumn Term - Art



A. The Pop Art Movement



Pop Art is an art movement that emerged in the United Kingdom and then the United States during the mid-to-late 1950s. Pop artists challenged traditions of fine art by including imagery from popular and mass culture, such as advertising, comic books and ordinary massproduced objects.

D. <u>Keywords</u>

- 1) **Popular culture**: Music, TV and Cinema aimed at and enjoyed by ordinary young people.
- 2) Vibrant colours: radiant, bright and intense colours.
- Mass Media: newspaper and magazine articles, published photographs, television and radio shows, music recorded for mass distribution, advertising, books, and magazines.
- 4) **Mass Production**: the manufacture of large quantities of a product by an automated mechanical process.
- 5) **Irony and satire**: Humour was one of the main features of Pop art.



- 1) Andy Warhol
- 2) Roy Lichtenstein
- 3) Keith Haring
- 4) Richard Hamilton
- 5) David Hockney
- 6) Claes Oldenburg
- 7) Yayoi Kusama
- 8) Tim Marrs
- 9) Peter Max
- 10) Jasper Johns

C. Origins of Pop Art

The 'Pop' in Pop Art stands for popular.

The Independent Group met in London in 1952 and included radical young artists who wanted to challenge attitudes and emphasise the impact of technology and mass culture on art.

Early Pop Art included collages and photomontages intended to recreate the barrage of mass media images experienced in everyday life.

Pop artists wanted to represent the everyday elements of mass culture and the optimism of post-war society.



Knowledge Organiser: Year 8 Autumn Term - Art



E. What were the aims of the Pop Artists?

By creating paintings or sculptures of mass culture objects and celebrities, the Pop Art movement aimed to blur the boundaries between 'high' art and 'low' culture. The idea that there is no ranking of culture, and that art may borrow from any source has been one of the most influential characteristics of Pop Art. Pop Art aimed to employ images of popular culture in art, emphasizing the ordinary or tacky elements, most often using irony or sarcasm. Pop Art is colourful and is often associated with the artists' use of mechanical means of reproduction or rendering techniques, such as Silk-Screen printing.



Bourne Scholars Knowledge Organiser: Year 8 Autumn Term – Art



A: Pop Art

The booming post-war western economies of the mid-1950s meant prosperity for many, particularly in America. Ordinary people had more money to spend on luxuries and entertainment.

The media and big business promoted a glossy and colourful lifestyle through advertising in cinemas, magazines, TV and comics. New bold visual styles emerged in popular culture.

Andy Warhol (1928 – 1987) was an American artist, film director, and producer who was a leading figure in Pop Art. Warhol created art in many ways, including painting, silk-screen printing, photography, film and sculpture. Warhol's style has been imitated many times such as in this Google banner:



Roy Lichtenstein (1923 – 1997) was an American painter, musician and film producer who also served in the Army. His work was not well-received by critics initially. His work defined the premise of Pop Art through parody. He became famous for his distinctive comic book style incorporating benday dots.



Benday dots – the benday process named after illustrator and printer Benjamin Henry Day Jr. is a printing and photoengraving technique dating from 1879.

Bourne Scholars Knowledge Organiser: Year 8 Autumn Term – Art



1. <u>Why did the Pop Art movement</u> emerge when it did?

Consider why Eduardo Paolozzi and others formed the Independent Group. What were their intentions? It is important to understand the context of what was happening in the U.K. and in the U.S.A. during that period in our history, and the developments that influenced Pop artists ideas and methods of working.

Consider what techniques and processes they were using.

2. Analysing Pop Artwork:

Describe the work of Roy Lichtenstein.

Why was Lichtenstein painting in that distinctive style?

What are Benday dots, and why was Lichtenstein using them in his artwork?

Can you name 3 more famous Pop artists that are not already listed in your Knowledge Organiser, and describe their work?

What aspects of their work do you like the most? Consider subject matter, colour, composition, mood, pattern etc.

What industry were most Pop artists working in before they became famous artists?

3. Formal Elements in Art:

These are the formal elements of Art:

Line, Tone, Shape, Form, Colour, Texture, Pattern, Space.

When analysing artwork, you should refer to these formal elements and explain how they help to convey meaning or create an impact.

4. <u>Colours and their meanings:</u>

We see colours in everything around us, every moment of the day, but do you ever stop to think about the impact each of those colours is having on you? Whether it's the calming effect of blue skies and fields of green, or the salivainducing red and yellow of your local fast-food chain, each colour has a meaning and taps into emotions.

There is a whole science (and art) in the meanings of colours. It is essential to be aware of these colour meanings to help you choose your colours wisely and tap into the magical power of colour symbolism.

Create lists of meanings and emotions for each of the following colours: Black, Yellow, Red, Grey, White, Blue, Purple, Pink, Green, Brown, Orange. e.g. Yellow = joy, White = purity.

5. Artists and their practice:

Look at the work of the following artists and then choose two... compare and contrast their work making reference to their themes, materials, techniques and processes.

Andy Warhol, Michael Craig Martin, Claes Oldenburg, Richard Hamilton, Shepard Fairey, Tim Mars, Peter Blake.

Answer the following questions to help your analysis, ensuring that you make use of art specific terminology.

What do you see? What do you think is happening in the piece of art?

What materials do you think the artist used to make this piece of art?

Does this piece of art remind you of anything?

Pretend you could go inside this piece of art. What do you see? What do you hear? What do you smell?

What part of the piece is your favourite, and why?

If you could change one thing about this piece of art, what would you change? How does this piece of art make you feel?

Can you say why?

If you had to describe this piece of art to a friend, what kinds of words would you use?

Knowledge Organiser: Year 8 Autumn Term - Computing



1. Data Types	5. Programming Terms		
a) Integers are whole numbers e.g. 1, 2, 3, 4	a) Variable is a part of code storing	i) Flow Chart is a clear and visual way to plan	
b) Float are decimal numbers e.g. 1.7, 3.25	information that can be changed	a program or how to logically solve a problem	
c) Characters are any single character key you can type on the keyboard e.g. F, 5, %, #	<pre>e.g. name = input("Type your name:") b) Selection is a decision in the program</pre>	Start/End	
d) A string is a group of characters e.g. "hello"	e.g. if want cream hot chocolate:	*	
 e) Boolean is a data type with only two values, true or false e.g. 5 < 10 = TRUE 	then add cream else:	Input/Output	
2. Boolean Operators	skip to next step	\wedge	
> greater than < less than	c) Iteration is repeating part of the code, usually in a loop	Decision	
= equal to ≠ not equal to	e.g. while age < 18:	Yes	
3. Mathematical Operators	attend school	Process/	
+ addition - subtraction	next step	Calculation	
/ division * multiplication	d) Sequence is a set of instructions in order	i) Block-Based Code is a drag-and-drop coding	
4. Computational Thinking	e) Syntax Errors are mistakes in the way	learning environment such as Scratch	
Decomposition is breaking down a complex problem into smaller more manageable parts Pattern Recognition is looking for similarities	 the code is written f) Logic Error occur when the program works but not the way it is expected to g) Debugging is finding errors in the code 	e.g. ask What's your name? and wait set name to answer	
by hiding unnecessary details	and amending them	k) Text-Based Code creates programs with	
Algorithm is a step by step solution to a problem	h) Python is a general-purpose text-based programming language for a variety of uses	<pre>coding commands, such as using Python e.g. name = input("Type your name:")</pre>	

Bourne Scholars Knowledge Organiser: Year 8 Autumn Term - Computing



1. Programming Vocabulary	2. Python Data Types	3. Python Turtle
a) Assignment is setting the value of a variable in a computer program	a) The code for an integer is int e.g. age = int(12)	a) A module is a pre-written chunk of code which can be loaded into your program from a library
b) A constant is a value in programming that does not change	 b) Code for characters, such as '#', '7', 'f', is char e.g. letter = char("g") c) The code for strings, such as "Harp," is str 	Python has many modules in its built-in library, such as 'random', 'math', 'turtle'. The random module is used to generates random numbers and
data type, e.g. numbers or characters	e.g. name = str("Harry")	the turtle module is used to draw basic images
d) To execute a program means to run it	d) The code for Boolean , such as "True", is bool e.g. answer = bool("False")	b) To use the turtle module in our program, we need to add import turtle at the start of our code
e) High-level language is a programming language, like Python, used to write programs	e) To output text is print e.g. print("hello")	c) Challenge yourself by creating a range of shapes in Python using the turtle module. Ask for the
f) Binary is a base 2 number system only using 1's and 0's such as 11001100	Challenge 1. Create Python code which uses a combination of all data types listed above (a-d).	"Turtle Challenge Sheet" which examples of code. Try to create the following shapes:
g) Machine code is low-level code that	Go through each data type and come up with your own example in Python	Challenge 3. Square (sides 100, line colour pink)
understand instructions using binary numbers	Challenge 2. Create a password checker using the following steps:	Challenge 4. Rectangle (longer sides 200, shorter sides 100, green fill)
 h) Runtime is when a computer program is executing or running 	 Create a variable and make up a password e.g. password = 123. 	Challenge 5. Triangle (sides 100, blue line colour, red fill)
 i) Python uses indentation (created by pressing the tab key) to identify blocks of code 	2) Ask the user to input their password guess	Challenge 6. Circle (cyan fill, blue line colour)
 j) Syntax is how you write code. There are rules governing how to write statements in code, such as using indents to identify blocks of code 	 e.g. guess = input() 3) Using a while loop, if they get the password wrong (password != guess) it will keep looping a message that the password is wrong. Else, if they 	Challenge 7. Using what you've learnt and the Turtle Snowman help sheet, create your own snowman in Python using Turtle code
 k) Computational thinking is the ability to solve problems logically 	get the password correct (password == guess), output a message saying they got the password!	house drawing in Python using Turtle code

Knowledge Organiser: Year 8 Autumn Term - Dance



1. Safe Dance Practice



B. The Dance Space

Safety Points in the Dance Space

1. Is the space clean?

2. What is the temperature?

3. Is the space free of obstacles

4. Are there any spills?

5. Is the space large enough?







2. Key Skills

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1970s.

C-Walk – Dance move

Cypher – Freestyling

• Dougie – Dance move

• Freeze – a still position

4. Street Dance Vocabulary

Battle – Dancers go head-to-head.

Breakers – Any person practicing breaking.

• Hip Hop – Dance style which encompasses

music, art, poetry, language and fashion.

