ESSENTIAL KNOWLEDGE FOR GCSE STUDY

2022 - 2023

BRIDGNORTH Endowed

www.bridgnorthendowed.co.uk

Ofsted
Good
Provider

Essential Knowledge for GCSE Study

2022 - 2023

BRIDGNORTH Endowed

Bridgnorth Endowed School | Northgate Bridgnorth | Shropshire | WV16 4ER
01746 762103 | www.bridgnorthendowed.co.uk

INDEX

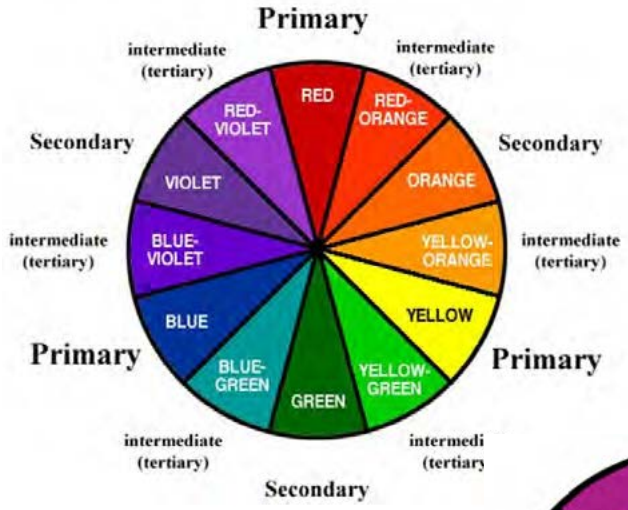
BRIDGNORTH Endowed

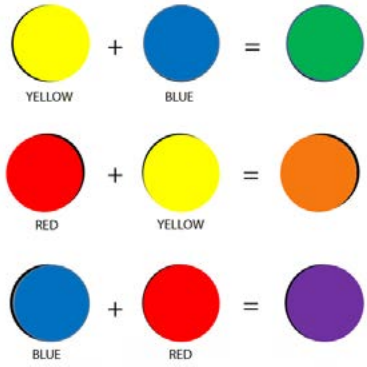
Notes

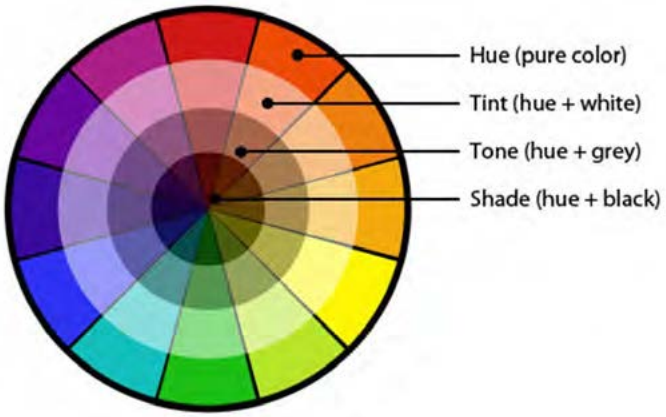
Art

BRIDGNORTH Endowed

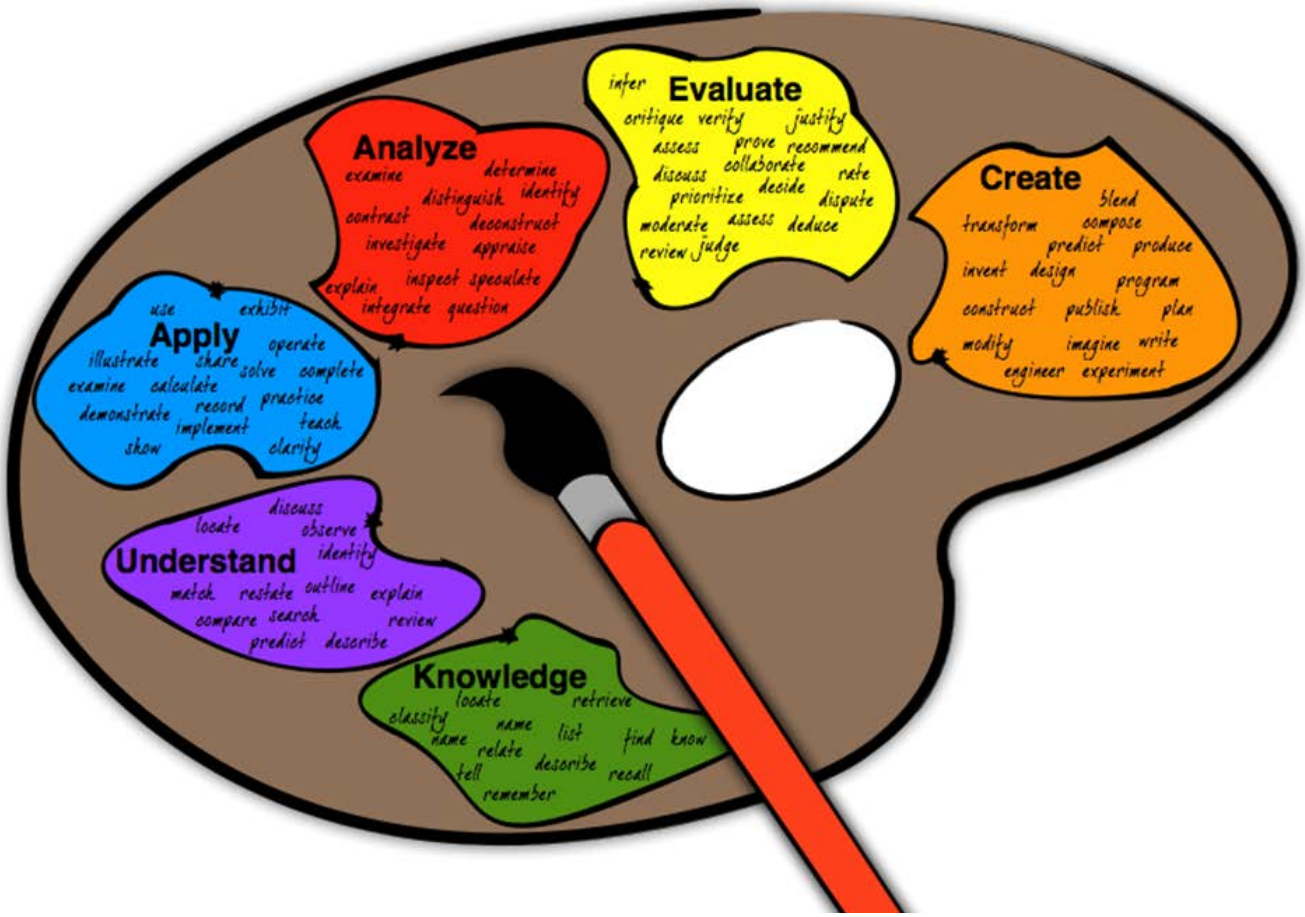
COLOUR THEORY







THE PROCESS FOR DEVELOPING WRITTEN AND VISUAL ART WORK



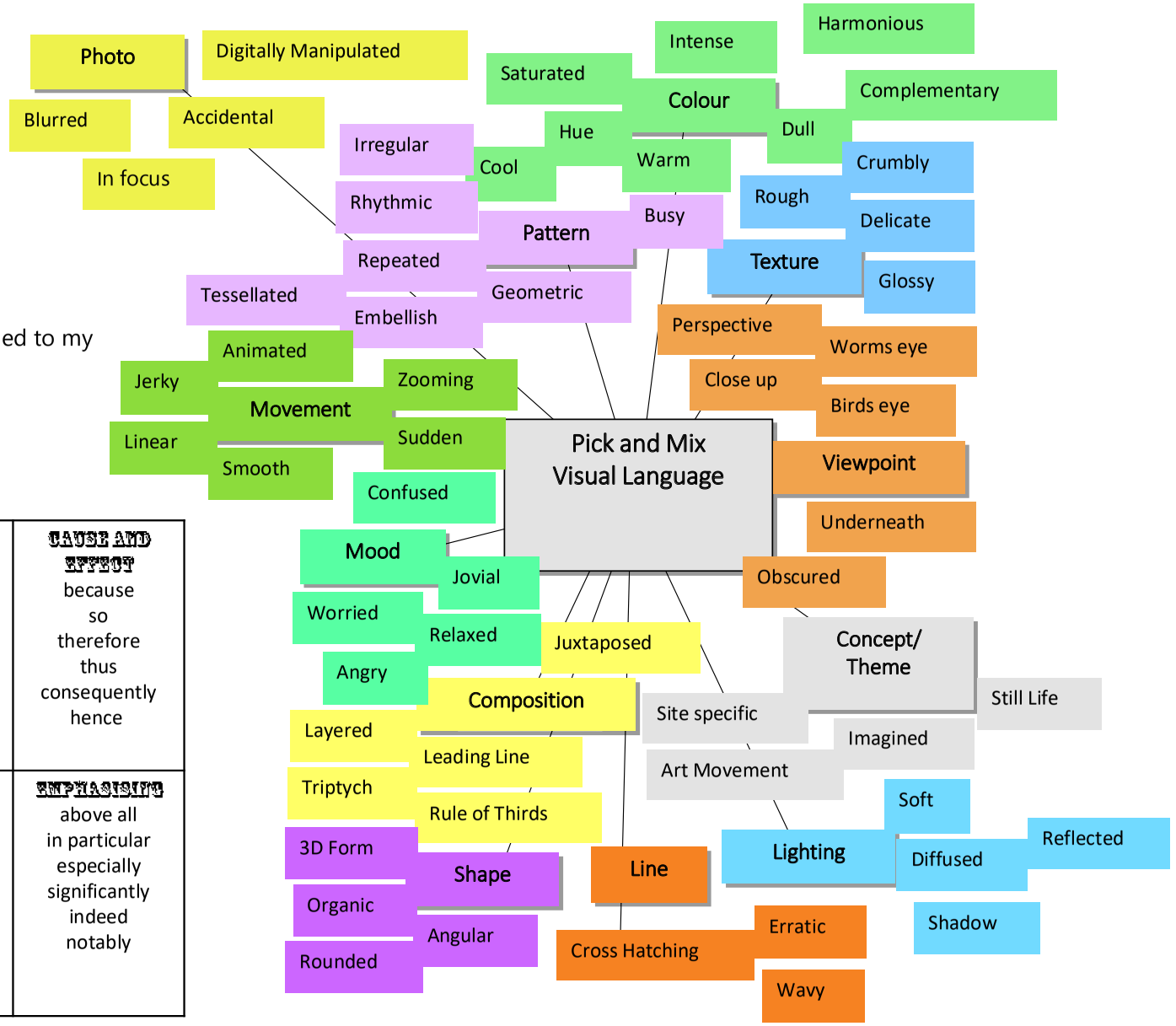
ART HISTORY TIMELINE

Sentence starters…

While looking at the work…
Initially I thought that…
The artists work reminds me of…
I particularly like the…
In my own work I would like to…
In my opinion I feel that…
The artist creates work which…
This type of work is…
The similarities between… and… are apparent because…
The skill/technique which worked really well was… this added to my work because…
The main theme which inspired me was… because…
I think the colour scheme used is effective because…
I think the artist has been inspired by… because…

Connectives

ADDING	SEQUENCING	ILLUSTRATING	CAUSE AND EFFECT
and also as well as moreover too furthermore additionally	First, second, third…… finally, next meanwhile after then subsequently	for example such as for instance in the case of as revealed by… illustrated by…	because so therefore thus consequently hence
COMPARING	**QUALIFYING**	**CONTRASTING**	**EMPHASISING**
similarly likewise as with like equally in the same way…	but however although unless except apart from as long as if	whereas instead of alternatively otherwise unlike on the other hand… conversely	above all in particular especially significantly indeed notably



ART LITERACY – WORD BANK

LINE

BOLD
BROKEN
FEATHERY
FINE
FLOWING
SENSITIVE
SOFT
SWIRLING
VIGOROUS
HEAVY

TONE

BLENDED
CROSS HATCHING
STIPPLING
SCUMBLING
TONAL
GREY
WHITE
BLACK
HIGHLIGHT

TEXTURE

FLAT
SMOOTH
SCULPTURAL
RAISED
ROUGH
NATURAL
LAYERED
COLLAGED
PAINTED
SHINY
UNEVEN
TACTILE

COLOUR

PRIMARY
SECONDARY
TERTIARY
CONTRASTING
COMPLIMENTARY
HUE
TINT
BRIGHT
PASTEL
COLD
WARM
EARTHY
INTENSE

SYMBOLIC

RED – LOVE, REVOLUTION, DANGER
BLUE – SPIRITUALITY, ROYALTY, SADNESS
BLACK – EVIL, AUTHORITY, DARKNESS
GREEN – NATURE, JEALOUSY, GO
YELLOW – HAPPINESS, INTELLIGENCE, SUNSHINE
WHITE – HEAVEN, PURITY, SURRENDER

JUDGEMENT

INSIGHTFUL
PERSONAL
OPTOMISTIC
CONFUSING
SOPHISTICATED
CONCEALED
DRAMATIC
INTERESTING
VIBRANT
CALM
ROMANTIC
FEMININE
STRONG
STRANGE
HARMONIOUS
PURPOSEFUL
MEANINGFUL
UNUSUAL
NARRATIVE
ABSTRACT
SYMBOLIC
EMOTIONAL
STRIKING
BUSY
DEPRESSING
CHALLENGING
FREE
IMAGINATIVE
EMOTIVE
SOLITARY