Breaking – Dance style which developed in the

Physical Skills	Performance Skills	Technical Skills	Mental Skills
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

5. The beginnings of Street Dance

Popping, Locking and Breaking are three foundation funk styles that come under the umbrella term of Street Dance. Popping and Locking started in the early 1970's funk era in California, USA. Breaking or Bboying started in the Bronx in New York in the late 1970s but came to the world's attention through films such as Wild Style and Breakdance in the 1980s.

6. The Golden Age 1943-1968:

Street dance is stereotypically synonymous with "Hip Hop" but there is more to it than that. In fact, the word 'street' in street dance means any form of dance that evolves spontaneously outside of a professional dance environment as part of some sort of culture.

3. Choreographic Devices:

Canon Levels Repetition Directions Facings

Speed Proximity Size Retrograde

7. The significance of Street Dance.

The significant feature of the history of Street Dance was that it was the dance of young people. It offered opportunities for creative expression, gave a sense of freedom and a 'voice' to unrepresented and often invisible communities through the means of music and dance. Despite the improvisational nature of these street dances, participants wanted to learn their vocabularies and skills, to enable teachers to pass these on with safety and a high level of execution.



1. Relationships	2. Action	3. Space	4. Dynamics
WHO are we performing with?	WHAT are we performing?	WHERE are we dancing?	HOW are we performing?
This is who you are performing with including how many people are in your group.	This is the range of movement in your dance piece	This focuses on how you use the space effectively	This is how you perform each movement (i.e., the SPEED and ENERGY)
Solo-1 dancer Duet-2 dancers Trio- 3 dancers Quartet- 4 dancers Quintet- 5 dancers Unison- all together at the same time Canon-one after another Contact-making connections with different parts of the body Mirroring-creating a true reflection of another person's actions Questioning and answer-a conversation through movement Lead and follow-one person performs a sequence and the rest	All dance actions fit into one of the following categories: jumps, turns, travels, balances, stillness, and transfer of weight Examples of actions: kicks, rolls, spins, leans, falls, leaps, runs, swings, twist, crouch, etc	Directions-forwards, backwards, stage left, stage right, diagonal Levels-low, medium, high Pathways-zig zag, circle, linear, wavy Group formations-straight line, triangle, 2 vs 2, arrowhead, etc	Slow, fast, smooth, sharp, jerky, effortless, hard, strong, weightless, aggressive, powerful, free-flowing, soft, graceful, quiet, calm, and sudden. Dynamics are like punctuation in a sentence and are used to create impact and interest in a dance piece

Preparing for a performance -rehearse the dance slowly without music -use the mirrors to check spacing and dance accuracy -ask for teacher or peer feedback -one at a time watch your group performing -perform the dance on your own to see if you know the step







	'The Use of Social Media'
1. Drama Technique	Definition
Still Image	Visual pictures created by performers to tell part of the story, illustrate narration, or emphasize a key moment in a play. Performers use facial expressions, body language and positioning onstage to show characters, relationships, and emotions.
Role Play	Actors take on the role of a character within a scene/performance.
Thought Tracking	The thoughts and feelings of a character being told directly to the audience during a still image.
Improvisation	Improvised drama is work that has not been scripted, the dialogue, characters and actions are made up as you go along. Spontaneous improvisation is created in the moment, a rehearsed role play is planned and prepared.
Narration	A character speaks directly to the audience to describe or narrate parts of his/her own story, or a narrator speaks objectively about the events happening onstage.
Direct Address	This narrative technique is when a character speaks directly to the audience about their thoughts and feelings. The other characters are unaware of what this character is saying.
Ensemble	a group of musicians, actors, or dancers who perform together.
Choral Speech	Choral speech is a group of actors that are speaking or narrating at the same time.
Choral Movement	Choral movement is a powerful technique to employ in both devised and scripted performance. A group of actors moving at the same time.
Split Screen	In drama and theatre, the term is used to describe two or more scenes which are performed on stage at the same time.
Physical Theatre	This is a style of theatre, where the cast make the scenery, set, and props out of their bodies to help tell the story on stage.



2. Style of Theatre	Definition
Style	Style is a way of describing the author's artistic vision and intention which brings together all the staging elements into a consistent dramatic experience.
Non-Naturalistic	Non-naturalistic theatre is a broad term for all performance styles that are not dependent on the life-like representation of everyday life
Bertolt Brecht	Bertolt Brecht was born in Germany in 1898 and died aged 58 in 1956. He was a poet, playwright and theatre director . His most famous plays include Life of Galileo, Mother Courage and Her Children and The Caucasian Chalk Circle.

3. Drama Skills	Definition
Facial Expressions	A facial expression conveys an emotion that tells us about the character and the way they react to the situation.
Body Language	Body language is communication coming from movement or position, particularly facial expressions, gestures and the relative positions of a speaker and listener . It may be the message being conveyed or it may add layers of meaning to the spoken words. Body language is also known as non-verbal communication.
Vocal Skills	There are a range of vocal skills and techniques for performers to utilise when performing. Performers vocal skills convey an emotion that tells us more about the character and how they are feeling/react to certain situations.

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4. Definitions of Key D)rama Skills		
Pitch	Pitch, in speech, the relative highness or lowness of a tone.	Gesture	A movement of part of the body, especially a hand or the head, to express an idea or meaning
Pace	How fast or slow you are moving or speaking	Gait	Gait is a person's pattern of walking
Tone	An individual way of speaking to express an emotion	Posture	Posture is the position in which you hold your body while standing, sitting, or lying down
Projection	Voice projection involves the use of a loud, clear voice.	Character	The character you create and perform using a range of skills.



1. Higher Order Thinking – How to devise from a stimulus.

Stimulus.

You will devise a short piece based on the painting below.



Research.

This painting is The Persistence of Memory by Salvador Dali. Complete extensive research around the painting to help you understand the Social, Historical, Cultural and Ethical aspects of the piece.

What style will your piece be?

1. Naturalistic

2. Non-Naturalistic

Creative Intentions.

What are your creative intentions for the piece? What do you want your audience to feel? Is there a specific message?

2. Problem Solving – The Design Aspect

When in the planning/design phase of your performance, both lighting and sound are important aspects.

Lighting Design – Design 5-10 different lighting states that will enhance your performance. Do you have a spotlight? Any colours? Red, Blue, Green, or White?

Sound Design – Would any specific sounds or music help to support your creative intentions?

Costume – Design the costumes for your main characters. What is your rationale behind the costumes? Why did you choose certain items? How much would the costumes cost? Add this to your budget.

What is your estimated total cost?

3. Describe and Explain how the following link to The Persistence of Memory. Social Historical Cultural Ethical

4. Analyse and Develop

Giving feedback to your actors as a director is a vital part of creating a performance.

How do you decide what is a good idea?

How do you select material that is of a high standard and how do you reject certain material?

Task - Create a feedback sheet for your actors. You should include relevant performance skills and techniques. How will this support your actors in the devising process?



Knowledge Organiser: Year 8 Autumn Term - 19th Century Detective - English

1. Structural terminology	Definition	3. Context	Definition	
a) Climax	The most intense, exciting or important point of a story.	a) The industrial revolution	1760 – 1840. A period of economic and social change in Britain, fuelled by technology and inventions.	
b) Problem	A situation which is unwelcome and needs to be dealt with.	b) The Metropolitan Police	The police service founded in 1829 by Robert Peel. They patrolled the streets in order to prevent crime.	
c) Resolution	The answer or end to a problem.	c) Forensic science	The application of scientific methods and technique	
d) Suspense	A feeling of excited or anxious uncertainty about what may happen.		to matters under investigation by a court of law.	
e) Foreshadowing	A hint at a future event.	d) Victorian Era	The period of Queen Victoria's reign from 1837 to	
f) Foreboding	A feeling that something bad will happen.		1901.	

2. Language terminology	Definition	Example	4. Punctuation	Symbol	Definition	Example
a) Onomatopoeia	A word which sounds like the noise it describes.	The fireworks <u>whizzed</u> into the sky and exploded with a loud <u>bang</u> .	a) Ellipsis		Used to show a pause or that words are missing from the sentence.	She looked up the plane was right above her head.
b) Symbolism	The use of symbols and images to represent something else.	In 'The Adventure of The Speckled Band', exotic animals are used as a symbol of a characters dark and evil nature.	b) Semicolon	;	Used between two main clauses which are linked in meaning or to separate items in a long list.	I have a big test tomorrow; I can't go out tonight.



Knowledge Organiser: Year 8 Autumn Term – 19th Century Detective - English

5. Speech marks	Definition		Example	Rules		7. Conventions	Definition
a)""	Used to show	Sam "Yoເ	exclaimed, ı'll never guess	1. Each new character's speech starts on a new line.		a) Convention	The way in which something is usually done.
	where direct speech	wha seer "Wh	t I've just n!" at's that?"	 2.You need a piece of punctuation before the speech eg. a comma. 3. Speech is opened and closed with 		b) Detective	A person whose occupation is to investigate and solve crimes.
	starts and ends.	aske	ed Louise.	speech marks. 4. Each line of speech starts with a capital letter.		c) Villain	A character whose evil actions or motives are important to the plot.
				 The line of speech ends with a comma, exclamation mark or question mark inside the speech marks. 	1	d) Victim	A person harmed or injured in some way.
						e) Motive	A reason for doing something.
6. Detective storie	es Auth	or		Synonsis			
and characters				591104515		f) Evidence	Physical signs, documents, images etc.
a) The Adventure	of Arthur		Julia Stoner d	ied mysteriously in her room with the			suggesting a certain theory is true.
the Speckled Banc	d Conan D	oyle	last words ou speckled band	t of her mouth being "it was the d!" Following her death, now her twin, is here in Baker Street to ask the belo		g) Deduction	A conclusion that can be drawn from certain facts.
			of the famous	s detective, Sherlock Holmes.		h) Suspect	A person who is believed to be guilty of committing a crime.
						i) Clue	A piece of evidence or information used in
b) Sherlock Holme	es Arthur		A fictional det	tective known for his intelligence and			the detection of a crime.
	Conan D	oyie	ability to ded	uce information on very little evidence.	-	j) Red herring	A clue or piece of information which is
c) Dr John Watson	Arthur		Sherlock Holn	nes' flatmate and companion. He is the			intended to be misleading or distracting.
	Conan D	oyle	narrator of Sh	nerlock's stories.			

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The Bourne Academy

Bourne Scholars Knowledge Organiser: Year 8 Autumn Term – 19th Century Detective - English

1. Exte vocab	ended ulary	Definition	2. Aut	hors	Additional reading
a)	Protagonist	The main character in a story.	a)	Sir Arthur Conan Doyle	A Study in Scarlett, Silver Blaze, The Red-Headed League, The Hound of the Baskervilles.
b)	Antagonist	An adversary, opponent, enemy of the protagonist.	b) Agatha Christie c) Kim Harrington		Murder on the Orient Express, Death on the Nile, And Then There Were None, The Man in the Brown Suit.
c)	Deceptive	Intentionally misleading.			Partners in Crime
d)	Fallible	Capable of making mistakes or being wrong.	d)	Julie Campbell	The Secret Mansion
e)	Insightful	Having a deep and accurate understanding.	e)	James Patterson	Confessions of a Murder Suspect
f)	Introspective	Someone who focuses on their own internal thoughts and beliefs.	f)	Robin Stevens	Murder Most Unladylike
g)	Logical	Clear and sound reasoning.	g)	Phillip Pullman	The Ruby in the Smoke
h)	Malicious	Intending to do harm.	3. Exte	ended writing	Tasks
i)	Manipulative	Having control or influence over	a)	Research	Research a famous detective and create a fact file about them.
j)	Pragmatic	Dealing with things sensibly.	b)	Research	Research crime in Victorian London. Consider why this might have made detective stories so popular at the time.
k)	Remorseful	Full of regret.	c)	Writing	Plan and write your own detective story titled 'Secrets of the Silent Strange'.



1. The Eatwell Guide

A guide to help us eat the right foods in the right amount for optimal health.

a) Fruits and vegetables (40%)

- Eat 5 portions a day!
- Choose a variety.
- Provides fibre for healthy digestion .
- Provides vitamins and minerals for.
 healthy body functions and immune system.

b) Beans, pulses, eggs, meat, fish (12%)

- Provide protein for growth, repair and maintenance of body cells.
- Choose a combination of plant proteins.
- Avoid eating too much processed meat like bacon and sausages as these are linked with increased risk of bowel and stomach cancer.

c) Dairy foods (8%)

- Provide calcium for healthy bones, teeth and nails.
- The body needs **Vitamin D** to absorb calcium effectively.

d) Oils and spreads (Fats) (1%)

- Provide fat soluble vitamins A, D, E & K.
- Are high in calories & energy so keep use to a minimum.
- It is recommended to choose unsaturated oils like olive oil.

e) Fatty, salty, and sugary foods (0%)

- These are the danger foods!
- They are **not** part of a healthy diet.
- Eat them only occasionally.
- Eating too much fatty and sugary processed food is linked to increased risk of weight gain/obesity, diabetes, tooth decay and cardiovascular disease.



f) Starchy foods (38%)

- Provide slow-release **carbohydrate** used by the body for **energy.**
- Choose wholegrains for increased **fibre** (good digestion, reduced risk of heart disease).

g) Water

- A balanced diet must include water, it is required for nearly all brain and other bodily functions.
- It is recommended that you have 6-8 glasses of water a day.

2. Deficiencies/Excess

Having a lack or too much of certain nutrients can have a negative impact on our health.

a) Vitamin C

Deficiencies: Effects the absorption of iron. Excess: Scurvy, bleeding gums, wounds not healing properly, tiredness.

b) Calcium/Vitamin D

Deficiency: Rickets (soft and deformed bones), osteoporosis (weak bones). Excess: build-up of calcium, poor appetite, vomiting.

c) Iron

Deficiency: Anaemia (Tiredness, paleness). Excess: Constipation, vomiting.

d) Protein

Deficiency: Muscle loss, slow growth in children. Excess: Stored as fat, weight gain and obesity.

e) Carbohydrates

Deficiency: Ketosis which is very rare. The body switches to using protein as an energy source. Excess: Type 2 diabetes, obesity, heart disease and high blood pressure.

f) Fats

Deficiency: Weight loss, lack of fat-soluble vitamins, feeling cold.

Excess: type 2 diabetes, obesity and heart disease and high blood pressure.

Bourne Scholars Knowledge Organiser: Year 8 Autumn Term - Food



1.The Eatwell Guide

a) Fruits and Vegetables.

The main nutrients provided by this food group are vitamins and minerals. Research the following vitamins.

- Vitamin C,
- Vitamin D.

Why do we need them? What food provide them? Are there any other sources of these nutrients that are not in this food group?

b) Beans, pulses, meat, fish, and eggs.

The main nutrient provided by this food group is protein. Research this nutrient. Why do we need protein? Which foods provide protein? Are there any other sources of this nutrient that are not in this food group?

c) Dairy foods.

The main nutrient provided by this food group is a mineral called calcium. Research this nutrient. Why do we need calcium? Which foods provide calcium? Are there any other sources of this nutrient that are not in this food group?

d) Oils and spreads.

The main nutrient provided by this food group is fat. Research this nutrient.

Why do we need fat? Which foods provide fat? Are there any other sources of this nutrient that are not in this food group?

e) Fatty, salty and sugary foods.

As we have already established, this food group is not needed in a healthy balanced diet. While it is ok to eat these foods occasionally, they should be limited to ensure we are not at risk of heart disease, diabetes, and obesity. Suggest ways a family could reduce their intake of these foods.

f) Starchy foods.

The main nutrient provided by this food group is carbohydrates. Research this nutrient. Why do we need carbohydrates? Which foods provide carbohydrates? Are there any other sources of this nutrient that are not in this food group?

g) Water.

Water is crucial to our wellbeing and good health. However, most people struggle to drink the recommended 6-8 glasses of water a day. Suggest ways a family could increase their intake of water.

h) A healthy balance diet.

In order to achieve a healthy balanced diet, we need to eat the right proportions of each food group. We don't have to eat foods from all the food groups in every meal, but instead should be aiming to spread them over a day. Plan a menu that includes breakfast, lunch, dinner, and snacks, that provides the recommended proportions of each food group.

2. Excesses and deficiencies

For each of the following nutrients, describe what can happen if you have too much or too little of each.

- Vitamin C,
- Vitamin D,
- Calcium,
- Iron,
- Protein,
- Carbohydrates,
- Fats.

3. Analyse and evaluate your diet

Making sure our diets are balanced is vital for a healthy lifestyle. Answer these questions to analyse and evaluate your diet.

a) Analyse

- What do you usually eat for breakfast?
- What kind of snacks do you eat during the day?
- How often do you have fruit or vegetables with a meal or as a snack?

b) Evaluate

- Compare your answers to the eat well guide. Are you having the right proportions of each food group?
- Are there any food groups you do not eat at all?
- Suggest ways that you could change your diet to make it more balanced.

Knowledge Organiser: Year 8 Autumn Term – Vive les vacances - French



(A) Point de départ	Introduction	(B) Les opinions	opinions
J'ai	I have	C'est amusant.	It is fun.
une semaine de vacances.	a week of holiday.	C'est ennuyeux.	It is boring.
deux semaines de vacances.	two weeks of holiday.	C'est intéressant.	It is interesting.
en janvier / février (etc.)		C'est sympa.	It is nice.
C'est pour Noël.	in January / February (etc.)	C'est nul.	lt is rubbish.
C'est pour Pâques.	It's for Christmas.	un peu	A bit
C'est pour les grandes vacances.	It's for Easter.	assez	quite
Tu es où en vacances?	It's for the summer holidays.	très	very
Je suis en vacances		complètement	completely
au bord de la mer.	Where are you on holiday?		
à la montagne.	I am on holiday		
à la campagne.	at the seaside.		
en colonie de vacances.	in the mountains.		
chez mes grands-parents.	in the countryside.		
	at a holiday camp.		
	at my grandparents' home.		
(C) Qu'est-ce que tu as visité?	What did you visit ?	(D) Les connecteurs	Connectives
J'ai visité le château.	I visited the castle.	d'abord	first of all
J'ai visité le lac.	I visited the lake.	ensuite	next
J'ai visité le musée.	I visited the museum.	puis	then
J'ai visité le parc.	I visited the park.	après	after(wards)
J'ai visité le stade.	I visited the stadium.	finalement	last of all
J'ai visité la cathédrale.	I visited the cathedral.		
J'ai visité la mosquée.	I visited the mosque.		
l'ai visitó la chocolatorio			
J di visite la chocolaterie.	I visited the chocolate shop.		

Knowledge Organiser: Year 8 Autumn Term – Vive les vacances - French



(D) C'était comment?	How was it?	(E) Qu'est-ce que tu as fait pendant les	What did you do during the
		vacances?	holidays?
C'était amusant.	It was fun.	Pendant les vacances	During the holidays
C'était cool.	It was cool.	J'ai joué au tennis.	I played tennis.
C'était génial.	It was great.	J'ai joué au foot.	I played football.
C'était ennuyeux.	It was boring.	J'ai mangé des glaces.	I ate ice creams.
C'était intéressant.	It was interesting.	J'ai écouté de la musique.	I listened to music.
C'était sympa.	It was nice.	J'ai acheté des baskets.	I bought some trainers.
C'était moderne.	It was modern.	J'ai acheté des BD.	I bought some comics.
C'était nul.	It was rubbish.	J'ai regardé des clips vidéo.	I watched video clips.
		J'ai regardé un film à la télé.	I watched a film on TV.
		J'ai nagé dans la mer.	I swam in the sea.
		J'ai retrouvé Léo.	I met up with Léo.
		J'ai dormi.	I slept.
(F) Qu'est-ce que tu as fait?	What did you do?	(G) Tu es allé(e) où?	Where did you go?
J'ai visité un parc d'attractions.	I visited a theme park.	Je suis allé(e) en Espagne.	I went to Spain.
J'ai bu un coca.	I drank a cola.	Je suis allé(e) en Grèce.	I went to Greece.
J'ai vu un spectacle.	I saw a show.	Je suis allé(e) au Maroc.	I went to Morocco.
J'ai vu mes personnages préférés.	I saw my favourite characters.	Je suis allé(e) aux États-Unis.	I went to the USA.
J'ai fait une balade en bateau.		Avec qui?	Who with?
J'ai fait les manèges.	I went on a boat ride	Avec mon frère.	With my brother.
J'ai pris des photos.	I went on the rides.	Avec ma famille.	With my family.
Je n'ai pas mangé de glaces.	l took photos.	Avec mes parents.	With my parents.
Je n'ai pas acheté de souvenirs.	I didn't eat any ice creams.	Avec mes amis.	With my friends.
	I didn't buy any souvenirs	Tu as voyagé comment?	How did you travel?
		J'ai voyagé en avion.	I travelled by plane.
		J'ai voyagé en bateau.	I travelled by boat.
		J'ai voyagé en car.	I travelled by coach.
		J'ai voyagé en voiture.	I travelled by car.