FORM & SHAPE

ABSTRACT
ANGULAR
BROKEN
ORGANIC
SOFT
COMPOSED
CIRCULAR
LINEAR

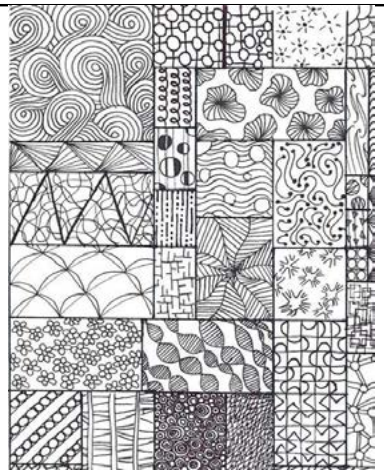
PATTERN

DECORATIVE
DIAGONAL
EMBELLISHED
FLORAL
GEOMETRIC
INCISED
HORIZONAL
IRREGULAR
ORGANIC
REPEAT
SYMMETRICAL

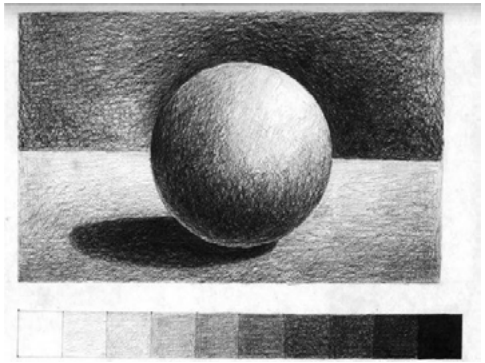
COMPOSITION

LAYOUT
BACKGROUND
DISTANCE
LEFT SIDE
RIGHT SIDE
ISOLATED
GROUPED TOGETHER
FOREGROUND
PORTRAIT
LANDSCAPE

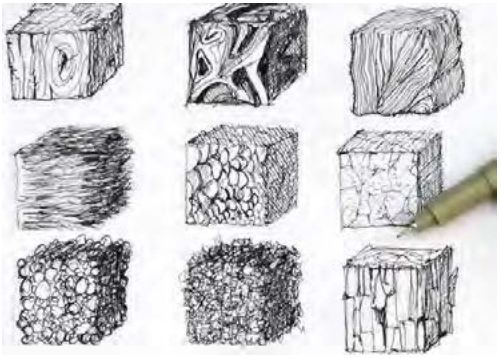
LINE



TONE



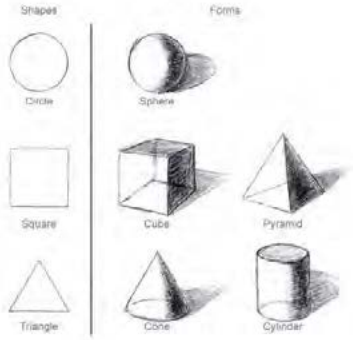
TEXTURE



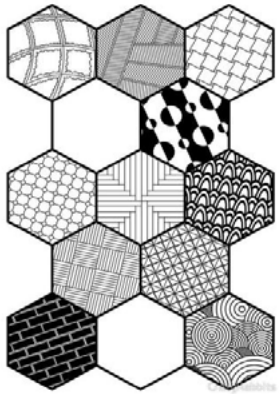
COLOUR

THE FORMAL ELEMENTS OF ART

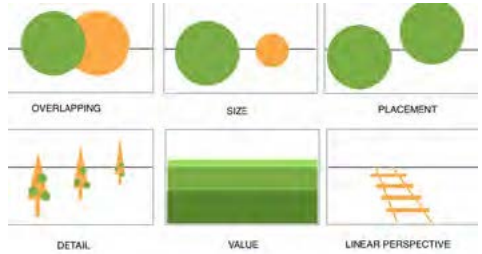
SHAPE & FORM



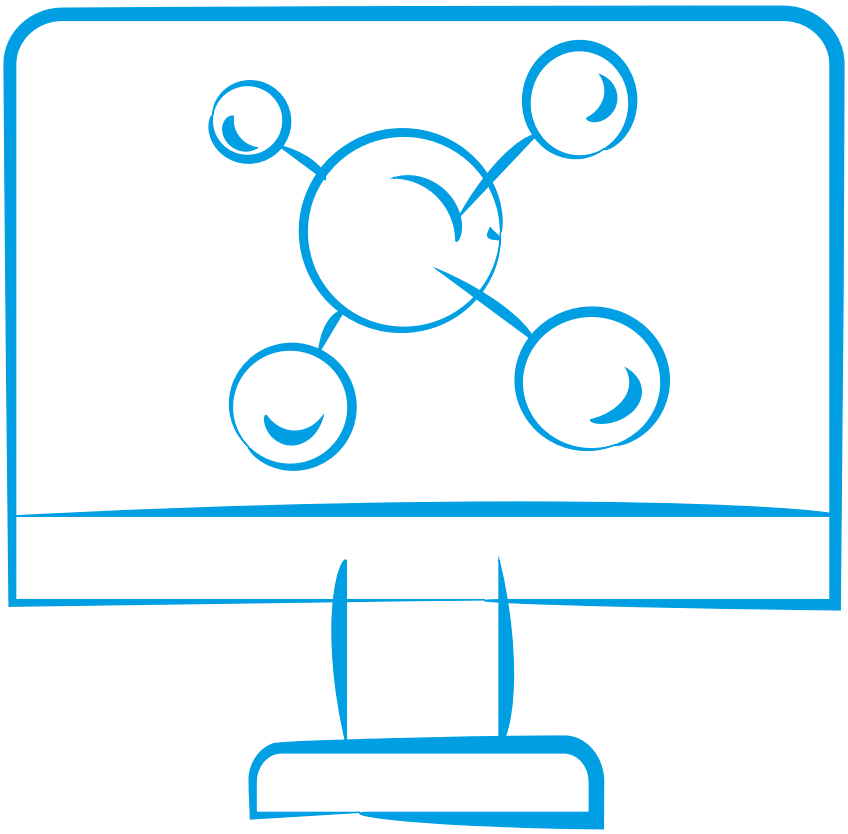
PATTERN



COMPOSITION



Computer Science



BRIDGNORTH Endowed

COMPUTER SCIENCE COMPUTATIONAL THINKING

SECTION 1 Algorithms

Decomposition; breaking down a problem – a recipe breaks down into a list of ingredients with a process of how to make the meal

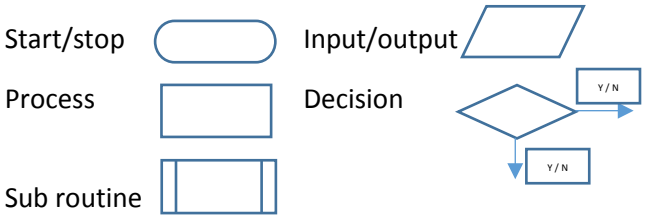
Abstraction, taking away the detail but looking at the information only – London Tube map

Algorithmic thinking, logically from the problem to the solution. Algorithms created which can be re-used.

Algorithm; a set of instruction for solving problems in a finite number of steps

Pseudo-code; algorithms written in a structured way, not in a programming language

Flowcharts (start/stop, input/output, decision, process, subroutine)



Search algorithms: **Binary search**; ordered list
Linear search; unordered list

Sorting algorithms: **Bubble sort**; compares pairs
Merge sort; splits lists

SECTION 2 Programming

Programming – Data types

Integer (int), Real Float (dec), Boolean (bol), Character (chr), String (str)
Strings are always written in quotation marks; strGreeting ← "Hello"
Constant variables remain the same; intVAT ← 20%

Programming – Operators

Addition +, subtraction -, multiplication *, division /, integer division DIV, remainder MOD or %

Assignment operators	
= or ==	Is equal to
= or <> or !=	Is not equal to
<	Is less than
>	Is greater than
<= or ≤	Is less than or equal to
=> or ≥	Is greater than or equal to

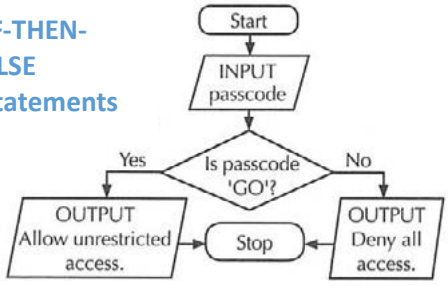
String manipulation

Start at 0 S P Y I N G
0 1 2 3 4 5
LEN(string) returns the number of characters in a string
LEN("Hello") would return 5
POSITION(string, character)

Program Flow

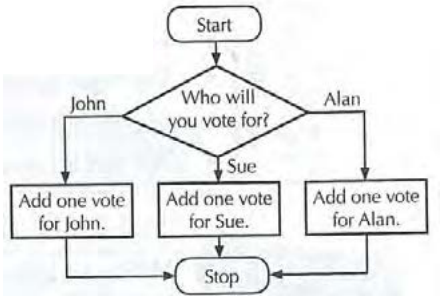
Interact with a user – input or output

IF-THEN-ELSE statements



ELSE-IF statements – check condition until one is true

CASE statements – check the value of a variable



Iteration

REPEAT UNTIL – controlled by a condition at the end of the loop. Always run the code inside them at least once.

WHILE loops – controlled by a condition at the start of the loop. Never run the code inside them if the condition is initially false

DO WHILE – controlled by a condition at the start of the loop. Always run the code inside them at least once

FOR loops are an example of a Counter Controlled Loop

Nested iteration – Loop within a loop

Boolean Operators; AND, OR and NOT

Boolean operator	Example that returns true	Example that returns false
AND	3 < 5 AND 2 > 1	4 < 5 AND 10 > 20
OR	1 > 8 OR 2 = 2	1 = 8 OR 2 < 2
NOT	NOT(5 > 8)	NOT(10 > 6)

Random Number Generation

Pseudocode: RANDOM_INT(x , y) where x is the lower number and y the higher number

Arrays are used to store multiple values. One dimensional arrays are like lists
arrStudents ←['John', 'Alan', 'Beth', 'Heather']

Two-dimensional arrays are like a List of lists. You have to give both positions to add to or access the list

arrStudents[1,1] ←'John'

		Pupils			
		0	1	2	3
Tests	0	15	5	13	12
	1	2	14	11	9
	2	5	4	12	7
	3	6	8	18	19

Scores array highlighted is Scores[2,0]

Records are a different type of data structure. They contain a collection of data values e.g. int, str, bol

```
RECORD Recipes
        INT RecipeNumber
        STRING RecipeName
        BOOL   Tested
        INT    Score
END RECORD
```

Once you have created the RECORD you can assign values to it

Recipe1 ← Recipes(1, 'Chocolate Cake', True, 3)

Records: keep related information together
Arrays: group records together

File Handling

Files allow permanent data storage
Start by opening an external file
newFile ← OPEN('newFile.txt')

Read or write to a file

WRITE() or WRITELINE()
READ() or READLINE()

ENDOFFILE() returns true if at the end of a file

Subroutines

Used to simplify code, help to avoid repeating code
Subroutines can carry out a set of instructions

Functions always return a value

Scope of variables - Local & Global

Local variables can only be used within the structure they are created in
Global variables can be used any time after their declaration

SECTION 3 Structured Programming

Makes (modular) coding much easier
Decompose the problem into manageable parts
Use of subroutines
Easy to maintain the program

Authentication & Validation

Authentication can help to protect your programs
Validation can make sure the Inputs can't be exploited
Range check: data is within a specified range
Presence check: data has actually been entered
Format check: data has the correct format e.g. date
Length check: data is the correct length

Testing

Syntax errors: when the compiler doesn't understand something you've typed in because it doesn't follow the rules or grammar of the programming language
Logic errors: when the compiler or interpreter is able to run the program but the program does something unexpected

Test Plan

Should be created before implementation
Will outline exactly what is to be tested
Anticipate potential errors
Include Test Data:
Normal typical data: what is likely to be entered
Boundary data: at the limit of what should be entered
Erroneous data: inputs that should not be accepted

Trace Tables help to find logic errors by working through the code with values entered and keeps track of the variables

Algorithms can be tested for time efficiency

High level: VB.NET, Pyhton, C++. The source code is easy for humans to understand

Low level: Machine code made up of 1s and 0s

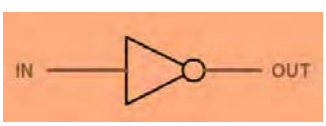
Translators convert programming languages into machine code

Translators: assemblers, compilers & interpreters

Compliers and translators are used to turn high-level languages into machine code

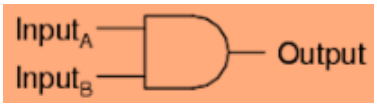
SECTION 4 Data representation

Logic gates apply Boolean operations to inputs
NOT gate: single input & single output. Output is always the opposite of the input



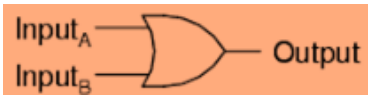
Input	Output
0	1
1	0

AND gate: two inputs and one output. If both inputs are 1 then output is 1, otherwise output is 0.



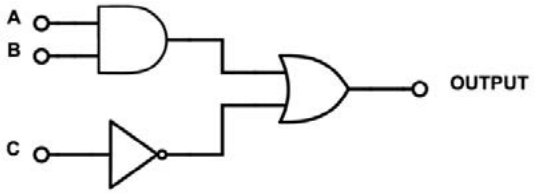
A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1

OR gate: two inputs and one output. If one or more inputs are 1 then output is 1, otherwise output is 0.



A	B	Output
0	0	0
0	1	1
1	0	1
1	1	1

Logic gates can be combined e.g. AND then NOT, OR then NOT. Logic gates can also have more than two inputs:



Units: bits are the smallest measure of data
Computers use 1s and 0s to represent flow of electricity
All the data we want a computer to process must be converted to binary code (1s and 0s)
each 1 and 0 is a bit (**bi**nary digi**t**)

Name	Size
Bit (b)	A single binary digit (1 or 0)
Nibble	4 bits
Byte (B)	8 bits
Kilobyte (KB)	1000 bytes
Megabyte (MB)	1000 kilobytes
Gigabyte (GB)	1000 megabytes
Terabyte (TB)	1000 gigabytes

You can convert between different units

Binary Numbers

Converting **binary** to **decimal**

128	64	32	16	8	4	2	1
0	0	1	1	0	1	0	1

1 x 128 + 64 x 0 + 1 x 32 + 1 x 16 + 0 x 8 + 1 x 4 +0 x 2 + 1 x 1 = 53

Converting decimal to binary by subtracting: 79 to binary

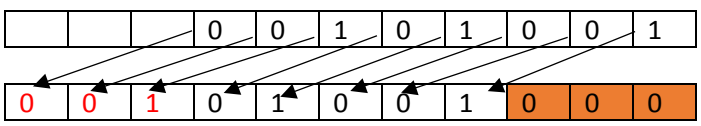
128	64	32	16	8	4	2	1
0	1	0	0	1	1	1	1

(79 = 128 = -49) (79 – 64 = 15) (15 – 32 = -17) (15 – 16 = -1) (15 – 8 = 7) (7 – 4 = 3) (3 – 2 = 1) (1 – 1 = 0)

Binary **addition** using column method
0 + 0 = 0, 1 + 0 = 1, 0 + 1 = 1, 1 + 1 = 10

	1	0	0	0	1	1	0	1
+	0	1	0	0	1	0	0	0
	1	1	0	1	0	1	0	1

Binary (logical) **shift** can be used to multiply or divide by 2



Hexadecimal numbers (base 16) are shorter than binary
A single hex character can represent any decimal number from 0 to 15

Decimal	Hex	Binary	Decimal	Hex	Binary
0	0	0000	8	8	1000
1	1	0001	9	9	1001
2	2	0010	10	A	1010
3	3	0011	11	B	1011
4	4	0100	12	C	1100
5	5	0101	13	D	1101
6	6	0110	14	E	1110
7	7	0111	15	F	1111

In hex, moving right to left, place values increase in powers of 16

4096	256	16	1

Convert **hex to decimal** by multiplying each character
87 hex to decimal

Step 1:

16	1
8	7

Step 2: multiply the numbers in each column
8 x 16 = 128 7 x 1 = 7
Step 3: add up the results: 128 + 7 = 135

Convert **decimal to hex** by dividing each character
106 decimal into hex

Step 1: 106 / 6 = 6 r 10
Step 2: divide the remainder from the last calculation by 1
10 / 1 = 10 = A

16	1
6	A

Convert **binary to hex** by splitting it into nibbles
10111001 into hex

Step 1: split into nibbles 1011 1001
Step 2: draw binary table with the nibbles

8	4	2	1	8	4	2	1
1	0	1	1	1	0	0	1

Step 3: For each nibble add up the numbers with a 1 then convert to hex 8 + 2 + 1 = 11 8 + 1 = 9
Step 4: Convert to hex values 11 = B 9 = 9 B9
If the binary number cannot be split into nibbles, add 0s to the front until you can split into nibbles

Convert from **hex to binary** use each character's decimal value (opposite way from hex to binary above) e.g. 8C
Step 1: find the decimal value of each character
8 = 8 decimal C = 12 in decimal
Step 2: Find the binary value of each decimal number

8	4	2	1
1	0	0	0

8	4	2	1
1	1	0	0

Step 3: Put the nibbles together 10001100

Binary can be used to **represent characters**
The number of bits needed is based on the character set

Images are stored as a series of pixels
Increasing the **colour depth** and resolution increases the file size
Total number of colours = 2n (where n = number of bits per pixel, or bpp)
File size (in bits) = image resolution c colour depth = width x height x colour depth

Sound is **sampled** and stored electronically
Several factors affect the size and quality of sound files
Sample rate, Sample resolution
File size (in bits) = Sample rate (in Hz) x sample resolution a length in seconds

There are two types of compression; **lossy** and **lossless**

Run Length Encoding (RLE) looks at repeating data
RLE can be used to compress different types of data

Huffman coding uses the frequency of each data value

SECTION Five Computer Systems

A **computer** is a machine that **process data**
Embedded systems are computers **inside** a larger system
Computers contain **components** which work together

The **CPU** is the **Central Processing Unit** – five main parts **Control Unit (CU), Arithmetic Logic Unit (ALU), The Cache, The Clock** and **Buses**
CPUs are based on **Von Neumann's** design which revolutionised computing
CPUs follow the **fetch-decode-execute** cycle

Memory; **RAM** is high speed, volatile while **ROM** tells the CPU how to boot up and in non-volatile

CPU **performance** depends on **clock speed, number of cores and cache size.**
Overall CPU performance is also affected by other components too

Secondary Storage; **primary** – memory areas that the CPU can access directly like CPU registers and **secondary**, is non-volatile, not accessible directly by the CPU

Secondary storage includes; **magnetic hard disks**, high capacity, reliable storage, **solid state drives**, fast and reliable, **optical disks**, cheap and robust, **cloud storage**, uses the internet to store files and applications

System Software

Operating System (OS) manages the hardware and runs software
The OS communicates with Input/Output (I/O) devices through **drivers**
The OS also **manages** applications
The OS is in charge of **memory management**
The OS tells the **CPU what to process**
The OS handles **file and disk management**
OS manages **system security**

System Software – utilities, help maintain the computer; **Disk health**, **compression**, **encryption**, **backup**, **virus scanners**, **system clean-up**

SECTION 6 Networks

LAN: Local Area Network, WAN: Wide Area Network, PAN: Personal Area Network
Networking computers has **advantages** and **disadvantages**
Wired and wireless networks

Topologies: **Star** and **Bus** networks

Network protocols – networks need protocols to set the **rules**. Divided into layers; **application layer (4), transport layer (3), internet layer (2) and link layer (1)**

Protocols; **TCP** and **UDP** split the data into **packets**, **IP** is responsible for **packet switching, Wi-Fi** is the standard set of **protocols** for **wireless LANs**

Cyber security is important to people and organisations
Penetration testing can test a system' cyber security
Malware is software that can harm computers
People are often the weak point in secure systems (phishing, pharming, shouldering and blagging)

Networks need to protect against threats; **encryption**, **anti-malware software, automatic software updates, user access levels, MAC address filtering**

Authentication confirms your identity

SECTION Seven Issues

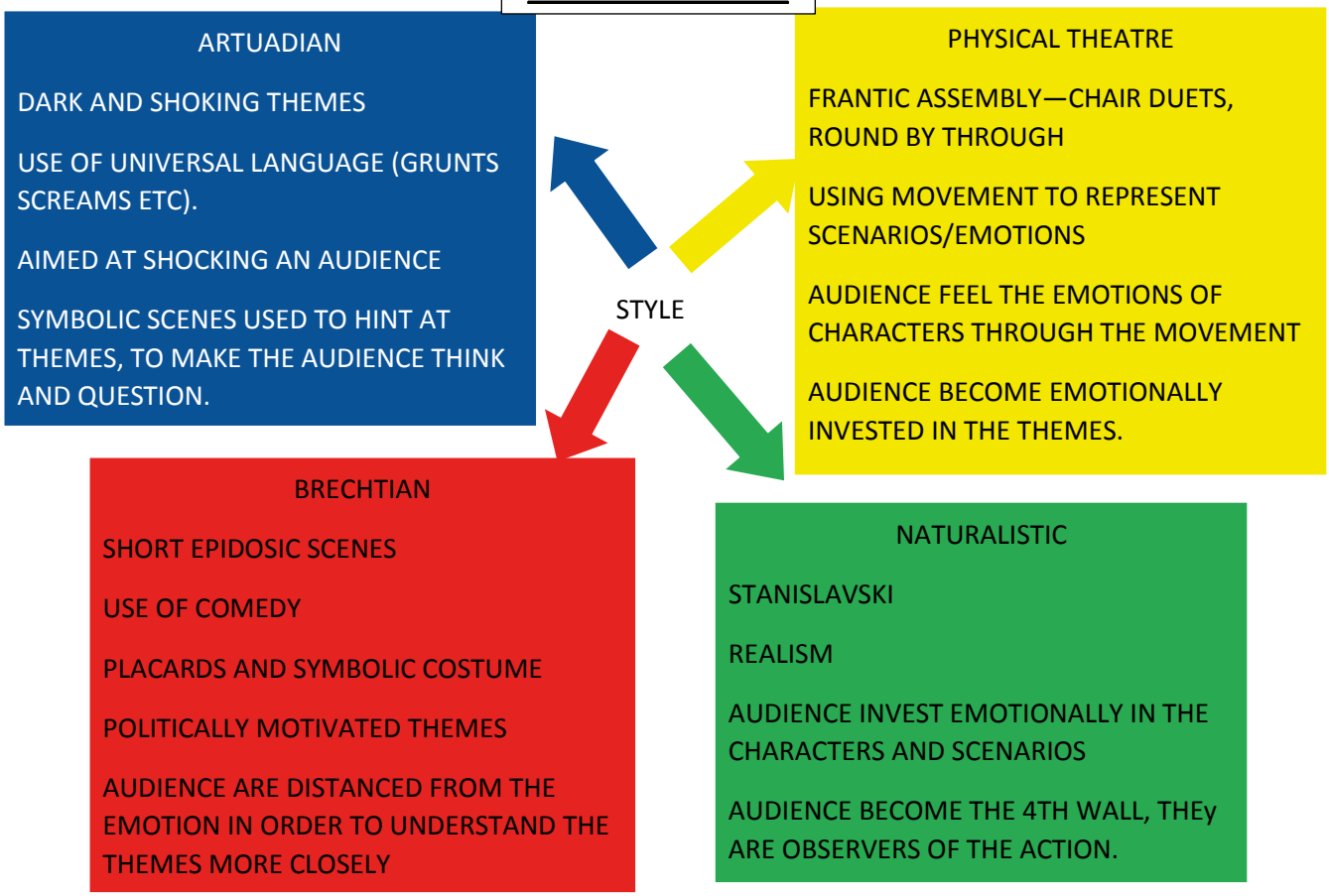
Issues created by technology come in different flavours
Digital technology raises many **ethical issues**
Most issues lie with the Internet
Technology is changing the way we **access services**
Technology is also changing how **businesses operate**
It's hard to keep information **private** on the Internet
Surveillance and **censorship** are **controversial issues**

Legal Issues: Laws control the use of your personal data; **data protection laws, Computer Misuse Act** prevents illegal access to files
Cyber-crime is a major problem
Copyright and Patents Act protects innovation
Some content can be copied and shared legally

Environmental Issues: When we **make devices** we use up natural resources
When we **use devises** we use energy and lots of it
When we **throw away devices** we create loads of **E-waste**

Drama

GCSE DRAMA



- These are the styles we have learnt about in Drama, consider carefully the work we have done on these, which style do you prefer? Think about and list the pros and cons for each style.
- Try to explain how each style would impact an audience.
- You can also consider which style the plays and performances you have studied fall into.

PERFORMANCE SKILLS

KEY WORDS

VOCAL

- TONE –EMOTION IN VOICE
- INTONATION—RISE AND FALL OF THE VOICE
- PAUSE—FOR DRAMATIC EFFECT
- PITCH—HIGH OR LOW
- CLARITY—HOW CLEAR
- PACE—SPEED

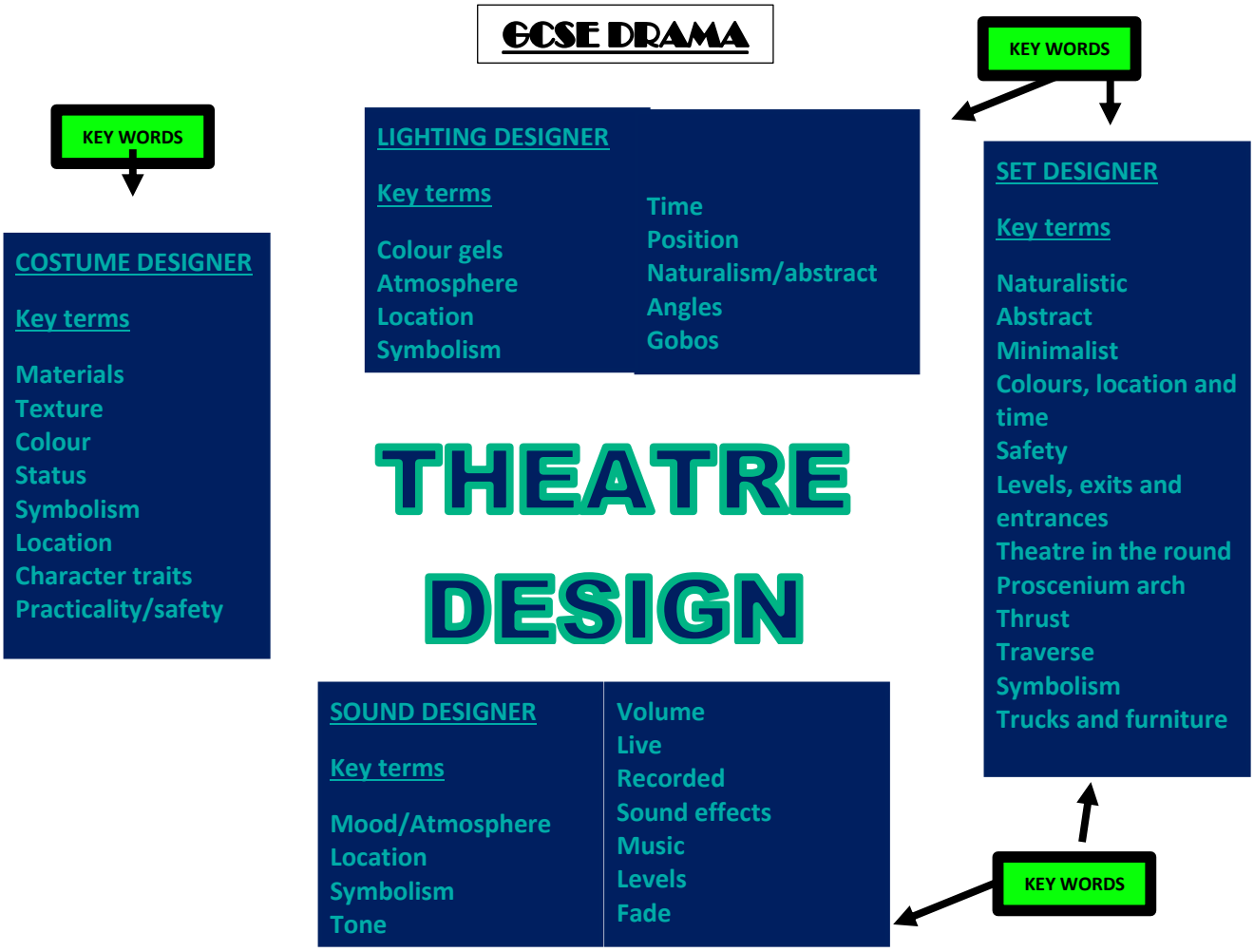
KEY WORDS

PHYSICAL

- GESTURE—SMALL MOVEMENTS
- FACIAL EXPRESSION—TO CONVEY EMOTION
- BODY LANGUAGE—TO CONVEY CHARACTER
- STANCE—HOW YOU HOLD YOURSELF
- STILLNESS—FOR DRAMATIC EFFECT
- PROXEMICS—USE OF SPACE TO SHOW RELATIONSHIPS

- Look through your lines for your scripted performance and make a note of how you will use these skills to deliver your lines. Make sure you think about the impact you want to have on an audience.
- Select some extracts from DNA and explain how and why you would use these skills to deliver the lines, remember to include context in your answers when providing an explanation for the skills that you would use.