Bourne Scholars Knowledge Organiser: Year 8 Autumn Term - French



A) The Present Tense – 3 regular verbs and 2 irregular verbs:

D) Time expressions:

Ils/Elles sont allés/es

Subject Pronouns	ER VERBS Parler/To speak	IR VERBS Finir/ To finish	RE VERBS Vendre/ To sell	Avoir/To have	Être/To be	Normalement Normally D'habitude Usually		Normally Usually
I	Je parl <mark>e</mark>	Je fin <mark>is</mark>	Je vend <mark>s</mark>	J'ai	Je <mark>suis</mark>	Parfois	ours	Every day Sometimes
You (Singular)	Tu parl <mark>es</mark>	Tu fin <mark>is</mark>	Tu vend <mark>s</mark>	Tu as	Tu <mark>es</mark>	Une fois	par	Once a
He/she/one	Il/elle/on parle	Il/elle/on fin <mark>it</mark>	Il/elle/on vend	Il/elle/on a	Il/elle/on est	Le weeke	nd lernier	At the weekend Last month
We	Nous parlons	Nous fin <mark>issons</mark>	Nous vendons	Nous avons	Nous sommes	L'année dernière Last year		Last year
You (Plural)	Vous parl <mark>ez</mark>	Vous fin <mark>issez</mark>	Vous vend <mark>ez</mark>	Vous avez	Vous <mark>êtes</mark>	L'été dernier Last sum		Last summer
They	lls/elles parl <mark>ent</mark>	lls/elles fin <mark>issent</mark>	lls/elles vend <mark>ent</mark>	lls/elles ont	Ils/elles sont	ll y a un r	nois	A month ago
B) The past t	ense – 3 regular	verbs and 1 irregu	ılar verb :					
Subject Pronouns	Par	ER VERBS ·ler/To speak	IR V Finir/	/ERBS To finish	RE VERE Vendre/ To	S sell	Δ	Aller/ To go
I		J'ai parlé	J'a	ai fini	J'ai venc	lu	Je	e suis allé/e
You (Singula	r) 🗌	Tu as parlé	Tu	Tu as fini		Tu as vendu		ſu es allé∕e
He/she/one	e II/e	lle/on a parlé	Il/elle,	/on a fini	Il/elle/on a	vendu	ll/ell	e/on est allé/e
We	Νοι	us avons parlé	Nous a	Nous avons fini		vendu	Nous s	sommes allés/es
You (Plural) Vo	us avez parlé	Vous	avez fini	Vous avez vendu		Vou	s êtes allés/es
They	lls/E	Elles ont parlé	IIs/Elle	es ont fini	Ils/Elles ont	vendu	lls/Ell	es sont allés/es

C) Questions :

They

1. What are the 3 groups of regular verbs? What are the steps required to go from I speak to I spoke in French?

2. How do you form a regular IR verb in the past? What makes the verb 'aller' irregular?

3. Can you match each time expressions with a tense?

4. Why do you think the verb 'aller' has different ending?

Ils/Elles ont parlé

The Bourne Academy Knowledge Organiser: Year 8 - Autumn Term - Geography



1	. Key Vocabulary	2. Where are Oceania and Southeast Asia loc				
a. Earth's structure (layers)	1. inner core, outer core, mantle and crust	MYANMAR	PACIFIC OCEAN	Oceania is a geog Australasia, Mela Southeast Asia is Continent. Ocean		
b. Tectonic plates	2. large portions of the earth's crust that move because of convection currents in the mantle	THAILAND THAILAND THAILAND THAILAND THILIPPIN BRUNEI	continent include Several countries Australia, Philipp region you can fi			
c. Convection currents	3. rivers of molten rock that move underneath the crust and slowly drag tectonic plates	MALAYSIA PALI 2 INDONESIA	BRUNEI MALAYSIA 2 INDONESIA PALAU FEDERATED STATES OF MICRONESIA NAURU KIRIBATI NEW GUINEA SOLOMON			
d. Earthquake and volcano preparation	4. monitoring, prediction, protection, planning	1. CAMBODIA 2. SINGAPORE	 >Jakarta (Indonesi >Manila (Philippin 			
e. Development	5. The process of change that affects people's lives.	OCEAN	>Kuala Lumpur			
f. Life Expectancy	6. The average age a person can expect to live to.	0 800 miles 0 800 kilometers	ZEALAND 25	>Wellington (New Zealand)		
g. Literacy Rate	7. The % of people that can read and write beyond the age of 15.					
h Davida un ant	8. Ways of measuring a countries progress and development. For example literacy rate.	J		and Southeast		
n. Development Indicators		Country	Level of development			
i. HIC	9. High Income Countries – Some of the most development countries in the world (UK, France , USA)	New Zealand	ніс	Life Expectancy = Literacy Rate: 99		
J NEE	10.Newly Emerging Economy – Countries that rapidly becoming	Indonesia	NEE	Life Expectancy = Literacy rate = 94		
	Nigeria)	Papua New Guinea	LIC	Life Expectancy =		
k. LIC	the least developed countries in the world (Ethiopia, Afghanistan)	Evaluation of development in	Indicators - Using individual indications	ators can be mislea		

ated?

graphic region that includes anesia, Micronesia and Polynesia. s a subregion of the Asian ns that border the coastline of this e the Indian and Pacific Ocean. es located in the region include pines, Indonesia and Kiribati. In the ind cities such Manila, Sydney, iala Lumpur.

Human features	Physical Features
25 Capital Cities	>Indian Ocean
>Jakarta (Indonesia)	>Pacific Ocean
>Manila (Philippines)	>Coral Sea
>Kuala Lumpur	>Volcanoes - Ring of Fire
(Malavsia)	>Great Barrier Reef
>Wellington (New	>Mariana Trench
Zealand)	

Asia?

Country	Level of development	Evidence
New Zealand	HIC	Life Expectancy = 82 years Literacy Rate: 99.9%
Indonesia	NEE	Life Expectancy =70 years Literacy rate = 94%
Papua New Guinea	LIC	Life Expectancy = 64 years Literacy Rate: 62%
		Literacy Rate: 62%

ding because as a country develops, some aspects develop before others.



Kilowieuge Organiser. Tear & Autumin Term	- Geography		
4. Plate tectonics in Oceania and Southeast	Asia: How do plates move?	6. Cause	s of human-made global warming
The structure of the Earth The Earth is separated into four layers:	Convection Currents	Evidence for climate chan planet. So some of it mus be put down to human a	nge shows changes before humans were on the st be natural but recent changes in the climate car ctivity. Human Causes
The inner core: a ball of solid iron and nickel The outer core: liquid iron and nickel The mantle: semi-molten rock (magma) that moves slowly The crust: thin, outer layer divided into slabs of rock called tectonic plates Tectonic plates are moving because of convection currents in the mantle underneath the crust. The places where plates meet are called plate margins or plate boundaries. This is where tectonic activity (volcanoes and earthquakes) occurs.	 The core heats the molten rock. The molten rock rises because it is light. When the molten rock reaches the crust (the plate) it drags the plate with it in the direction it is going. The molten rock will lose its heat when dragging the plate. The molten rock becomes cool and heavy and falls back towards the core. Plates either move towards each other (destructive or collision margin) away from each other (constructive) or slide past each other (conservative) 	Global Temperature, 1880 - 2014 Land - Ocean Index: 1951-1980 Base	 >Burning Fossil rules – release carbon dioxide with accounts for 50% of greenhouse gases >Deforestation – logging and clearing land for agriculture increases carbon dioxide in the atmosphere and reduces ability to planet to absorb carbon through photosynthesis. >Agriculture – accounts for around 20% of greenhouse gases due to methane production from cows etc. Larger populations and growing demand for meat and rice increase contribution. e of greenhouse gases result in global warming?
5. How can we prepare for ea	arthquakes and volcanoes?		Step 1: Solar radiation reaches the Earth's atmosphere - some of this is reflected into

Monitoring	Prediction
Seismometers measure earth movement and a seismograph records earthquakes.	Scientists study historical records of earthquakes at plate margins and have identified locations that they believe are at most risk.
Protection	Planning
Reinforced buildings and making building foundations that absorb movement. Automatic shut offs for gas and electricity	Avoid building in at risk areas Training for emergency services and planned evacuation routes and drills.

Loundations such loto



space.

>Step 2: The rest of the sun's energy is absorbed by the land and the oceans, heating the Earth.

>Step 3: Heat radiates from Earth towards space.

>Step 4: Some of this heat is trapped by greenhouse gases in the atmosphere, keeping the Earth warm enough to sustain life.

>Step 5: Human activities such as burning fossil fuels, agriculture and land clearing are increasing the amount of greenhouse gases released into the atmosphere.

Step 6: This is trapping extra heat and causing the Earth's temperature to rise.