GCSE DRAMA



- Practice design skills by coming up with a design for each of the above with your performance text write about your designs using as many of these key terms as you can. And remember to evaluate your choices
- In preparation for the written exam you should have a clear idea of how you would design costume, lighting set and sound for DNA pick out key extracts and practice evaluating your choices.

WRITING STYLE you should aim to use analyse and evaluation in your exam answers. Use key words and quotations to help you

Analysis is the process of breaking a complex topic or substance into smaller parts to gain a better understanding of it.

Evaluation is to judge the worth or effectiveness of something. It could be to try to see things from a different perspective and consider what was MEANT to be communicated and what was PERSONALLY understood

Identify- a physical/vocal skill (voice) or type of design element (set).
Describe- what does it look like?
Explain- how do you use it?
Analyse- what is the intended impact for the audience?

Identify- a physical/vocal skill (voice) or type of design element (set).
Describe- what does it look like?
Explain- how do you use it?
Analyse- what is the impact for the audience?
Opinion – What was the impact was it successful or not?

GCSE DRAMA

CONTEXT AND THEMES

'Broken Britain'
Terrorist threats causing increased anxiety
Anti-social behaviour caused increased security
Heightened CCTV
Advances in technology
Distrust in youth/hoodie culture
David Cameron – 'hug a hoodie'
Bullying
Responsibility
Guilt
Morality
Peer-Pressure
Gang culture
Power struggle

DNA CHARACTERS

JAN
MARK
LEAH
PHIL
ADAM
JOHN TATE
LOU
DANNY
BRIAN
CATHY
RICHARD

STRUCTURE

LINEAR NARRATIVE:
Introduction: the main characters and introduced and the plot established - Phil comes up with the plan to cover up Adam's disappearance
PROBLEM: the situation becomes more complicated – innocent man arrested, Phil forces Brian to lie to the police
CRISIS: something goes wrong for the group – Adam is alive, Phil tells Cathy and Brian to kill Adam to keep the truth hidden
RESOLUTION: the crisis is resolved – the group prevent the truth about Adam being known, but suffer from the experience

SETTINGS

THE WOOD: isolated from society, hidden from view, symbolises secrecy. Natural habitat of bonobos and chimps
THE STREET: most familiar to an audience making it ordinary, closest to civilisation, should remind the audience there is a wider social setting
THE FIELD: open, characters can be themselves and escape pressures of the group

DNA

STRUCTURE

CYCLICAL STRUCTURE:

- The structure repeats itself
- The repetition of the settings creates tension for the audience. It hints that the characters are trapped in a loop, unable to escape from their situation, which gradually gets worse
- The last act breaks the cycle by only having 2 scenes. This could leave the audience with a sense that the issues raised are unresolved

SPEECH & LANGUAGE

- Kelly uses colloquial language to create realistic dialogue (naturalistic, every day, slang, crude)
- Speech shows a characters status in the group, e.g. stronger characters use more commands, weaker characters use short phrases
- Language can create humour
- Monologues help to develop characters and relationships, duologues can build tension

- Find quotes from the text that highlight the context and the themes of the play.
- Describe each characters personality and give examples of how an actor could use vocal and physical skills to highlight their personality. Remember to use quotes to support your point.

GCSE DRAMA

PRACTICE QUESTIONS

Read from the start of Act one to where John Tate says “I’m trying to keep things together”

- As a designer, explain how you would use staging to portray this extract effectively to the audience. You should refer to the plays context.

Read Act two from the stage direction “LEAH jumps up, shocked” to the end of the scene

- As a designer describe how you would use lighting to portray this extract effectively on stage to the audience.

Find the part of Act three where the group meet Adam in the wood. Read from the start of the scene to where Leah says “Okay. Right. Okay”

- Imagine you’re a designer, explain how you would use costume to portray this extract effectively to an audience

Read Act one from where John Tate says “What do we do?” to the end of the act

- Imagine you are a director, explain how a performer playing the role of Phil should demonstrate his high status to the audience in this extract and throughout the play. You should consider physical skills, vocal skills and the use of stage space in your answer.

Read Act two from the start of the scene to where Danny says “How am I gonna get references?”

- Explain how a performer playing Danny could portray his character to the audience in this extract. Consider vocal skills, physical skills and interactions with other characters.

Read Act three

- Imagine you are playing Jan in this extract. Suggest three ways in which you would use performance skills to portray Jan’s uncertainty to the audience. Give reasons for each of your suggestions
- Imagine you are a director, discuss how you would use set design to portray this extract effectively to an audience. You should refer to the context of the play in your answer

Read Act four from where it says “RICHARD sits with Phil” to the end of the scene

- Imagine you’re a sound designer, explain how you would use sound design to portray this extract effectively to an audience. You should refer to mood and atmosphere in your answer

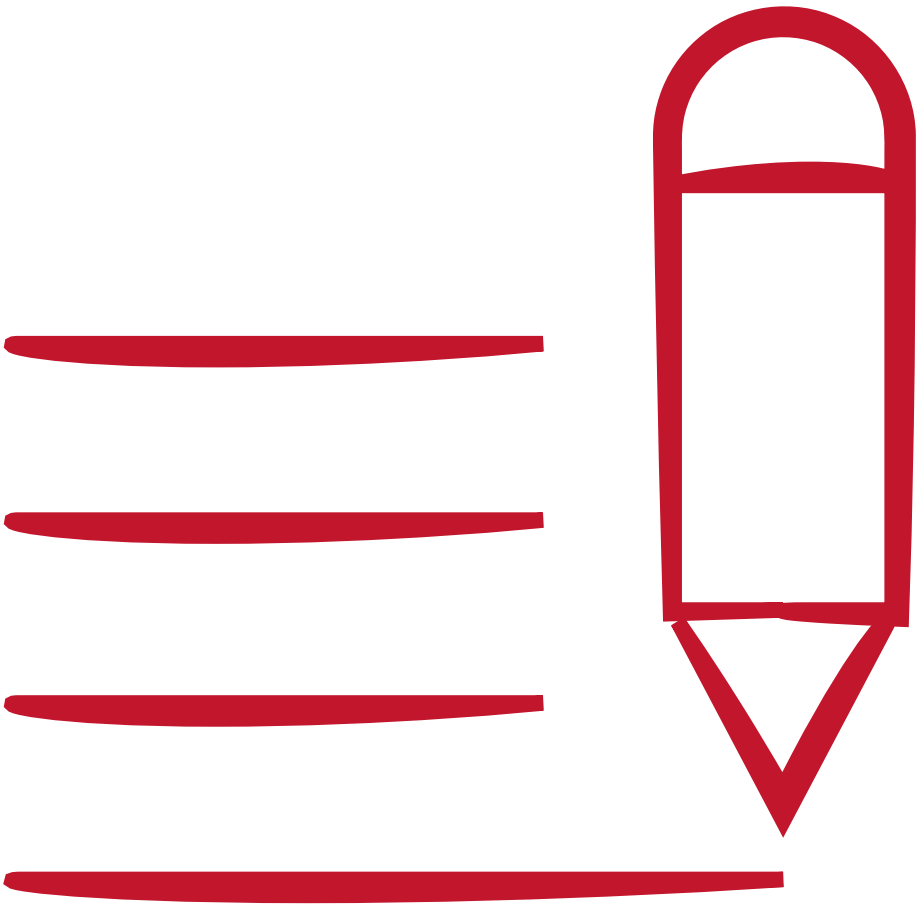
Read Act one from Cathy’s entrance to where John Tate says “That just leaves you, Brian”

- Discuss how a performer playing Cathy could communicate key aspects of her character to the audience. You should consider Cathy’s motivations and how the actor could use vocal and physical skills.

Live theatre

- Analyse and evaluate how lighting and sound were used to enhance the impact of the production on an audience
- Describe how an actor used their vocal and physical skills to portray their character effectively
- Analyse and evaluate how sound effects and music were used to enhance the impact of the production

English Language



BRIDGNORTH Endowed

READING CREATIVE TEXTS

60 mins (25% GCSE) - One literary fiction text. 4 questions.

QUESTION ONE

LIST 4 things in lines .....

❑4 marks = 5 mins
❑Extract referred to but not re-printed
❑AO1 - Locate

To answer:
- ❑ **Read and highlight key words in the question**
- ❑ Don't quote
- ❑ Don't use the word 'and'
- ❑ Write four short points in spaces A-D for 4 marks

Top tips:
*This is not a trick question. It is easy. Be brief but accurate. Re-read the **correct lines** from the text.*

QUESTION TWO

How does the writer use **LANGUAGE** to.....?

❑8 marks = 15mins
❑Extract re-printed on your answer page.
❑Bullet points guide your answer
❑AO2 – Language

To answer:
- ❑ **Read and highlight key words in the question**
- ❑ Pick your quotes **first** then consider devices
- ❑ Point (name writer)/Quote/Device/**Effect**
- ❑ DON'T DISCUSS STRUCTURE
- ❑ DO LOOK AT SENTENCE FORMS (simple/compound/complex)

Top tips:
*Pick out individual words afterwards and discuss their **effect** (not meaning). When you pick out a word/device you need to underline or re-quote it – so the examiners knows you know which word is the 'verb' etc. Think of squeezing or wringing the last drop of meaning from a passage. **Track** through the extract from start to finish.*

QUESTION THREE

How has the writer **STRUCUTRED** the text to...?

❑ 8 marks = 15mins
❑You will need to consider the WHOLE text.
❑Bullet points guide your answer
❑AO2 - Structure

To answer:
- ❑ **Read and highlight key words in the question**
- ❑ Consider the **sequence** through a passage (introduction, development, summary and conclusion. Maybe also: contrast, flashback/forwards, repetitions, threads patterns or motifs).
- ❑ Consider **changes** in ideas and perspectives (changing focus from wide to narrow, place to place, outside to inside(and vice versa).
- ❑ Consider **coherence,** (connections and links across paragraphs, links within paragraphs, topic sentences.)

Top Tips:
Comment in the writer's techniques like a film makers using phrases like: focusing, zooming, narrowing, widening, introducing, developing, changing focus, concluding, foreshadowing, contrasting. E.G. 'We start to see things through the father's eyes as if we are searching with him' or 'We go from a wide viewpoint to a close-up focus if we are getting inside the father's mind'

QUESTION FOUR

Statement written. How far do you **AGREE**?

❑20 marks = 25 mins
❑Bullet points guide your answer
❑AO4 – Evaluate

To answer:
- ❑ **Read and highlight key words in the question**
- ❑ Agree with the statement. The text IS well written.
- ❑ Two stages: recognising **how** the writer tries to achieve effects and deciding **how effectively** this has been done.
- ❑ Use phrases like: This makes the reader identify with the character because/ the impact of this description is.../ This works because we think/feel.../ This phrases indicates / The contrast used makes the reader....

Top Tips:
Leave enough time to cover the whole text. Consider HOW much you agree (a little or a lot). Look at specifics within the statement, not just the statement as a whole.) Could compare within a text.

Basics & Stretch Yourself

Know your basics	Noun/verb/adverb/adjective/ simile/metaphor/question/ alliteration/ onomatopoeia/5 senses/listing/personification/ repetition
Reach for the stars	Give one sentence overview for each question, identifying patters - use the word 'main' or 'key'/Embed quotations/ Look at the bigger picture – not just individual quotes/ Consider genre and form/narrative voice/be /use terms: implies/ illuminates/

Language Devices

Pronouns	Replaces names
Direct speech	Reported speech
Narrative voice	The voice behind the story
Simple/compound /complex sentences	Using a variety of sentences
Utterances	Aside.
Ellipsis	3 dots indicating unknown, unpalatable or ambiguous information
1st/3rd person	I or He/she
Hyperbole	exaggeration
Imperatives	Must, will
Exclamations	Help! etc

Structure

- Narrative perspective/voice
- Flashforward/ backward
- Non sequiturs
- Topic sentence
- Discourse markers
- Ellipsis
- Foreshadowing
- Focus/Narrowing
- Contrast/ juxtaposition
- Cyclical narrative

WHY?

Always ask why the writer has made the choices they have?

WRITING PROSE

Example question and how to get top marks

You are going to enter a creative writing competition.
Your entry will be judged by a panel of people of your own age.
Either:
Write a description suggested by this picture:
Or:
Write the opening part of a story about a place that is severely affected by the weather.

24 marks for content and organization
16 marks for technical accuracy (Total 40 marks = 25% of GCSE)

Content	❑ ***Register** is convincing and compelling for audience* ❑ *Assuredly matched to **purpose*** ❑ *Extensive and ambitious **vocabulary** with sustained crafting of **linguistic devices***
Organisation	❑ *Varied and inventive use of **structural features*** ❑ *Writing is compelling, incorporating a range of convincing and **complex ideas*** ❑ *Fluently linked **paragraphs** with seamlessly integrated **discourse markers***
Technical accuracy	❑ Wide range of **punctuation** is used with a high level of accuracy ❑ Uses a full range of appropriate **sentence forms** for effect ❑ Uses **Standard English** consistently and appropriately with secure control of complex grammatical **structures** ❑ High level of accuracy in **spelling**, including ambitious vocabulary ❑ Extensive and ambitious use of **vocabulary**

The Exam

45 minutes – 1 task – A choice of 2 tasks (1 descriptive **or** 1 narrative…. but could be 2xnarrative or 2xdescrpitve.)

Step one: read & highlight key words in question (including PAT/PAF/PAL)

Step two: Study the stimulus (picture) then choose one of the two questions

Step three: Plan 6 -8 things you can include, then put them in order (Steps 1 to 3 = 10 mins)

Step four: Write it' (Step 4 = 30 mins)
- ❑ should be lots of crossing out to show 'crafting'
- ❑ Should be 1 ½ sides approx

What to expect…

As a stimulus for students' writing, there will be a choice of scenario, written prompt or visual image that is related to the topic of the reading text in section A. The scenario sets out a context for writing with a designated audience, purpose and form that will differ to those specified on Paper 2.

Sentence starts

Verb – Running quickly, she …… (make sure you finish sentence)

Adverb – Darkly, the night sky….

Adjective – Red light filled the …

Preposition – Down there, all…

Connective – However, his life…

Language devices to use

- Simile
- Metaphor
- Personification
- Onomatopoeia
- Alliteration
- Imagery
- Symbolism
- Oxymoron
- Juxtaposition
- Pathetic Fallacy

Narrative v descriptive

A narrative should include a lot of description.

A description should not include any narration.

Basic narrative structure

- Setting
- Character
- Problem
- Climax
- Resolution

The basics

- Capital letters
- Full stops
- Question marks
- Commas
- Apostrophes
- Consistent tense
- Paragraphs
- Homophone spellings
- Connectives
- Semi-colons
- Colons
- Vary sentence starts/lengths
- Vary paragraph lengths
- Topic sentences

Stretch yourself

- For planning – mind map rather than spider diagram.
- Learn some impressive vocab.
- Break the rules!!!
- Reveal slowly/quickly
- Dialogue
- Parenthesis
- Ascending / descending tri-colon
- Syndetic/asyndetic listing
- Cohesion (topic sentence, pronouns, chains, prepositions, fronted adverbials)
- Cyclical/non-linear structure
- READ OTHER NOVELS/SHORT STOIRIES/POETRY/PLAYS–. IF YOU DON'T KNOW WHAT TO READ - ASK!

Dramatic verbs

snared, disturbed, smashed, blazed, swayed, tormented, straggling, lacerating, plunged, clashed, crackled, penetrated, blistering, jolted, splitting, darted, collapsed, trembled, engulfed, scurried, flickered, twitched, shattered, obliterated, throbbing, shuddered, exploded, oozed, quivered, gushed, raged, toiled, twisting, , writhed, swelled, crept, flapped, collided, pummelled, punctured, dissolved, clenched.

Interesting colours

saffron, indigo, scarlet, azure, emerald, hazel, turquoise, jaundiced, pea green, cyan, magenta, burgundy, cherry, ruby, sapphire, crimson, bloodshot, vermilion, maroon, auburn, chestnut, cobalt, aquamarine, navy, khaki, camouflage, vanilla, , pearly white, antique white, violet, beech, cadet blue, firebrick, tomato, coral, orchid, honeydew, ivory, lemon, peach, plum, gold, lavender, beige, fuchsia.

The descriptive 'rules'

- No names for people
- At least 5 zoom-ins
- No person described for more than a paragraph
- Minimum 5 senses
- 1-3 sentences of direct speech
- Maximum 1 exclamation mark
- 3rd person
- No thoughts
- Present or past tense (not both)
- Move the camera – like a film

The narrative 'rules'

- The story takes place within one hour
- Maximum 3 characters
- Maximum 3 sentences of direct speech
- Show not tell
- Minimum 1 adjective per sentence
- Minimum 5 senses
- Maximum 1 exclamation mark
- 3rd person
- 50 % description with zooms
- Don't 'chat' to the reader
- A 'small' story – make the ordinary extraordinary

READING NON-FICTION

60 mins (25% GCSE) – Two non-fiction texts – one from 19th Century & one from 20th/21st century.

QUESTION ONE

CHOOSE four true or false statements from a list of 8.

- ❑ 4 marks = 5 mins (4 boxes shaded)
- ❑Named lines
- ❑ AO1 – find & inference

BEFORE YOU BEGIN
LOOK AT THE SUMMARY INFORMATION ABOUT BOTH TEXTS – THEY GIVE YOU CLUES.
ALSO FIGURE OUT THE PAT/PAF/PAL OF BOTH TEXTS – THEY ALSO GIVE YOU CLUES.

- ❑ Only look at lines named in question to in order to find answers.
- ❑ Only shade 4 boxes (1 box = 1 mark) - this is not a trick question – it is easy.
- ❑ Follow the instruction on the paper if you shade the wrong box.

QUESTION TWO

Write a **SUMMARY** of the **DIFFERNCES** between Source A and B

- ❑8 marks = 10mins
- ❑ Two texts
- ❑AO1 – summarise differences

- ❑ **Read and highlight key words in the question**
- ❑ Start mini essay with an overview sentence stating main difference then your summary of **differences** using **short quotes** and stating specific **effects**.
- ❑ E.g. "Firstly, the differences between Eddie and Henry are vast as Henry's experience of school is much harsher than Eddie's; we can see this when Henry complains about not being able to write freely as Mr. Smith, 'would flog me if he knew it.' This is is contrast to…"
- ❑ **Track** through each text; space your quotes out throughout the whole text.

QUESTION THREE

How does the writer use **LANGUAGE** to…" in one source only

- ❑ 12 marks = 20 mins
- ❑ One text
- ❑AO2 – Language (not structure)

- ❑ **Read and highlight key words in the question**
- ❑ Read and highlight text
- ❑ Start mini essay with an **overview sentence**, then answer the question using **short quotes** , naming the **device** and stating specific **effects**.
- ❑ E.g. "Henry uses lots of emotive language … QUOTE….. in his letter to attempt to influence his father to remove him and his brother from Cotherstone Academy."
- ❑ Analyse as many quotes as you can, analysing a technique used by the writer and discussing the multiple effects for the audience.
- ❑ Write **a lot about a little** - e.g. "The writer uses personification in this phrase, 'Death stood at my bedside,' to create an intense feeling of fear for the reader, suggesting the writer felt death was imminent; it was a threatening being, about to take his life."
- ❑ **Track** through each text, space your quotes out throughout the whole text.

QUESTION FOUR

Compare DIFFERENCES in **LANGUAGE** in how the two **writers** present/convey/convince/persuade… in Source A and B

- ❑16marks = 25mins
- ❑ Two texts
- ❑AO3 – compare language (not structure)

- ❑ **Read and highlight key words in the question**
- ❑ Start mini essay with an **overview sentence** stating the main **difference** in the language. E.g. The writer of Source A believes that education really is the job of parents and not schools, whereas the writer of Source B has sent both his boys off to a boarding school where he has little control and knows nothing about the conditions for his children, or the standard of education they are receiving.
- ❑ Then compare the differences in the **writers' viewpoints** using **short** quotes and stating **specific effects.** E.g. For example, the writer of Source A explains using expert opinion … QUOTE…..to demonstrate that…, however, the writer of Source B uses statistics …… QUOTE…..to back up their argument. The effect on the audience is similar as both add weight to the arguments the writers are putting forward and convince their audience of their standpoint.
- ❑ REFER TO BOTH WRITERS THROUGHOUT.
- ❑ YOU CAN REPEAT QUOTES & EFFECTS FROM EARLIER QUESTIONS.
- ❑ Go back and forth between the texts. Use **comparison words or phrases** = Likewise, Similarly, In the same way, Different to…, Unlike …..B, In contrast……,However, etc.

Know your techniques

Imperatives	A command or request
Adjective/Adverb	Describing words
Modal Verbs (permission words)	Can,could,may,might will etc
Alliteration	Starting words with same sound.
Figurative language	Not literal.
Opinions	Can't be proven conclusively.
Repetition	Repeating stuff.
Exaggeration/Expert opinion	Two very effective devices.
Statistics	Numbers to support or make a case.
Triplets	Using a list of 3 to clarify or confirm.
Emotive Language	Words with power.
Rhetorical Question	Used to make people ponder.

Stretch yourself

Paradox/oxymoron	Contradicts itself.
Irony	Using opposites for effect
Onomatopoeia	Sounds like it sounds.
Euphemism	A polite way of expressing something distasteful.
Pun	A word with two meanings.
Fronted adverbials or conjunctions	Suddenly, I went and…
Simple/compound/complex sentences	Different types of sentences.
Writing for purpose/audience/type of text	Why are you writing it?
Anaphora/epistrophe	Repeating in a pattern.
Tone/Register	Your attitude and how you express it.

WRITING NON-FICTION

Example question and how to get top marks

'Homework has no value. Some students get it done for them; some don't do it at all. Students should be relaxing in their free time.' Write an article for a broadsheet newspaper in which you explain your point of view on this statement. (24 marks for content and organisation 16 marks for accuracy) THIS UNIT AMOUNTS TO 25% OF GCSE RESULT

Content	❑ **Register** is convincing and compelling for audience ❑ Assuredly matched to **purpose** ❑ Extensive and ambitious **vocabulary** with sustained crafting of **linguistic devices**
Organisation	❑ Varied and inventive use of **structural** features ❑ Writing is compelling, incorporating a range of convincing and **complex ideas** ❑ Fluently linked **paragraphs** with seamlessly integrated **discourse markers**
Technical accuracy	❑ Wide range of **punctuation** is used with a high level of accuracy ❑ Uses a full range of appropriate **sentence forms** for effect ❑ Uses **Standard English** consistently and appropriately with secure control of complex grammatical **structures** ❑ High level of accuracy in **spelling**, including ambitious vocabulary ❑ Extensive and ambitious use of **vocabulary**

Possible writing purposes

Explain	Q - Explain what you think about..... ❑ Be factual ❑Give a balanced view (but not contradictory) ❑Use evidence to support your view ❑Use connectives of comparison ❑Write in 3rd or 1st person
Instruct/ Advice	Q - Advise the reader of the best way.... ❑Be factual ❑Write in present tense ❑Use connectives ❑Use technical terms ❑Write in 2nd person
Argue	Q - Argue the case for/against.... ❑Rhetorical questions ❑Emotive language ❑Counter arguments ❑IAMAFORESTER/AHARMLESSRIME
Persuade	Q - Persuade the writer of the statement that... ❑IAMAFORESTER/AHARMLESSRIME ❑One-sided argument

Possible layouts/types of text/formats

Letter	❑the use of addresses & date ❑a formal mode of address e.g. Dear Sir/Madam or a named recipient ❑effectively/fluently sequenced paragraphs ❑an appropriate mode of signing off: Yours sincerely/faithfully.
Article	❑Broadsheet = formal/Local or tabloid = informal ❑a clear/apt/original title ❑a strapline & subheadings ❑an introductory (overview) paragraph ❑effectively/fluently sequenced paragraphs.
Leaflet (text only)	❑a clear/apt/original title ❑organisational devices such as inventive subheadings or boxes ❑bullet points ❑effectively/fluently sequenced paragraphs.
Speech (text only)	❑a clear address to an audience ❑effective/fluently linked sections to indicate sequence ❑rhetorical indicators that an audience is being addressed ❑a clear sign off e.g. 'Thank you for listening'.
Essay	❑an effective introduction and convincing conclusion ❑effectively/fluently linked paragraphs to sequence a range of ideas.

Stretch yourself

Take a bold standpoint: hook/tone/style. Also consider cohesive devices: adverbials/pronouns/reference chains/ synonyms/rhetorical questions/discourse markers.

The Basics

- Capital letters
- Full stops
- Question marks
- Commas
- Apostrophes
- Consistent tense
- Ellipsis ....
- Homophone spellings
- Connectives
- Semi-colons
- Colons
- Vary sentence starts/lengths
- Vary paragraph lengths
- Topic sentences

Sentence starts

- Verb – Running quickly, she .....
- Adverb – Darkly, the night sky....
- Adjective – Red light filled the ...
- Preposition – Down there, all...
- Connective – However, his life...

Subject terminology to use

Imperative verbs	*Repetition*
Alliteration	Emotive lang./ expert opinion
Modal verbs	Statistics
Appeal	Triplets
Figurative lang.	Exaggeration
Opinion	Rhetorical q.

The Exam

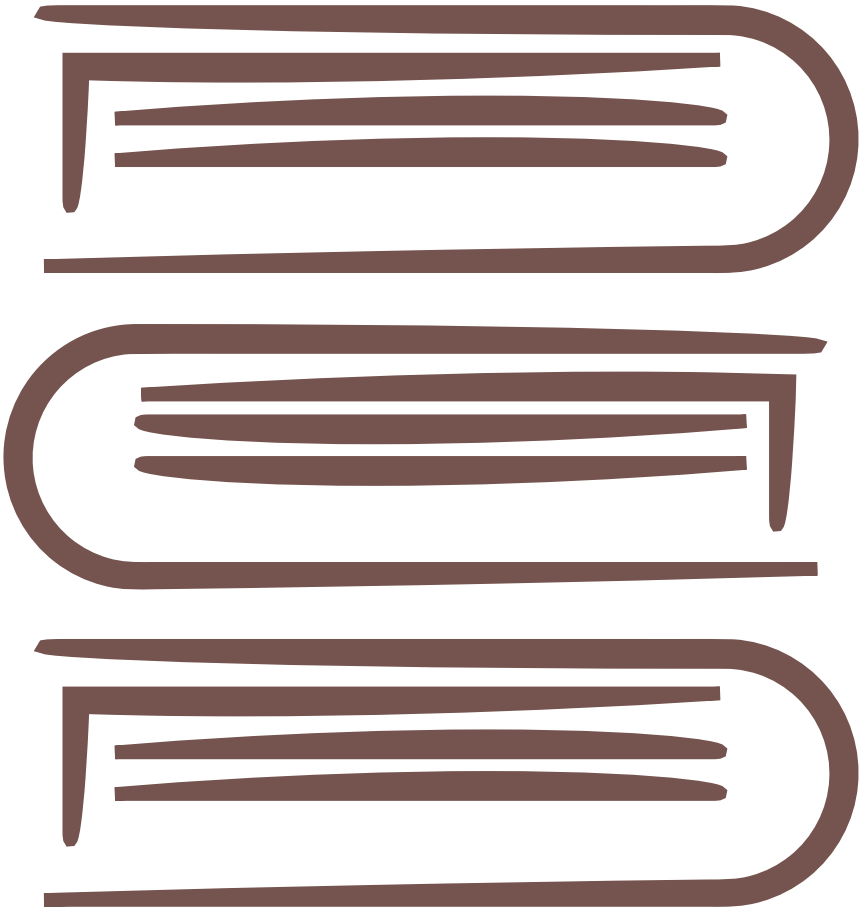
- 45 minutes – 1 task – no choice
- Step one: read & highlight key words in question
- Step two: Identify the PAT/PAF/PAL
- Step three: Plan 6 -8 things you can include, then put them in order (Steps 1 to 3 = 10 mins)
- Step four: Write it (Step 4 = 30 mins)
- Step five (MOST IMPORTANT): Lip check (Step 5 = 5 minutes)

Audience

An audience your age:
- ❑ Colloquial expressions and sayings and references to modern culture.
- ❑ Frequent use of direct address.
- ❑ Use of humour and sarcasm.
- ❑ Affronted conjunctions (So...)