Bourne Academy Knowledge Organiser: Year 8 Autumn Term - Geography



1. Place - when you locate a place you need to discuss its relationship to other places . Task: Complete a CLOCC description of a city using the map in your planner.	2. Inequality - this is experienced after hazards. Question: Why do LIC suffer more than a HIC after a hazard?	3. Time - when you loo or the formation of a f consider how a factor	ok at any: graph, chart eature you need to has changed over time.
C - Continent - Christchurch is in the continent of Oceania.	A. Christchurch B. Nepal Earthquake	Month Temp Rainfa	Delhi 220 - Solid - HatTey - Sa Tey 276
New Zealand L - Latitude - New Zealand exists at 40 degrees south of the equator.	1. 185 killed 1. 8632 killed 2. 3129 injured 2. 19 009 injured	January 8 120mm	n and a state of the state of t
O - Oceans - Neighbouring oceans include the south Pacific	3. 100,000 properties 3. Hundreds of thousands of people	February 9 125mm	n
C - Country - Christchurch is in the	4. \$28 billion of made homeless	March 11 140mm	ⁿ dataset and draw
Country of New Zealand. Com WorldAtlas.com	50% of GDP	April 12 105mm	a graph to illustrate it
4. Mathematical Skill - when we look at a data set, we can find patterns or meaning in it by calculating the following:	5. Enquiry - there will be opportunities for you to carry out enquiry . Task: Choose a debate and back it up with evidence	6. Sustainability – 'm without compromising generations.'	eeting our needs, needs of the future
We can use the: mean, median, mode and range to look at data and make decisions about it	 A. The Taal eruption affected people more than it affected places B. Christchurch is not vulnerable to earthquakes or volcanoes C. Oceania is rich D. Pollution of the Citarum doesn't matter - it is halfway across the world. E. Cities are done changing. F. We cannot prepare for earthquakes and volcanoes? 	Question: Consider the fashion brands along th (i) Advantages a. Fast Fashion allows for more affordable clothing b. The textile industry provides jobs for people on manufacturing lines	sustainability of fast e Citarum River (ii) Disadvantages a. Pollution causes ailments such as organ damage, itchiness, and impetigo b. Crop yields have reduced causing huge losses for farmers. c. Over 60% of the fish in the Citarum have died
Task: write out strings of numbers and calculate the: mean, median, mode and range	G. Overpopulation is going to happen.	inies	

William

Granville

Sharp

Wilberforce

11

12

Knowledge Organiser: Year 8 Autumn Term - Slave Trade - History



A. 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	7 1807 Abolit buyin		n of the Slave Trade Act abolishes the and selling of slaves in the British Empire.				
8	1833 The Slavery Abolition Act is passed in Britain.						
		В.	. Key Individuals				
9	Thomas Clarkson		Formed first Abolition Committee.				
10 Olaudah Equiano)	Ex-slave who spoke out about his experiences.				

Abolition.

Leading campaigner in Parliament for

Anti-slavery activist. Worked with

Wilberforce and Clarkson.

C. Key Words/Terms

13	Empire	A group of countries, people or land controlled and ruled by one single powerful country.
14	Colony	A country which is part of an Empire.
15	Slavery	A relationship where one person has absolute power over another. They control their life, freedom and wealth.
16	Triangular Trade	The name of the system for trading slaves across the world.
17	Middle PassageThe name used to describe the journey from Africa America for slaves, it took up to 2 months.	
18	Auction	An event where slaves are put up for sale and prospective owners bid for them. The highest bid wins the slave.
19	Plantation	A large farm that slaves worked on to produce cotton, tobacco and sugar.
20	Abolition	The act of putting an end to something by law.
21	The Slavery Abolition Act. 1833	The Act passed in Britain which made slavery illegal.
22	Cash crops	Sugar, cotton, tobacco and coffee grown for profit.
23	Act	A law passed by Parliament.
24	Bill	The name given to an Act before it is passed by Parliament.
25	Prejudice	Unfair opinions that are not based on facts.
26	Reform	To change something, making it better. 27





D. The Triangular Trade

The system in which slaves were traded across the world. Ships were loaded in England, in cities such as Bristol, Liverpool and Southampton, with goods such as guns, cloth and salt. This was taken to Africa and traded for enslaved humans. The ships then went on a 2-month journey known as the Middle Passage to the Caribbean. Here the enslaved humans were sold to work in the cotton plantations and farms. The ship was then loaded with sugar and cotton, also known as cash crops, to be taken back to England to be sold for huge profits. Cities like Liverpool and Bristol became extremely wealthy and grew as a result of the slave trade.

E. The Middle Passage

The Middle Passage was the longest part of the journey for slaves from Africa to the Caribbean. They suffered through terrible conditions, and many died during the journey. Slaves were packed into the ship in very tight quarters and laid down for most of the journey. They were only given little bits of food to keep them going and were severely punished should they disobey orders. Slaves were chained up for the entire journey, meaning that diseases spread quickly and easily from slave to slave. A lot threw themselves overboard in order to avoid their fate as a slave.

F. Reasons for the Abolition of the Slave Trade in 1807

Politics – Granville Sharp used the	Economics – Sugar	Religion –	Beliefs and Ideas -	Media – Thomas Clarkson	Key Individuals -
aw courts to try and give slaves	plantations were	Christian	The Society for	collected evidence against slavery.	William
their freedom. He fought many	closing as cheap	groups, such	the Abolition of	He spread his message all over the	Wilberforce MP
court cases, e.g., <u>the Zong ship</u> .	sugar could be	as the	the Slave Trade	country by publishing posters,	campaigned against
Slavery was becoming legally	bought from Brazil	Quakers,	was set up in	pamphlets and making public	the slave trade. The
unacceptable. Slaves in Britain	and Cuba. People	thought that	1787. Anti -slavery	speeches. Hannah More was a	first time he
went to court to get their	argued that slaves	slavery was a	petitions were	member of the Abolition Society.	introduced the idea
freedom. By the early 1800s most	would work harder	sin against	signed in British	She wrote poems and books about	he lost the debate
udges set these slaves free. The	if they were freed	God and	towns	the horrors of the slave trade and	by 163 votes to 88
aw of the land was turning against	and paid.	religion		convinced many of the need to	but he never gave
the idea of slavery				ban it.	up 28
			1		4

Bourne Scholars Knowledge Organiser: Year 8 - Autumn Term - History



AO1: Demonstrate knowledge and understanding of the <u>key features</u> of the periods studied.	AO2: Explain and analyse historical events and periods studied using historical concepts.		
1.1 Chronology - Create an A3 timeline of England's involvement in the Transatlantic Slave Trade from 1562 to 1833.	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.		
1.2 Historical Terminology - Define the following words: Branding, Caribbean, Chattel slavery, Corporal punishment, Diaspora, Dysentery, Enfranchisement, Indentured servant, Mulatto, Quaker, Royal African Company	2.2 Cause and Consequence - Record 3 arguments that would be used to defend the institution of slavery in the 17th and 18th centuries.		
 1.3 Key Features (Historical Knowledge) - Explain TWO English court-cases about the slave trade that may have influenced attitudes to slavery. 	2.3 Significance - Research and evaluate the impacts of <u>Thomas Clarkson</u> on the campaign for abolition in England. Was his work more significant that the work of Hannah More, William Wilberforce or Olaudah Equiano?		
AO3: Analyse, evaluate and use <u>primary sources</u> to make judgements.	AO4: Analyse, evaluate and make judgements about <u>interpretations</u> .		
 3.1 Valid inferences What can you infer from the diagram of the Slave Ship Brookes created in 1787 	4.1 Identifying views - What is the view given by Hochschild about the abolition movement?representative of the anti-slave trade forces. Gracious, witty, and devoutly religious, he was also a great orator who was beloved by almost everyone.		
 3.2 Nature, Origin, Audience, Purpose What is the nature, origin, Audience of the second s	4.2 Analysing interpretations - What evidence can you find to support the claim that Wilberforce was a 'key representative' for abolition? But was the abolition of the slave trade and slavery primarily the work of this likeable, saintly man and his circle of similarly religious friends? Today, most historians see the long struggle to end		
 diagram of the Brookes? 3.3 Usefulness What might the limitations of the source be for a historian researching reasons for the Transatlantic Slave Trade? 	4.3 Evaluating Interpretations - What other main interpretations could be used to counter the argument that Wilberforce was the real reason for the abolition?the slave trade as much more complex and unruly than simply being the work of Wilberforce alone. BBC Article William Wilberforce: The Real Abolitionist? Adam Hochschild 2011		



1. Keyword	Definition	Example	2. Decimal Place Value Chart
a. Decimal Place	The position of a digit to the right of a decimal point.	Decimal: Place value 2.456 <u>Tenths Hundredths Thousandths</u> <u>4</u> 10 <u>5</u> 100 <u>6</u> 1000	Thousands Hundreds Tens Ones Tenths Hundredths Thousandths Whole number part Decimal Point Fractional part
b. Significant	The digits in a number that	1st significant	3. Worked Examples
Figure	make it meaningful in	figure 3rd significant	a. Round 14.582 to one decimal place
	relation to its place value. Significant figures start	0.0701	14.582
	from the first non-zero	2nd significant	The digit 5 is the first decimal place
	digit.	figure	
o Error Intonvol	The upper bound and	A number rounded to 1	The digit 5 is next to 8, meaning the 5 rounds up to 6.
c. Error interval	lower bound of a number	A number rounded to 1	Answer = 14.6
	which provides a range of	The error interval is:	
	possible values that a	$0.55 \le x < 0.65$	b. Work out an estimate for the value of $\frac{48.7 \times 61.2}{11.3}$
	number could have been		
	before it was rounded.		$\frac{48.7 \times 61.2}{11.2} = \frac{50 \times 60}{10}$
d. Approximation	Roughly calculate or judge	The approximate height of	11.5 10 Significant ligure,
	the value or number of	the man is 1.8 metres	3000 iii Carry out the calculation
	something	Height ≈ 1.8 m	$\frac{10}{10} = 300$
	\approx means approximately.		
e. Estimate	Approximate an answer.	$63 + 38 \approx 70 + 40$	4. Sparx Independent Practice Codes
	Round each number in the	≈ 110	M111, M431, M994, M131, M878, M730
	calculation to one		
	significant figure.		