An older audience:
- ❑ Keep it formal. BUT remember they're not the Queen! (One is outraged my good sir)
- ❑ Avoid references to modern culture, humour and sarcasm.
- ❑ Avoid using contractions (do not instead of don't)

English Literature



BRIDGNORTH Endowed

MACBETH

Plot

Act 1	Macbeth and Banquo meet witches who give them predictions. Cawdor executed. Lady Macbeth reads letter. She taunts Macbeth and Duncan arrives.
Act 2	Macbeth sees a dagger reflecting his doubts about the murder- but kills Duncan with Lady Macbeth's help. Malcolm flees and Macbeth chosen to be king.
Act 3	Banquo suspects Macbeth – Macbeth murders Banquo but his son Fleance escapes. Macbeth sees Banquo's ghost.
Act 4	Witches second predictions. Macbeth orders the killing of Macduff's family. Macduff and Malcolm agree to invade Scotland.
Act 5	Lady Macbeth's mental state deteriorates eventually committing suicide. Malcolm's army invades through Burnham wood and eventually Macbeth killed by Macduff. Malcolm is proclaimed king.
Lines per character	Macbeth 715 Lady Macbeth 259 Malcolm 211 Macduff 180 Ross 135 Banquo 113

Themes

Ambition	Children	Natural world
Kingship	Blood	Gender
Fate and free will	Sleep	Light/dark
Appearance and reality	Visions	Manhood

Key production features

Polanski Version

- The dagger is a ghostly apparition that entices Macbeth forward.
- Macbeth grows a beard once King to show his new authority and wisdom.
- Banquo's ghost is covered in blood and gore and made to appear 'supernatural' and otherworldly.
- Lady Macbeth sleepwalks nude to show her vulnerable state and change from earlier.
- Macduff only has a moustache to show his place in the hierarchy.

Fassbender Version

- The battle is shown at the start to demonstrate the violence needed to maintain rule.
- Macbeth moves into a much grander castle to demonstrate the reward of violence.
- When Macbeth is mentally unravelling he sits on his bedroom floor playing with a dagger. The 'scorpions' are truly at work on his 'mind'.
- Fleance takes Macbeth's sword at the end to show the cycle of violence will carry on.

Character

Macbeth	A loyal warrior who becomes duplicitous as he becomes obsessed with the witches' prophecies of power
Lady Macbeth	Macbeth's wife who drives his ambition in the beginning but loses her control by the end.
Banquo	Macbeth's close friend and ally who also receives prophecies from the witches
Fleance	Banquo's son
Duncan King of Scotland	Portrayed as a strong and respected leader at the start of the play.
Macduff	A brave warrior who is loyal to Duncan and is consistently suspicious of Macbeth.
Malcolm	Duncan's son and next in line to the throne.
The Three Witches	**(Weird Sisters)** – Portrayed as forces of nature who seem to know the future (is this true?) They fascinate Macbeth.

How far is lady Macbeth portrayed as a strong and manipulative woman in this soliloquy? (Act 1 Scene 5 lines 12-27)

Lady Macbeth is *contemplating* the predictions Macbeth revealed in his letter in the previous scene. She *echoes* the words of the witches *linking* her directly with the *supernatural* world and evil. *Although* she acknowledges he has achieved two of the predictions, she fears his "nature is too full of the milk of human kindness". The *intensifier* "too" *implies* that she believes this is an element of his character that will prevent him killing Duncan. The reference to milk and its goodness is in direct *contrast* to the "bitter gall" she wanted to turn her nurturing milk into. She knows his weakness but also how to manipulate him. She knows "he is not without ambition" but doesn't have the evil "illness" with which he will be able to see through the murder. The *reference* to illness *foreshadows* the inevitable consequence of their actions.

Vocabulary

- Meter
- Blank verse
- Rhymed verse
- Prose
- Iambic pentameter
- Trochaic Tetrameter
- Heroic couplets
- soliloquy
- Dramatic irony
- Concealment
- Gender
- Stichomythia
- Tragedy
- Hamartia
- Prophecy
- Imagery
- Symbols
- Metaphor
- Regicide

Stretch yourself

- ❑ Whilst analysing the extract, quickly refer out to other parts of the play.
- ❑ Watch <u>different</u> performances of key scenes to provide you with 'ammunition' when discussing form.

Context

Macbeth is loosely based on true events in **feudal Scotland** in the **11th Century** and would have been known to King James. **King James** inherited the throne through his ancestors Banquo and Fleance who appear in the play.

This violent period in Scotland's history ended with stronger links with England much like **the union of the crowns** that took place when King James became King of England as well as Scotland.

King James was fascinated by **witchcraft** and it is likely that the witches were included to please him as Shakespeare wanted his approval.

King James also believed in **The Divine Right of Kings** meaning that any attempt to depose a king went directly against God and would be judged harshly. This is reflected in Macbeth's failure as a king.

Both King James' parents were killed in politically motivated moves to secure power and an attempt was made on his life through the gunpowder plot. Shakespeare echoes this interest in **usurpation** in the murders in the play.

There is a **direct reference to King James** in the play in Act 4 Scene 1 when Macbeth sees a vision of kings stemming from Banquo's sons

Form

Shakespeare uses **soliloquy** to allow the characters to communicate their true thoughts to the audience.

Macbeth is one of Shakespeare's **Tragedies** and follows specific **conventions**. The **climax** must end in a tremendous catastrophe involving the death of the main character; the character's death is caused by their own flaw(s) (**hamartia**); the character has something the audience can identify with which outweighs their flaws so we care about them.

Dr Jekyll & Mr Hyde

Plot

1 The Story of the Door	Passing a strange-looking door whilst out for a walk, Enfield tells Utterson about incident involving a man (Hyde) trampling on a young girl. The man paid the girl compensation. Enfield says the man had a key to the door (which leads to Dr Jekyll's laboratory)
2 Search for Hyde	Utterson looks at Dr Jekyll's will and discovers that he has left his possessions to Mr Hyde in the event of his disappearance. Utterson watches the door and sees Hyde unlock it, then goes to warn Jekyll. Jekyll isn't in, but Poole tells him that the servants have been told to obey Hyde.
3 Dr Jekyll was Quite at Ease	Two weeks later, Utterson goes to a dinner party at Jekyll's house and tells him about his concerns. Jekyll laughs off his worries.
4 The Carew Murder Case	Nearly a year later, an elderly gentleman is murdered in the street by Hyde. A letter to Utterson is found on the body. Utterson recognises the murder weapon has a broken walking cane of Jekyll's. He takes the police to Jekyll's house to find Hyde, but are told he hasn't been there for two months. They find the other half of the cane and signs of a quick exit.
5 Incident of the Letter	Utterson goes to Jekyll's house and finds him 'looking deadly sick'. He asks about Hyde but Jekyll shows him a letter that says he won't be back. Utterson believes the letter has been forged by Jekyll to cover for Hyde.
6 Remarkable Incident of Dr Lanyon	Hyde has disappeared and Jekyll seems more happy and sociable until a sudden depression strikes him. Utterson visits Dr Lanyon on his death-bed, who hints that Jekyll is the cause of his illness. Utterson writes to Jekyll and receives a reply that suggests he is has fallen 'under a dark influence'. Lanyon dies and leaves a note for Utterson to open after the death or disappearance of Jekyll. Utterson tries to revisit Jekyll but is told by Poole that he is living in isolation.
7 Incident at the Window	Utterson and Enfield are out for walk and pass Jekyll's window, where they see him confined like a prisoner. Utterson calls out and Jekyll's face has a look of 'abject terror and despair'. Shocked, Utterson and Enfield leave.
8 The Last Night	Poole visits Utterson and asks him to come to Jekyll's house. The door to the laboratory is locked and the voice inside sounds like Hyde. Poole says that the voice has been asking for days for a chemical to be brought, but has rejected it each time as it is not pure. They break down the door and find a twitching body with a vial in its hands. There is also a will which leaves everything to Utterson and a package containing Jekyll's confession and a letter asking Utterson to read Lanyon's letter.
9 Dr Lanyon's Narrative	The contents of Lanyon's letter tells of how he received a letter from Jekyll asking him to collect chemicals, a vial and notebook from Jekyll's laboratory and give it to a man who would call at midnight. A grotesque man arrives and drinks the potion which transforms him into Jekyll, causing Lanyon to fall ill.
10 Henry Jekyll's Full Statement of the Case	Jekyll tells the story of how he turned into Hyde. It began as a scientific investigation into the duality of human nature and an attempt to destroy his 'darker self'. Eventually he became addicted to being Hyde, who increasingly took over and destroyed him.

Characters

Dr Henry Jekyll	A doctor and experimental scientist who is both wealthy and respectable.
Mr Edward Hyde	A small, violent and unpleasant-looking man; an unrepentant criminal.
Gabriel Utterson	A calm and rational lawyer and friend of Jekyll.
Dr Hastie Lanyon	A conventional and respectable doctor and former friend of Jekyll.
Richard Enfield	A distant relative of Utterson and well-known man about town.
Poole	Jekyll's manservant.
Sir Danvers Carew	A distinguished gentlemen who is beaten to death by Hyde.
Mr Guest	Utterson's secretary and handwriting expert.

Themes

Themes	Ideas
The duality of human nature	We are compelled to act in a moral way but our primaeval instincts urge us to commit sin. The id and the ego, the inner chimp, fight or flight.
Science and the unexplained	New scientific discoveries were not only exciting but scary as it may uncover things we don't want to know/face.
The supernatural	With science starting to explain everything, the things left unknown became even scarier and more threatening,
Reputation	A man's reputation was everything and was more important in an increasingly secular society than his morality.
Rationality	In an age of reason outlandish explanations were less and less likely. So logical prevailed.
Urban terror	London was increasing in size and anonymity made crime easier and more prevalent.
Secrecy and silence	An age of religious piety but increasing
Addiction	

Stretch yourself

Be original, develop your own interpretations;
Be critical, give your own justified opinions;
Get to grips with context- what effect does have on the novel & your understanding – consider its application not just existence.
Be sure to comment on how it relates to the themes.

Vocabulary

- aberration
- abhorrent
- allegory
- allusion
- anxiety
- atavism
- consciousness
- debased
- degenerate
- depraved
- duality
- duplicity
- epistolary
- ethics
- eugenics
- feral
- genre
- metamorphosis
- perversion
- professional
- respectability
- restraint
- savage
- subconscious
- suppression
- supernatural
- unorthodox
- Victorian

Context

Fin-de-siècle fears – at the end of the 19th century, there were growing fears about: migration and the threats of disease; sexuality and promiscuity; moral degeneration and decadence.

Victorian values – from the 1850s to the turn of the century, British society outwardly displayed values of sexual restraint, low tolerance of crime, religious morality and a strict social code of conduct.

The implications of ***Darwinism and evolution*** haunted Victorian society. The idea that humans evolved from apes and amphibians led to worries about our lineage and about humanity's reversion to these primitive states.

Physiognomy – Italian criminologist Cesare Lombroso (1835-1909) theorised that the 'born criminal' could be recognised by physical characteristics, such as asymmetrical facial features, long arms or a sloping forehead.

Victorian London – the population of 1 million in 1800 to 6.7 million in 1900, with a huge numbers migrating from Europe. It became the biggest city in the world and a global capital for politics, finance and trade. The city grew wealthy.

Urban terror – as London grew wealthy, so poverty in the city also grew. The overcrowded city became rife with crime. The crowd as something that could hide sinister individuals became a trope of Gothic and detective literature.

Robert Louis Stevenson was born and raised in Edinburgh, giving him the dual identity of being both Scottish and British. Edinburgh was a city of two sides - he was raised in the wealthy New Town area, but spent his youth exploring the darker, more sinister side of town.

Deacon Brodie – a respectable member of Edinburgh's society and town councilor, William Brodie lead a secret life as a burglar, womaniser and gambler. He was hanged in 1788 for his crimes. As a youth, Stevenson wrote a play about him.

Lord of the Flies

Ch.1	The Sound of the Shell – During WW2, plane carrying evacuees crashes on an island. Piggy (P) meets Ralph(R) and they find a conch shell. R made leader; Jack (J) made leader of hunters.
Ch.2	Fire on the Mountain – Beastie first mentioned. Signal fire rages out of control and kills boy with birthmark.
Ch.3	Huts on the Beach – P focuses on building shelter; J and choir prefer hunting. Simon (Si) disappears and finds peaceful, aromatic part of island.
Ch.4	Painted Faces and Long Hair – J and others paint their faces – say it's for camouflage but it actually reveals their savage identity.
Ch.5	Beast from Water – beastie discussed. J starts to rebel against the rules/democracy.
Ch.6	Beast from Air – Sam + Eric (S+E) mistake the parachutist for the beast
Ch.7	Shadows and Tall Trees – The boys fight and separate. Storm begins.
Ch.8	Gift for the Darkness – J sacrifices pig's head to beast
Ch.9	A View to a Death – S thinks the head talks to him; it realises his paranoia. S killed by the boys.
Ch.10	The Shell and the Glasses – P, S+E avoid talking about Si's death. J and hunters steal P's glasses.
Ch.11	Castle Rock – P+R go to get P's glasses. P killed by Roger.
Ch.12	Cry of the Hunters – R runs for his life. Fire engulfs the island and a naval officer comes to investigate. The boys are rescued.

Characters

Ralph	Anglo Saxon word for council: leader, tall, rational, blonde hair. Voted chief. Believes his dad will rescue them.
Piggy	Nickname only (never learn his real name): glasses-wearing, asthma-suffering, low class, bullied. Orphan fat in age of rationing.
Jack	'one who takes over' – tall, intimidating, red hair. Head chorister and joint biggest boy.
Simon	'one who listens' – small, shy, 'queer', spiritual, black hair. Epileptic
Roger	'one with a spear' – secretive, sadistic, Jack's sidekick. Throws the stones but misses on purpose and then later pushes rock onto Piggy.
Samneric	twins, always together. Stay with Ralph the longest and warn him about the stick sharpened at both ends.
The Littleuns	collective name of the younger boys, poo in the wrong place and follow Ralph because of the trumpet thing and then Jack because of the feast.

Symbols and Allegory

Conch – civilization and democracy
Piggy's glasses – science and technology
Fire – hope of salvation
The Beast – human nature (the desire to be a savage)
The Lord of the Flies (pig's head) – physical manifestation of the beast
Adults – civilization and social order
The ocean – the unconscious mind; the desires and thoughts we have within ourselves

Allegory = story that relates to another context

Religious allegory

The island = Garden of Eden
The scar = how man destroys paradise (the Fall of Man)
Simon = Jesus Christ

War allegory

Piggy = the Jews; victimized, vulnerable
Jack = Nazi leader; manipulates and bullies

Context

The people of Britain had just been through the Second World War. In the novel, the boys seem to create their own war, suggesting the reality of human nature
Food was still being rationed in Britain. Desire for food is a major part and motivation of LOTF.
It was feared that there might be a nuclear war between Western countries and the Soviet Union. References to bombs + fighting are made throughout the novel.
Golding worked as a teacher in a boys' school and said he understood young boys with 'awful precision.'
Golding served in the Navy during WW2. He came to the conclusion that all human beings had the capacity for incredible evil, even children.
Britain was having to come to terms with the loss of the British Empire.
Public schools (where most of the boys on the island went to) still produced most of Britain's leaders and top professionals.
The class system was very much existent in Britain. Piggy stands out for being lower class; the others are upper class.
Nazi Germany had adopted a system of rewarding the strong and attacking the weak. The same system appears to happen in the novel.
The adults the boys wish could help them are the same ones who are fighting the war that has led to the boys being stranded.

Key Themes

1. Democracy vs dictatorship
2. Civilisation vs savagery
3. The loss of innocence
4. Consequences of war
5. Individual vs community
6. Good vs evil
7. Human nature (the natural desires we have in us: to be selfish, savage and immoral)
8. Communication (or lack of it)

Key examples

1. The battle for control- who will lead and how? Ralph vs Jack
2. How will they live? The conch vs the sharp stick.
3. Murder and the naval officer's disappointment.
4. Death.
5. Denying Piggy meat.
6. Meetings vs hunting.
7. They all kill Simon.
8. The conch and its destruction

Key Quotations

There: 'Maybe there is a beast…maybe it's only us' (Simon)
Hiding: "The mask was a thing on its own, behind which Jack hid, liberated from shame and self-consciousness."
Experience: "They walked along, two continents of experience and feeling unable to communicate." (Jack and Ralph)
'Life… is scientific' (Piggy)
Or: 'Which is better, law and rescue, OR hunting and breaking things up?' (Piggy)
'Right to speak!' (I have the conch, I have a ….)
'Desire to squeeze and hurt was over-mastering' (remember this relates to Ralph)
Order: 'Roger's arm was conditioned by a civilisation that knew nothing of him and was in ruins.'
'Fancy thinking the beast was something you could hunt and kill!' (The Pig's head to Simon)

'The tearing of teeth and claws' (when the boys kill Simon)
'His fat, his ass-mar, his matter of fact ideas: Piggy was a bore'
'Exploded into a thousand pieces' (the Conch after Piggy's death)
'Fall…of a true wise friend called Piggy (and the darkness of a man's heart) – what Ralph wept for
'Laughter became a bloodthirsty snarling' (Jack)
Incantation/chant: 'Kill the pig, Cut his throat, Bash him in!'
Exclamation: 'You're a beast and a swine and a bloody, bloody thief!' (Ralph to Jack)
'Stick sharpened at both ends' (Roger)

POWER & CONFLICT POETRY and UNSEEN POETRY

Poet	(Context in bold)
Ozymandias Percy Shelley 1817	Narrator meets a traveller who tells him about a statue in the middle of the desert. The statue is of an ancient & cruel ruler from a past civilization – **Pharaoh Ramesses II**. The poem is about the temporary nature of power. Ultimately, power will fade, art cannot immortalise power & nature will be long-lasting.
London William Blake 1794	Narrator describes a walk around London & comments on the despair & misery that he sees. **Blake was influenced by the French Revolution & wanted social & political equality**. He wanted the people to rise up against the powerful (church, monarchy) & in turn emancipate (liberate/free) themselves.
The Prelude: Stealing the boat William Wordsworth 1850	This is only an extract of the poem & is **autobiographical**. It is about an over confident narrator who finds a boat & takes it out on the lake. Although confident to begin with & enjoying the scenery, the narrator sees the mountain appear on the horizon & is overwhelmed with its size & power. It causes the narrator to retreat & change his view of nature, he now realises its power. **Wordsworth was a romantic poet (Romantics challenged people about they way they thought. They also saw the power of nature over mankind.)**
My Last Duchess Robert Browning 1842	A Duke is showing a visitor a portrait of his Duchess (former wife) who is now dead. Whilst observing the painting he tells the visitor that the Duchess was flirtatious & displeased him. As he speaks we realise that the Duke is insanely jealous & probably had the Duchess killed. We learn at the end of the poem that the visitor has come to arrange the Duke's next marriage & is representing the woman he is set to marry. **Poem based loosely on the real Duke of Ferrara.**
The Charge of the Light Brigade Alfred Tennyson 1854	**A tribute to the British cavalry (soldiers on horseback) who died during the Crimean War. Basically, the men were given an incorrect order to charge into battle & with swords, & meet the Russian enemy, who were armed with guns. The cavalry were defenceless- yet still fought bravely.**
Exposure Wilfred Owen 1917-1978	An authentic poem **based on Owens' own experience on the front line. It was a horrendous winter & the men are subject not to enemy attacks but to the brutality of nature**. Nature is personified as the main enemy & the men can only wait to die. It is an anti-war poem & stresses the insignificance of man compared to nature. **During the Somme, over 60,000 British soldiers died in one night.**
Storm on the Island Seamus Heaney 1966	The narrator describes how a community are waiting to be hit by a storm. It is obvious that they have been hit before because of the landscape of the island (houses squat). The narrator starts off confident but as the storm hits the power of the storm creates feelings fear & trepidation.. **Heaney grew up in a farming community in Ireland; much of his poetry uses agricultural/natural images.**
Bayonet Charge Ted Hughes 1957	The poem focuses on a single solder's experience of a charge towards enemy lines. It describes his thoughts & actions as he tries to stay alive. It is clear that the solder is not ready for the charge & could have been sleeping. The soldier fears for his life & the patriotic ideals that encouraged him to fight have gone. **Hughes was a former RAF serviceman & often look at man's impact on nature.**
Remains Simon Armitage 2008	**Based on the account of a British soldier who served in Iraq, first published in a series of interviews by Channel 4 called 'The Not Dead'.** . A group of soldiers shoot a man who's running away from a bank raid. His death is described in graphic detail & the soldier who is telling the story can't get the death of the man out of his head. He didn't know if the man was armed or not & the reader gets the impression that it was not an isolated incident.
Poppies Jane Weir 2009	A mother describes her son leaving home, seemingly to join the army. The poem is about the mother's emotional reaction losing her son to the war. She fears for his safety & after he leaves her she goes to a familiar place that reminds her of him. **Weir is a textile artist as well as poet & textiles feature heavily here.**
War Photographer Carol Ann Duffy 1985	A war photographer is in his darkroom, developing pictures that he has taken in different warzones. As the pictures develop he recalls the death of one man & remembers the cries of his wife. The photographer contrasts his experiences to rural England & focuses on people who do not seem to care about war torn places. **Duffy was inspired to write this poem by her friendship with a photojournalist.**

Poem & Poet	About
Tissue Imtiaz Dharker 2006	The poem uses tissue as an extended metaphor for life. She describes how life, like tissue is fragile. However, she also discusses some of the literal uses of paper that are intertwined with our lives, such as recording names in the Koran- She then goes onto to discuss how we are made from tissue (living tissue which is our skin) emphasising that life is fragile. **Dharker has Pakistani origins & was raised in Glasgow. Many of her poems looks at issues of identify.**
The Emigrée Carol Rumens 1993	The speaker speaks about a city that she left as a child. The speaker has a purely positive view of the city. The city she recalls has since changed, perhaps it was scene of conflict, however, she still protects the memory of her city. The city may not be a real place but represent a time, emotion - perhaps the speaker's childhood. **According to Ben Wilkinson (critic), Rumens has a 'fascination with elsewhere.'**
Kamikaze Beatrice Garland 2013	**Kamikaze is the unofficial name given to Japanese pilots who were send on a suicide mission. The mission was considered one of honour** but this poem is about a pilot who aborted the mission. Hi daughter imagines that her father was reminded of his childhood & the beauty of nature & life whilst on the mission. When he returned home he was shunned.
Checking Out Me History John Agard 2007	The narrator discusses his identity & emphasises how identity is closely linked to history & understanding your own history. **In school he was taught British history & not about his Caribbean roots to which he feels resentful.** He mocks some of the pointless things he was taught & contrasts the nonsense topics with admirable black figures.

POETRY DEVICES – FORM

Auto-biographical	About the poet
Ballad	Story poems– often 4 lines stanzas
Blank verse	Verse with no rhyme – usually 10 syllables
Dramatic monologue	A character speaks to the reader
Epic	Tragic/heroic story poems
First person	'I'
Free verse	No regular rhyme/rhythm
Haiku	3 lines, syllables 5/7/5. Often about nature
Lyrical	Emotional and beautiful
Narrative	A story
Ode	Lyrical poem often addressed to one person
Phonetic spelling	Written like it sounds
Rhetoric	Persuasive
Sonnet	14 lines, ababcdcdefefgg, Often love poem
Shape poem	Poem is in shape of the main subject
Third person	He/she/they

Subject terminology

- Alliteration
- Assonance
- Autobiographical
- Authentic
- Blank verse
- Caesura (plural caesurae)
- Colloquial language
- Dramatic monologue
- Emotive
- Enjambment
- Euphemism
- First person
- Half rhymes
- Iambic pentameter
- Imagery
- In medias res
- Internal rhyme
- Irony
- Juxtaposition
- Language
- Layout
- Metaphor
- Monologue
- Mood
- Narrative
- Onomatopoeia
- Anaphora
- Oxymoron
- Personification
- Sonnet
- Phonetic spellings
- Plosive
- Rhetoric
- Rhetorical question
- Rhyming scheme
- Rhyming couplet
- Rhythm
- Sibilance
- Simile
- Stanza
- Verse
- Structure
- Symbolism
- Voice
- Third person
- Tone
- Volta
- Epic poem
- Cliché
- Hyperbole
- Semantic field
- Protagonist
- Persona
- Narrative
- Syllable
- Repetition

Themes

Power of Nature: Ozymandias, The Prelude, Exposure, Storm on the Island, Tissue & Kamikaze.

Power of humans: Ozymandias, London, My Last Duchess, Tissue, Checking Out Me History.

Effects of conflict: The Charge of the Light Brigade, Exposure, Bayonet Charge, Remains, Poppies, War Photographer, Kamikaze.

Reality & brutality of conflict: The Charge of the Light Brigade, Exposure, Bayonet Charge, Remains, War Photographer.

Loss & Absence: London, Exposure, Poppies, The Emigree, Kamikaze.

Memory: The Prelude, My last Duchess, Remains, Poppies, War Photographer, The Emigree, Kamikaze.

Place: London, The Prelude, The Emigree, Kamikaze.

Identity: My Last Duchess, The Charge of the Light Brigade, Poppies, Tissue, The Emigree, Kamikaze, Checking Out Me History.

Individual Experiences: London, The Prelude, Bayonet Charge, Remains, Poppies, War Photographer, The Emigree, Kamikaze.

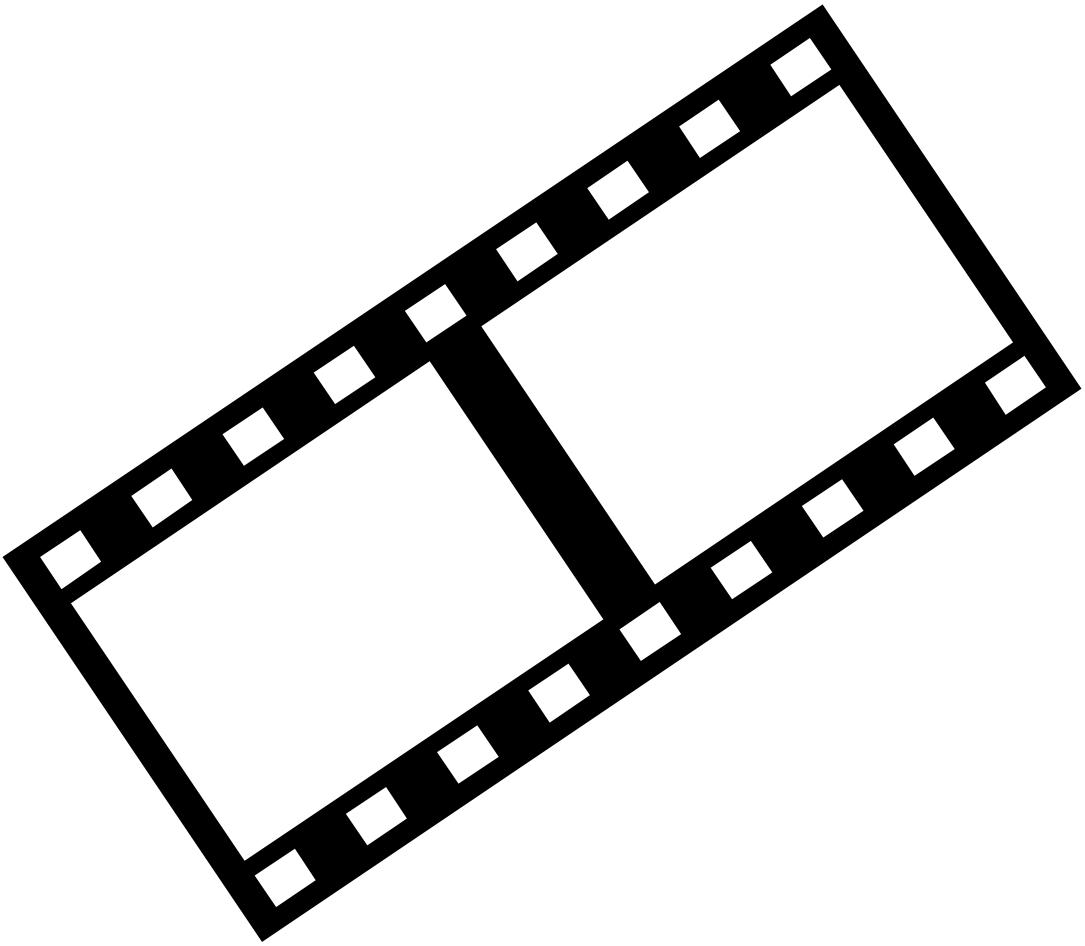
Bravery: Exposure, Bayonet Charge, The Charge of the Light Brigade.