Knowledge Organiser: Year 8 Autumn Term - Linear Graphs - Mathematics





Knowledge Organiser: Year 8 Autumn Term - Sequences - Mathematics



1.Keyword	Definition	Example	2. Worked Examples
a. Sequence	A list of numbers or objects in a special order	1 3 6 10	a. What is the term-to-term rule of this sequence? x^2 x^2 x^2 x^2 x^2
b. Ascending	Increasing in size (smallest to largest)	$3, 7, 11, 15, 19, \dots \\ +4 +4 +4 +4 +4$	1, 2, 4, 8, 16, 32
c. Descending	Decreasing in size (largest to smallest)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	b. Find the nth term of the following sequence: 360012015
d. Term	A value within a sequence. The first term in the sequence is when $n = 1$	1, 3 , 5, 7, 9 3 is the second term of the sequence	The nth term is $3n$
e. Linear Sequence	A sequence going from one term to the next by adding or subtracting the same number. Also known as an arithmetic sequence	$\underbrace{1, 5, 9, 13, 17}_{+4 \ +4 \ +4 \ +4 \ +4 \ +4 \ +4 \ +4 \$	c. Find the 5 th term of the sequence with the rule $4n - 1$ 5 th term means $n = 5$ $4 \times 5 - 1 = 19$
f. Geometric Sequence	A sequence going from one term to the next by multiplying or dividing by the same number.	2, 4, 8, 16, 32 x ² x ² x ² x ²	
g. nth term	The nth term is a formula used to find any term in a sequence. The 'n' stands for the term number. It is usually written as an expression in terms of n.	4, 7, 10, 13, 17 The nth term of the sequence is 3n - 1	3. Sparx Independent Practice Codes: M381, M241, M166, M991, M866, M418, M981

Knowledge Organiser: Year 8 Autumn Term - Forming and Solving Equations and Inequalities - Mathematics



Forming and Solving Equations and Inequalities						
1. Keyword	Definition	Example	Keyword	Definition	Example	
a. Expression	A statement using numbers and letters.	4 <i>x</i> + 8	h. Integer	A whole positive or negative number including 0.	$-5 100 \frac{10}{2}$ These are all integers	
b. Variable	A symbol or letter used to represent an unknown value	coefficient variable	i. Inequality	A relationship between two expressions that are not equal	< less than ≤ less than or equal to > greater than ≥ greater than orequal to ≠ not equal to	
c. Simplify Expression	Also known as collecting like terms, which are terms that have the same variable and power	3y + 2x + 4x - y + 6 Simplified expression is 2y + 6x + 6	j. Satisfy an Inequality	Find the values that make the inequality true	$-3 < x \le 2$ The integers that satisfy the inequality are: -2, -1, 0, 1, 2	
d. Equation	A statement showing that two expressions are equal	6y = 12 5x + 4 = 18	k. Inequality on a Number Line	Use open or filled circles to show the values of an inequality	x < 0	
e. Solve	To find the value of a variable in an equation or inequality	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		• means $<$ or $>$ means \le or \ge	$x \ge 2$ $\xleftarrow{1}{} \underbrace{+}{} \underbrace{+} +$	
f. Inverse Operation	The opposite or reverse calculation	The inverse of addition is subtraction. The inverse of multiplication is division	2. Sparx Inde Codes:	pendent Practice	M813, M830, M175, M428, M417, M327, M208, M979, M795, M531, M949, M120, M237, M792, M960, M100, M908, M707,	
g. Substitution	Replace a letter with a value	Find the value of 2a when $a = 5$ so $2 \times 5 = 10$			NISUS, NISS4, NISS7, NIS84, NIII8, NI732	

Õ

1. Mathematical vocabulary			2. Mathematician Research		
Define each of the words given.	a. Fibonacci sequence			Who are they?	Srinivasa Ramanujan
Give an example for each.	b.Triangular numbers			What are they famous for?	lyengar
	c. Geometric	sequence		What contributions have they made to maths?	
3. Watch	BBC Magic Nu	mbers Mysterious V	Vorld of	Maths 1of3 720p HDTV x264 AAC MVGroup org - YouTu	ube (58 mins 45 Secs)
4. Thinking Mathematically					
a. What's it worth?				b. Add to 200	
Each symbol has a numerical value. Th	ne total for		28	Choose any four digits (from 0, 1, 2,, 9) and pla	ace 4 1 41
the symbols is written at the end of ea	ach row and			them in the cells below (you can repeat digits).	+
column.			30	Read the vertically add them together. Read them	$2 0 \rightarrow 26$
i. Can you find the missing total that	should go		18	horizontally and add them together.	↓ ↓ 67
where the question mark has been	ו put?		20	i. Is there a quick way to tell if the total is going t	42 + 16 = 58
ii. Can you find any other ways of solution	ving the	? 30 23 22		be even or odd?	
problem?				ii. Can you make a total of 200?	
iii. Can you create your own mild, me	dium, hot versi	ion?		iii. How many ways are there of doing this?	58 ± 67 = 125
iv. Watch this webinar for students.	<u> https://youtu.b</u>	e/G-r8MzmlqSU		iv. Which numbers between 0 and 396 is it possib	le to
			make?		
				v. What if we used 3 digits?	
c. The Simple life				5. Short Problems	
i. True or false, when you simplify all	l the expression	ns below they all g	ive	a. Jane made a mistake when writing down a mu	ltiplication, and she
the same solution?				multiplied by 54 instead of 45. Her answer was	s 198 more than it should
3(x+6y) +	+2(x-5y)			have been.	
4(2x-y) -	-3(x-4y)			What number did she multiply 54 by?	
-2(5x-y)	+3(5x+2y)			b. A book has 89 pages, but the page numbers ar	e printed incorrectly.
II. Here are 5 expressions				Every third page number has been omitted, so	that the pages are
(x+y) (x+2y) (x-y)	(x + 4y)	(2x + 3y)		numbered 1,2,4,5,7,8, and so on.	
Choose any pair of expressions and	a add together	multiples of each	like in	What is the number on the last printed page?	
part I.	wof Eng Ootie			c. Granny's watch gains 30 minutes every hour, v	vhilst Grandpa's watch
ii. Can you find a way to get an answe	1015x + 8y	i each case?		loses 30 minutes every hour. At midnight, they	both set their watches to
in. Can you create your own set of exp	pression for thi			the correct time of 12 o'clock. What is the corr	ect time when their two
iv. what about with 3 variables?				watches next agree?	

Knowledge Organiser: Year 8 Autumn Term - Music

Strings in blue

your feet.



1. Keywords ar	d definitions	2. The Ukulele	
Strum	Brushing your fingers over several to create a sound.	HEAD	
Chord	2 or more notes played at the same time.	TUNERS	
Bars	How written music is divided up to make it easier to read.	GUESS WHATFOR!	
Beats	A measure of time in music.		
Тетро	The speed of the music.		
Frets	The space between the lines on the neck of a ukulele or guitar.	FRETS NECK LONG, LIKE A GIRAFFE	
Tablature (TAB)	Another method of reading music for string instruments.		
Modes	A traditional scale used in Folk Music.	COUND	
Rhythm	The different lengths of notes e.g Chips, Bur-Ger.	HOLE	
Verse	A section of a song. The lyrics change for each verse but the melody stays the same.	RONI	
Chorus	A section of a song. The lyrics and melody are repeated in each chorus.	SADDLE BRIDGE	
		DON'T SIT ON IT!	
3. The neck of	the ukulele and frets	4. Folk instruments Accordion	
1 st Fret	Fingers are placed on specific string in specific frets.	Mandolin Mandolin	
2 nd Fret	For example to play C Major you have to		
3 rd Fret	fret.	Banjo	
Face	When you hold the ukulele, the string on the far left is the string closest to your face and the far right is the string closest to		

The Bourne Academy Music Knowledge Organiser: Year 8 Autumn Term



5. Chord charts

A chord chart tells you the name of the chord (i.e. C) and then the number of beats it plays for using the / symbol. Not all chords in this sequence are played for 4 full beats.

1 |Am/G/|C///|

7. Chords on the ukulele













this means that folk songs slowly changed over time.

A Minor



D Minor









8. Chords on the keyboard

People from different countries and cultures have their own Folk music. It was

harvest time to bring good luck. Folk music also included work songs and sea

historically used in celebrations and festivals and important times of year such as

shanties which were sung at sea by sailors. The rhythm of these helped the workers to carry out their difficult work. There are also lots of folk songs about everyday life and battles, as song was used a form of story telling and news. Folk music can also

be instrumental, often used for dancing, entertainment, celebration, and religious

ceremonies. Dancing to Folk music still happens such as Morris Dancers or Maypole dancing. Folk songs were not written down, they passed down by word of mouth –

G Major

6. History of Folk Music







Knowledge Organiser: Year 8 Autumn Term – Physical Education





Knowledge Organiser: Year 8 Autumn Term – Physical Education





Bourne Scholars Knowledge Organiser: Year 8 Autumn Term – Physical Education





Knowledge Organiser: Year 8 Autumn Term - Human Rights - Religious Studies





1. Key Words

- a. Human Rights basic entitlements of all humans because they are humans
- b. Prejudice prejudging someone as inferior or superior without cause
- c. Discrimination- acts of treating groups or individuals differently, based on prejudice
- d. Extremism Believing in and supporting ideas far away from what most consider correct
- e. Personal conviction Something a person feels strongly or believes in
- f. Social justice promoting a fair society but challenging injustice and valuing

2. Christian Attitudes towards human rights

- All people are created in God's image characteristics of God are reflected in human beings so human life should be valued and not destroyed.
- Agape love selfless, unconditional love foundations of all the principles of Christian social teachings
- Liberation Theology Jesus' example was to help liberate those in need, he could be seen as a 'robin hood' like figure supporting the vulnerable.

3. Muslim Attitudes towards human rights

- Every human has worth and should have their dignity protected as an absolute right. Life is given by God and cannot be taken away.
- Muslims are expected to oppose injustice and oppression.
- The Qur'an teaches of equality for all humans, who have special duties in creating a just and far

4. Case Study: Oscar Romero

- A Christian Archbishop of San Salvador
- His friend and fellow priest Rutilio Grande was murdered
- He used his position to speak out against the inequality and human rights violations occurring against the people of El Salvador
- He was assassinated in 1980

5. Case Study: Suffragettes

- Victorian women had few rights
- Until 1884 wives were listed as property of their husbands
- 1903 The Suffragettes movement was formed
- Women fought & campaigned for their rights
- 1918 Women over 30 had the right to vote 41

Knowledge Organiser: Year 8 Human Rights Autumn Term - Religious Studies



Martin Luther King

- A charismatic Christian Baptist Minister, who fought against racism and inspired many others to join him
- He used non-violent methods of protests to support civil rights for black Americans.
- People of all races and religions joined his protests.
- He staged sit ins, marches and speeches.
- He followed his religious beliefs and the example of Jesus so 'turned the other cheek' when violence was used against him and his supporters.
- He gave a number of inspirational speeches, include 'I have a dream in 1963.
- He won the Noble Peace Prize in 1964.



• He was assassinated in 1968.

Rosa Parks

- A quiet Christian middle aged woman, who was an American activist in the civil rights movement
- In 1955, in Montgomery, Alabama she refused to leave her seat to allow a white woman to sit in it
- She was arrested and charged with disorderly conduct
- This act of defiance lead to the Montgomery Bus Boycotts, where people refused to ride on the buses because of Rosa Parks arrest and the inequality that faced people in America at that time
- Martin Luther King helped lead the boycott which lasted for over a year
- But the Supreme Court eventually ruled that segregation on the buses as unlawful, so for the first time there was equality for people in America.



Malcolm X

- His original surname was 'Little' which highlighted his family roots being linked to slavery
- He had a tough upbringing, after his father's death, mother's hospitalisation and being placed into many care-homes
- He was written off as a failure even though he was a very bright and capable student
- He was arrested and imprisoned.
- He became a Muslim and found his calling in life as a human rights activist.
- He was a vocal spokesman supporting civil rights for black Americans but was prepared to use force to have his message heard.
- He criticised Martin Luther King's emphasis on non-violence

• He was assassinated 1965

Malala Yousafzai

- A young Muslim girl, who believed and stood up for equality at all costs.
- She campaigned for the rights of girls to be educated
- Started when she was 11 using an online blog highlighting her views on promoting the right for girls to be educated which brought media attention to the issue
- She was issued with death threats for this from the Taliban
- She was shot in the head on her way home from school by the Taliban to silence her
- She survived and despite suffering severe injuries.
- Continues to campaign for issues of social justice



Bourne Scholars Knowledge Organiser: Year 8 Autumn Term - Religious Studies



A) Challenge Tasks

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

B) Research Challenge

Human Right Individuals

- A. Research Elizabeth Fry (Christianity)
- B. Research C.S. Lewis (Christianity)
- C. Research Shirin Ebadi (Islam)
- D. Research Fahma Mohammed (Islam)
- E. Research Mahatma Gandi (Hinduism)
- F. Research Emmeline Pankhurst (suffragetes)
- G. Research Greta Thunberg (suffragetes)
- H. Research your own role model that you think has made a positive different, e.g.Marcus Rashford, etc.

Human Right Groups

- I. Research Christian Aid
- J. Research the salvation army
- K. Research Islamic Relief
- L. Research and find quotations that support why Christian's campaign for human rights
- M. Research and find quotations that support
 - why Muslim's campaign for human rights

C) Wider Links Challenge

- Use the internet to find any examples of human rights being broken / issues
- II. Evaluate why humanrights abuses still occur?Is there any solution?
- III. Describe the impact of today's learning on your wider outlook
- IV. Explain how you might use today's learning outside of school
- V. Describe how today's learning relates to another of your subjects



Knowledge Organiser: Year 8 Autumn Term - B4 Breathing and Digestion - Science



(1) Key Word	Definition	(2) The Digestive System	(3) The Respiratory System
a) Alveoli	Tiny air sacs in the lungs, where gas is exchanged during breathing.	mouth	lung
b) Bile	A substance produced in the liver. It emulsifies fats to prepare them for digestion.	liver gall bladder pancreas	bronchiole
c) Bronchi	The plural of 'bronchus'. The bronchi are the two major air tubes in the lungs.	intestine intestine	alveoli
d) Bronchioles	The many small, branching tubules into which the bronchi subdivide.	anus	bronchus
e) Diaphragm	A large sheet of muscle that separates the lungs from the abdominal cavity.		
f) Digestion	The breakdown of large insoluble food molecules to smaller soluble ones.	(4) Gas Exchange	to the block Alveolus
g) Enzyme	A protein which catalyses or speeds up a chemical reaction.	the diffusion of carbon dioxide from the air.	the blood int $a_2 = a_2$
h) Lungs	The organs responsible for gas exchange in mammals, birds, reptiles and amphibians.	The alveoli are adapted to for gas exch	nange:
i) Respiratory System	The organ system where air is taken into and out of the body, and gas exchange happens.	 Alveoli increase the surface area o Alveoli have very thin cell walls to easily pass through. 	f the lungs. Capillary
j) Trachea	The windpipe, the tube that leads from the mouth towards the lungs.	 Alveoli are surrounded by lots of b which allow the gases to be transp 	lood capillaries, orted through the
k) Ventilation	Breathing in and out.	body.	
(5) Digestion The organs of the digestive system are adapted to break large food molecules down into smaller ones which can travel in the blood to cells, and are used for life processes. This is known as digestion .		 (6) Enzymes are proteins that break for Different enzymes break down differer Amylase breaks starch into sug Protease breaks down protein Lipase breaks down lipids (fats 	ood down into smaller molecules. ent food types. gar s into amino acids s) into fatty acids

Knowledge Organiser: Year 8 Autumn Term - C4 Elements, Matter and the Periodic Table - Science



(1) Key Word	Definition	(2) The Periodic Table of Elements	The vertical columns are	
a) Atom	The smallest particle of an element that can	12 345670	called groups. Elements	
-,	exist.	Не	in a group all react in a	
b) Chemical	Shows how many of each type of atom in a	Li Be H B C N O F Ne	similar way.	
formula	compound.	K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr	The horizontal rows are	
c) Chemical	Describes how an element, or group of	Rb Sr Y Zr Nb Mo Tc Ru Rh Pd Ag Cd In Sn Sb Te I Xe	called periods	
Properties	elements behaves in a chemical reaction.	Cs Ba La Hf Ta W Re Os Ir Pt Au Hg Tl Pb Bi Po At Rn	calleu perious .	
d) Compound	Two or more different elements that have	Fr Ra Ac	All elements have	
	been chemically joined.	metals non-metals	symbols and names.	
e) Element	A substance that is made up of only one type	(4) Motals and Non-motals		
	of atom.	(4) Metals and Non-metals	nd non motals are found	
f) Group	Columns on the Periodic table.	Metals are found on the left of the periodic table and non-metals are found		
g) Mixture	Two or more substances that are not	Metals	are below.	
	chemically joined (can be the same elements).	Solid at room tomporature (avcent Solid or ga	except Solid, or gas at room temperature (except bromine)	
h) Molecule	Two or more atoms that have been	mercury) (except solid, of ga		
	chemically joined (can be the same type of	Good conductors of electricity and Poor condu	ctor (good insulators)	
	atom).	heat		
i) Period	Rows on the Periodic table.	Shiny, strong, malleable (can be Dull, soft, b	rittle (they can shatter)	
Periodic Table	A table that shows all of the elements	bent)		
	arranged in rows and columns.	(5) Facts to Learn		
		Group 1 contains reactive metals called the alkali	netals	
(3) Elements, C	ompounds and Mixtures	Group 7 contains reactive non-metals called the halogens		
Elemen	Compound Mixture	Group 0 contains upreactive non-metals known as	the noble gases	
			the noble gases.	
An element is	Two or more Two or more	(6) Chemical Formula: how many of each type of a	tom in a compound?	
af atom only	be elements that substances that are	H-O: the chemical formula for water	tom in a compound.	
or atom only.	nave been not chemically	There are 2 hydrogen atoms and 1 water atom		
	chemically joined. joined	There are 2 hydrogen atoms and 1 water atom		



(1) Key Word	Definition
a) Electromagnets	A non-permanent magnet which can be turned off and on by controlling the
	current through it.
b) Magnetic pole	The area at either end of a magnet where the magnetic field is strongest. We call them (N) and (S).
c) Magnets	A material that produces a magnetic field. Iron, cobalt and nickel are magnetic materials.
d) Permanent magnet	A magnet made from a magnetic material (iron, cobalt, or nickel). It cannot be turned off like an electromagnet.
e) Solenoid	A long piece of wire that has been wrapped into a coil. A solenoid is part of an electromagnet.

(5) The Earth's magnetic field



The Earth behaves like a huge magnet. It produces a magnetic field which runs from north to south. The field lines are most concentrated at the poles.

The north-seeking pole of a compass is attracted to the Earth's north pole. This allows us to navigate with a map.

(2) Magnets



Like poles repel each other and unlike poles attract each other.

The field lines run from north to south. The stronger the magnet, the more field lines it will have.

The magnet is strongest at the poles. The magnetic field is strongest closer to the magnet and decrease with distance.

(3) Electromagnets



When a current flows through a wire, it causes a magnetic field. An electromagnet is a length of wire wrapped into a coil and attached to a power supply. An iron core inside the coil makes the electromagnet stronger. If the current is turned off, the electromagnet will no longer work.

(4) We can change the strength of an electromagnet in three ways:

- Increasing the number of coils in an electromagnet will increase the strength of the electromagnet.
- Adding an iron core to the solenoid (the coil of wire) will increase the strength of the electromagnet.
- Increasing the current flowing through the solenoid will increase the strength of the electromagnet.



(1) Key Word	Match The Definitions to Key Words	(2) The Digestive System (3) The Respiratory System
a) Alveoli	The plural of 'bronchus'. The bronchi are the two major air tubes in the lungs.	1. Describe the movement of food through the digestive4. Describe the movement of air through the respiratory
b) Bile	Breathing in and out.	system. system
c) Bronchi	The windpipe, the tube that leads from the mouth towards the lungs.	2. Explain the function of the gall bladder in the digestive 5. Explan why the trachea system contains cartillage
d) Bronchioles	A substance produced in the liver. It emulsifies fats to prepare them for digestion.	3. How is the small intestine specialised to aid in nutrient6. Explain what happens during
e) Diaphragm	The organs responsible for gas exchange in mammals, birds, reptiles and amphibians.	absorption? an asthma attack and what can trigger it.
f) Digestion	The many small, branching tubules into which the bronchi subdivide.	(4) Gas Exchange
g) Enzyme	A large sheet of muscle that separates the lungs from the abdominal cavity.	7. Describe 3 ways the alveoli are specialised to aid in rapid gas exchange and justify how Alveolus
h) Lungs	The breakdown of large insoluble food molecules to smaller soluble ones.	these specialisms help. O_2
i) Respiratory System	Tiny air sacs in the lungs, where gas is exchanged during breathing.	8. Give the name of the blood vessel that surrounds the alveoli. Why are other types of
j) Trachea	A protein which catalyses or speeds up a chemical reaction.	blood vessels not found there?
k) Ventilation	The organ system where air is taken into and out of the body, and gas exchange happens.	 State the component of blood that carries the oxygen away from the alveoli and explain how it is specialised.
(5) Digestion		(6) Enzymes
 10. How is the digestive system adapted to break down large food molecules? (Think stomach, small intestine) 11. What small molecules aid in the breaking down of large food molecules? Give some examples. 		12. Research the lock and key theory. How can this theory be used to explain how substances are broken down?

Bourne Scholars Knowledge Organiser: Year 8 Autumn Term - C4 Elements, Matter and the Periodic Table - Science



(1) Key Word	Match The Definitions to Key Words	(2) The Periodic Table of Elements	
a) Atom	Rows on the Periodic table.	12 345670	1) Lithium reacts with
b) Chemical formula	A substance that is made up of only one type of atom.	He H	water to produce an alkaline solution. How
c) Chemical	A table that shows all of the elements	K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr Rb Sr Y Zr Nb Mo Tc Ru Rh Pd Ag Cd In Sn Sb Te I Xe	potassium to react with
d) Compound	Two or more atoms that have been chemically joined (can be the same type of atom).	Cs Ba La Hf Ta W Re Os Ir Pt Au Hg Ti Pb Bi Po At Rn Fr Ra Ac ▶ metals ► non-metals	water? What will the pH of the solution be?
e) Element	Columns on the Periodic table.	(4) Metals and Non-metals	
f) Group	Shows how many of each type of atom in a compound.	3) Some metals are quite soft. What can be done to harder? What is this substance called?	o make a soft metal
g) Mixture	Two or more different elements that have been chemically joined.	4) Research why metals are generally hard and why	/ metals can conduct
h) Molecule	The smallest particle of an element that can exist.	electricity.	om temperature and why
i) Period	Describes how an element, or group of elements behaves in a chemical reaction.	they do not conduct electricity.	
J) Periodic	Two or more substances that are not	6) Graphite is made of the non-metal carbon. Why	can it conduct electricity?
Table	chemically joined (can be the same elements).	(5) Facts to Learn	
(3) Elements, (Compounds and Mixtures	 7) Research how the reactivity of the elements chan Down group 7 Down Group 1 	nges:
2) A mixture was made between sand, water, the element Iron, and the compound sodium chloride (table salt). Explain how you would separate the substances in this mixture.		 (6) Chemical Formula 8) Work out the chemical formula for sodium chlor and aluminium chloride. Why does the ratio of ator 	ide, magnesium chloride ns change?



Like poles repel each other and unlike poles attract each other.

(1) Key Word	Match The Definitions to Key Words
a) Electromagnets	A magnet made from a magnetic material
	(iron, cobalt, or nickel). It cannot be turned
	off like an electromagnet.
b) Magnetic pole	A material that produces a magnetic field.
	Iron, cobalt and nickel are magnetic
	materials.
c) Magnets	A non-permanent magnet which can be
	turned off and on by controlling the
	current through it.
d) Permanent	A long piece of wire that has been wrapped
magnet	into a coil. A solenoid is part of an
	electromagnet.
e) Solenoid	The area at either end of a magnet where
	the magnetic field is strongest. We call
	them (N) and (S).

(5) The Earth's magnetic field



- 7. How can compasses be used to navigate around the world?
- 8. Explain what generates the magnetic field around the earth.
- 9. What other benefit, other than navigation, is there of the earth having a magnetic field?

(2) Magnets



- 1. State the metals which are magnetic.
- 2. Explain how you could separate a magnetic metal from a mixture of other non-magnetic metals.

(3) Electromagnets



- Research what the right-hand grip rule is. How does this explain how a magnetic field is generated around a wire?
- 4. Using gold instead of iron would not increase the strength of the electromagnet. Explain why.

(4) We can change the strength of an electromagnet in three ways:

- 5. Devise an experiment which you would be able to investigate how to increase the strength of an electromagnet. Think of the control, dependent and independent variable.
- 6. What would happen to the direction of a magnetic field if the current in the electromagnet was reversed?

Knowledge Organiser: Year 8 Autumn Term - El tiempo libre – Free time - Spanish



(A) ¿Qué te gusta hacer?	What do you like to do?	(B) ¿Qué haces en tu tiempo libre?	What do you do in your
			spare time?
Me gusta	I like	Bailo	I dance
Me gusta mucho	I really like	canto karaoke	I sing karaoke
No me gusta	I don't like	hablo con mis amigos	I talk with my friends
No me gusta nada	I don't like at all	monto en bici	l ride my bike
chatear	to chat online	saco fotos	I take potos
escribir correos	to write emails	toco la guitarra	I play the guitar
escuchar música	to listen to music	a veces	Sometimes
jugar a los videojuegos	to play videogames	de vez en cuando	from time to time
leer	to read	nunca	never
mandar SMS	to send text messages	todos los días	every day
navegar por Internet	to surf the net		
salir con mis amigos	to go out with friends	¿Qué tiempo hace?	What's the weather like?
ver la television	to watch TV	hace calor	it's hot
porque es	because it is	hace frío	it's cold
porque no es	because it is not	hace sol	it's sunny
interesante	interesting	hace buen tiempo	it's nice weather
guay	cool	llueve	it's raining
divertido/a	amusing, funny	nieva	it's snowing
estúpido/a	stupid		
aburrido/a	boring		

O

The Bourne Academy

Knowledge Organiser: Year 8 Autumn Term - El tiempo libre – Free time - Spanish

(c) Las estaciones	The seasons	(D) ¿Qué deportes haces?	What sports do you do?
Los días de la semana.	The days of the week		
	Consists -		
la primavera	Spring	Hago artes marciales.	l do martial arts.
el verano	Summer	Hago atletismo.	I do athletics.
el otoño	Autumn	Hago equitación.	l do/go horseriding.
el invierno	Winter	Hago gimnasia.	I do gymnastics.
lunes	Monday	Hago natación.	I do/go swimming.
martes	Tuesday	Juego al baloncesto.	I play basketball.
miércoles	Wednesday	Juego al tenis.	I play tennis.
jueves	Thursday	Juego al voleibol.	l play volleyball.
viernes	Friday	¡Me gusta!	I like it!
sábado	Saturday	¡Me gusta mucho!	I like it a lot!
domingo	Sunday	¡Me gusta muchísimo!	I really, really like it
los lunes	on Mondays, every Monday	¡Me encanta!	I love it!
los martes	on Tuesdays, every Tuesday		
(E) Algunas preguntas	Some questions	(F) Palabras muy frecuentes	High-frequency words
¿Qué?	What/Which?	Con	With
¿Cuándo?	When?	Cuando	When
¿Dónde?	Where?	mucho	a lot
¿Cómo?	How/What?	0	or
¿Cuántos?	How many?	pero	but
	-	porque	because
		sí	yes
		también	also, too
		¿Υ tú?	And you?
		¿Υ tú?	And you?

Bourne Scholars Knowledge Organiser: Year 8 Autumn Term - Spanish



A) Using question words:	D) Verbs with infinitives:
To take part in longer conversations you need to know your question words. These are some of the question words that you know already: ¿Qué? What/ which?	The infinitive is the form of the verb found in the dictionary or a wordlist. In Spanish, verbs fall into three groups acording to the ending of the infinitive: -ar, -er or -ir When two verbs come side by side, one must be the infinitive:
¿Cuándo? When? ¿Dónde? Where? ¿Cómo? How/ what? ¿Cuántos? How many?	Me gusta mandar SMS- I like to text Me encanta ver la tele- I love to watch/ watching TV
 B) Complete the questions with the correct word. Example: 1. Cuándo 	E) Choose the correct form of the verb to complete each sentence:
1. ¿<u>Cuándo</u> es tu cumpleaños? 2. ¿ vives?	 No me gusta hacer/hago/ hace atletismo. Me encanta juego/jugar/juega al fútbol. Me gusta mandar/ mandan/ mando SMS
5. ¿ te gusta hacer en tu tiempo libre?	F) What does a sentence need to make sense? Translate the sentences below and explain what each has in common. Are there any patterns?
6. ¿ deportes haces? 7. ¿ años tienes?	1. Normalmente escucho la música pop-
C) Is there anything all the question words have in common?	2. No me gusta escuchar el jazz -
	3. A menudo hago una clase de baile el lunes -



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.

BrandingA strong brand makes a	3.Marketing and Market Research Methods
product:	Online Surveys: email and social
Easy to recognise	media
Easy to remember	Focus Groups: discuss needs and
Appealing to its target market	users.
Sets itself apart from	Product Analysis: Review
competitors	to see how competitors can be
Explains what the product is clearly.	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

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?

Medium

Hot

- 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?



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 Autumn Term - TED



14. PPE **PPE** stands for Personal Protective Equipment. **Resistors** control the flow of This equipment keeps you safe during practical work. electronic components. **PPE includes:** Goggles Aprons **Protective footwear** Visors

15. CAD/CAM

CAD stands for Computer Aided Design, 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 Computer Aided Manufacturing, 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

current within a circuit. They stop high rates of current damaging

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.

An **LDR** is a resistor which senses light. It allows current to run through it when it is dark.

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.







18. Design Iteration

17. Biomimicry

This is where designs mimic naturally

Divers use flippers inspired by animals with

Kayak oars are designed to be aerodynamic

occurring designs found in nature.

webbed feet.

like the fins on dolphins.

Iteration means to develop. When we iterate a design we develop it to become better.

Every time we iterate an idea we will improve it. Iteration creates products that are developed to be better for the primary user, easier to use and perform better.

To successfully iterate we need to evaluate and gather feedback on ideas. This feedback informs which parts of the ideas are strong and should be kept and which parts are weak and should be changed.







2. Describe and Explain 3. Iterate and develop 1. Knowledge and Understanding recall task. Create a range of sketched design Pick a manufacturing process to discuss. Manufacturing processes developments for the following products. Research and describe the process step by • Create a step by step production log that step. Support the description with a You must annotate your changes and talk through your current TED workshop diagram. explain why they are good for the primary project. user. • Discuss the tools you are using and how you are using them. Wood Lathe Brazing • Discuss quality control checks you are Welding Sand Casting making. • Discuss how you are assessing hazards, Metal Lathe Press Moulding controlling risks and implementing good health and safety measures. Milling Machine Fabric heat press • Give some top tips to students to ensure transfer they do things correctly. 6. Analyse and Develop 1. Who is the product 5. Visit, Watch, Do. 4. Assessment Ready designed for? How do you Flash cards are incredibly useful revision tools. Visit this link to a sketch-a-day know this? Create a set of flashcards which cover all the YouTube channel. Pick a video 2. How has the designer made theory in your other Knowledge Organiser. tutorial and develop your the product easy to use? 3. What features does the drawing skills by following the A good flash card will have questions as heading product have which makes instructions and demos. and include short snippets of easy to recall it a good product? information. You should underline and highlight https://www.youtube.com/chan 4. What features does the key words. nel/UCBtSgEZk914z5InEs U2J3w product have which could Gaming Chair make it hard to use? 5. How would you improve the product? What would you develop further? Why would you make that change? Child's learner keyboard



Hadow Road, Bournemouth, Dorset, BHIO SHS www.thebourneacademy.com Tel: 01202 528554