Comparing Connectives	Contrasting connectives
Likewise	However
In the same way	Whereas
Similarly	On the other hand
Equally	Conversely
Likewise	Alternatively
As with	Although

Stretch yourself

Be original, develop your own interpretations;
Be critical, give your own justified opinions;
Develop your ideas on context- what effect does have on the poem & your understanding?

Film Studies



BRIDGNORTH Endowed

Media Language

GCSE Film Studies

You will study how products use different types of language to communicate multiple meanings (polysemy/polysemic). How the combinations influence meaning and how developing technologies affect media language. You will also study how genre conventions are socially and historically relative.

Key Aspects

Mediation (selection, combination and exclusion)	Media producers make choices which influences meaning in media products, including to create narratives, to portray aspects of reality, to construct points of view, and to represent the world in ways that convey messages and values.
Conventions	What the audience expects to see in a particular media text, for example the conventions of science fiction films may include: aliens, scientists, other worlds, gadgets, representations of good and evil. Useful headings to discuss conventions are: characters, setting, iconography, narrative, technical codes and representation.
Roland Barthes' language codes	**Semantic codes:** Refers to the connotations of elements in the text. It has an extra layer of meaning in addition to its literal meaning; **Enigma codes**: This code refers to mystery within a text. Clues are dropped, but no clear answers are given; **Action codes**: This codes refers to the elements that signify action to be taken e.g. a person packing a suitcase – a code for leaving; **Referential/Cultural codes:** Refers to anything in the text which refers to an external body of knowlegde such as scientific, historical and cultural knowledge. (can be intertextual)
Technical codes	These are the way in which the text has been produced to communicate meanings these include: layout, design, graphics, logos, camera shots (close-up, medium, long, wide, etc), angles (high, low, canted) and movement (pan, tilt, track/dolly, zoom in/out, crane), editing filters and tools, font size, font design (serif or san-serif), horizontal or vertical navigation menu, hyperlinks, etc.
Visual codes	Lighting (Low-key or high key lighting, exterior or interior lighting, natural or unnatural lighting). Composition (rule of threes, textual metafunction). Focus. Colour. Iconography. Mise-en-scene: (Costume, Lighting, Actors body language and position in frame (including eyeline), Make-up, Props, Setting), etc.
Audio codes	Non-diegetic (characters cannot hear this) and diegetic (part of the character's reality) sounds including tone of dialogue, ambient sounds, atmospheric sounds, music tracks, score, theme music, dialogue, voiceover, sound effects, backing music, idents, etc.
Written or spoken language	formal/informal, factual/emotive, anchorage, features such as puns, alliteration, Metaphor, direct address, humour, slang, exclamations, rhetorical questions, statistics, superlatives, technical/specialist vocabulary, rule of three, similes, listing, etc.

Top Quotes

"Reality exists outside language, but it is constantly mediated by and through language: and what we can know and say has to be produced in and through discourse." **Stuart Hall**

Genres are instances of repetition and difference; this is what pleasure for the audience is derived from." "difference is absolutely essential to the economy of genre': more repetition would not attract an audience. **Steve Neale**

"Genre is a constant process of negotiation and change" **David Buckingham**

"Genre attempts to structure some order into the wide range of texts and meanings that circulate in our culture for the conveniences of both producers and audiences" **John Fiske**

"satisfaction is guaranteed with genre; the deferral of the inevitable provides the additional pleasure of prolonged anticipation" **Deborah Knight**

Julia Kristeva argued against the concept of a text as a isolated entity which operates in a self-contained manner and states that: "any text is the absorption and transformation of another"

Theories/concepts you need to know.

Character Spheres of action - **Vladimir Propp**	Propp defined character categories as: the **villain**, who struggles with the hero (formally known as the **antagonist**); the **donor**; the **helper**; the **Princess**, a sought-for person (and/or her father), who exists as a goal and often recognizes and marries hero and/or punishes villain; the **dispatcher**; the **hero**, who departs on a search (seeker-hero), reacts to the donor and weds; the **false hero** (or antihero or usurper), who claims to be the hero, often seeking and reacting like a real hero (i.e. by trying to marry the Princess)
Narrative Stages Tzvetan Todorov	Equilibrium – Disruption – Recognition of disruption – Attempt to repair disruption – Resolution/New equilibrium
Genre Theory	• Main genres e.g. drama – Sub genres e.g. medical drama – Hybrid genres e.g. action comedy. • Genres may be dominated by repetition, but are also marked by difference, variation and change. Often keeping the same iconography and producing paradigms. • Genres change, develop and vary, as they borrow from and overlap with one another, especially over time. • Genres exist within specific economic, institutional and industrial contexts. • Genres repeat, become clichés, get parodied.
Intertextuality	Where a text alludes to, or references, another text. Every text (and we can insert any cultural object here: image, film, web content, music etc.) is a mosaic of references to other texts, genres, and discourses. Intertextual figures include: reference and allusion, quotation, translation, *pastiche* and parody. Intertextuality has different meanings depending on your point of view e.g. if you haven't seen a TV show that another references, then you won't understand the full meaning of it.
Only Five Genres – **Frank McConnell**	Instead of basing genres around obvious visual clues, it is more meaningful to split texts according to their themes and plots and in particular their leading characters.
Binary Opposites Claude Lévi-Strauss	Binary Opposites: The oppositions within texts create conflict together and drive narratives forward e.g. good vs. evil, man vs. robot, black vs white, good cop/bad cop, young and old, etc

Vocabulary

1. Shot Types
2. Camera angle and movement
3. Referential code
3. Enigma code
4. Connotation
5. Conventions
6. Anchorage
7. Diegetic and non-diegetic
8. Reality
9. Mediation
10. Signs/Signifiers
11. Encoding/decoding
12. Polysemy
13. Narrative Structure
14. Equilibrium
15. Disruption
16. Resolution
17. Sub - genre and hybridity
18. Iconography
19. Paradigms
20. Intertextuality
21. Mise-en-scene
22. Composition
23. Dialogue
24. Atmospheric sounds
25. Ambient sounds

Three Act Structure:

Act 1: the beginning of the screenplay. In Act 1 the screenwriter setups the themes and settings whilst introducing the protagonist (good guy). Act 1 should create a problem for the protagonist and establish the antagonist (bad guy).

Plot Point 1: The Inciting Incident - this turns the story in a new direction. It is the cause of drama and changes the protagonist's world, leaving him/ her with a journey to take. The inciting incident sets up raises the stakes for the protagonist and propels the film into Act 2.

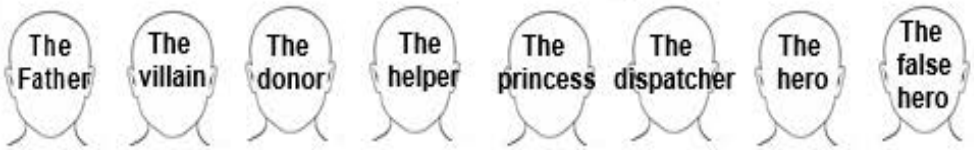
Act 2: at least ½ the entire story. This is where the protagonist struggle to achieve the solution to the problem created by the inciting incident. There are further complications shown through cycles of struggles and complications called reversals

Plot Point 2: the "climactic turning point". The protagonist's quest reaches critical mass and a possible solution is presented. This should feature the biggest cliff-hanger: will the protagonist win or lose?

Act 3: Where the protagonist achieves his mission. The conflict or problem is resolved. The final crisis (or "rising action") plays out to climax; then to resolution resulting in narrative closure.

FilmGenres

TheEightCharacterTypes



What is narrative?

A **narrative** is a retelling of something that happened (a story). The **narrative** is not the story itself, but rather the telling of the story. While a story just is a sequence of events, a **narrative** recounts those events, perhaps leaving some occurrences out because they are from some perspective insignificant, and perhaps emphasizing others. In a series of events, a car crash takes a split second. A **narrative account**, however, might be almost entirely about the crash itself and the few seconds leading up to it.

Film Roles

- Director
- Producer
- Cinematographer
- Location Manager
- Screen Writer
- Casting Director
- Researcher
- Runner
- Grip
- Sound Designer
- Costume Designer
- Visual Effects Manager

Narrative Structures

Chronological / Linear - this is where the film's action happens in the order that it took place.

Dual Narrative - this is where the film's action is split between two different narrative perspectives.

Multi Narrative - this is where the film's action is split between more than two different narrative perspectives.

Meta-Fictive Narrative - this is where the film's action is framed by a narrator or other framing devices - 'a story within a story'.

Fragmented Narrative - this is where the film's action is purposefully non-linear. The audience here have to work out the correct order of events as the film play outs.

Film Studies Knowledge Organiser: *Cinematography*

What is cinematography?

Cinematography is the art of photography and camerawork in film-making. A cinematographer is the man/woman responsible for the lighting / camera choices in a film. They are accountable to the DOP—Director of Photography—who is in charge of all the cinematographers working on the project.

How to describe the cinematography in a film:

You should be able to discuss the angle, shot, framing and movements of all camera choices made as well as the lighting choices. Below is a correct example:

Identified Techniques:

Eye level **angle**

Mid **shot**

Static(no **movement**)

Centrally/tightly **framed**

Natural soG **lighting**

How to turn your observations into a sentence:

'The cinematographer has used a static, eye level, mid shot that is tightly framed with natural, soG lighting. This shot suggests / connotes / is significant because…'

Shots:

Establishing shot - a shot usually involving a distant framing that shows the spatial relations among the important figures, objects and setting in a scene.

Close-up (& variations) - a framing in which the scale of the object shown is relatively large; most commonly a person's head seen from the neck up, or an object of a comparable size that fills most of the screen.

Medium shot - a framing in which the scale of the object shown is between a close up and a long shot. On a person this would usually be from the waist up.

Long shot - a framing in which the scale of the object shown is small, a standing figure would appear nearly the height of the screen.

Aerial shot - a moving shot from above looking down.

Point of view - a shot taken with the camera placed approximately where the character's eyes would be, showing what the character would see; usually cut in before or aGer a shot of the charac- ter looking.

Two-shot - two figures within the frame.

Angles:

High angle - shot from above making the subject look powerless.

Low angle - shot from below making the subject look powerful.

Eye level - shot from a neutral angle

Canted angle / Dutch angle - off centre and unbalanced.

Lighting:

"Hard" light - creates sharp shadows (Chiaroscuro/Low Key)**"Soft" light** - creates less of a contrast between light and dark. (High Key)

Frontal lighting - eliminates shadows

Side lighting - shadow from the side

Back lighting - silhouettes (or eliminates shadows when used with other lights)

Under lighting - shadow from below

Top lighting - shadow from above

Three point lighting - key light, fill light and back light used to illuminate the subject to create depth.

Movements:

Pan - a camera movement with the camera body turning to the right or leG. On screen it produces horizontal movements.

Practical extension - a camera movement in which the camera is kept at an equal distance to the subject.

Crane - a change in framing accomplished by having the camera above the ground & moving through the air in any direction.

Tilt- a camera movement with the camera body swivelling upward or downward on a stationary support. It produces a mobile framing that scans the space vertically.

Tracking - a mobile framing that travels through space forward, backward, or laterally.

Dolly - a camera support with wheels, used in making tracking shots.

Zoom/reverse zoom - a close up rapidly from a long shot to a close up, and vice versa. The mobile frame doe not alter the aspects or positions of the objects filmed.

Steadicam - a gyroscopically balanced body rig patented by Steadicam which a camera can be attached to generate smooth hand-held shots.

Handheld - the use of the camera operator's body as a camera support, either holding it by hand or using a harness.

Framing:

Rule of Thirds - a photography technique used to help with framing / composition of shots.

Framing - the use of the edges of the film frame to select and to compose what will be visible onscreen.

Centrally framed - the object is in the centre of the screen.

Tightly framed - there is no/little room around the object. It fills the screen

Film Studies Knowledge Organiser:– *Editing*

What is editing?

Film editing is technical part of the post-production process of filmmaking. The **film editor** works with the raw footage, selecting shots and combining them into sequences which create a finished motion picture. Film editing is oGen referred to as the "invisible art" because when it is well-practiced, the viewer can become so engaged that he or she is not aware of the editor's work.

Transitions:

Straight cut- In film making, the joining of two strips of film together with a splice. 2. In the finished film, an instantaneous change from one framing to another.

Fade in- a dark screen that gradually brightens as a shot appears.
Fade-out - a shot gradually darkens as the screen goes black. Occasionally fade-outs brighten to pure white or to a colour.

Wipe - a transition between shots in which a line passes across the screen, eliminating the first shot as it goes and replaces it with the next one.

Dissolve – a transition between two shots during which the first image gradually disappears while the second image gradually appears

Match cut - creates a cut between two shots that show graphically similar images.

Cutaway / Motivated Cut - a specific cut that cre- ates dramatic irony by drawing the audience's attention to something particular within the scene.

Crosscuttng - where the editor alternates between two different narratives.

Jump Cut - an abrupt transition from one scene to another.

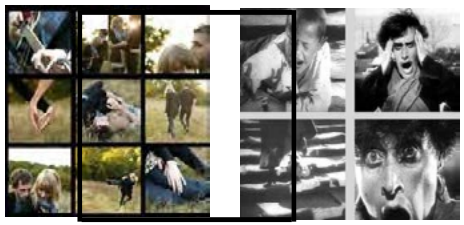
How to describe the editing in a film:

You should be able to discuss the pace, transitions, visual effects and montage / continuity features (as appropriate) . Below is a correct example:

Identified Techniques:

- Straight cuts
- Slow pace
- Eyeline match
- Shot / reverse shot
- The Kuleshov Effect

Montage Editing - is a technique in film editing in which a series of short shots are edited into a sequence to condense space, time, and information.



How to turn your observations into a sentence:

'The editor has used a series of slow paced straight cuts in this tension sequence. There are continuity editing techniques, like an eyeline match and reverse shots, to create realism alongside the Kuleshov effect to help convey the character's fear of the policeman...'

Thinking Point:

To what extent does the editor have a role in the construction of the film's narrative?

Editing Pace:

Fast pace - if there are frequent cuts - with each shot lasting for a minimal amount of time - then the editing pace is fast.

Slow pace - if there are infrequent cuts - with each shot lasting between 3-10 seconds - then the editing pace is slow.

Top tip: *count how many transitions take place in ten seconds to gauge the editing pace.*

Continuity Editing:

This is a style of editing that requires the director to try to make the film as realistic as possible. This means the film is trying to recreate what the world around us is and trying to make it easier on the audience to comprehend and understand the action happening on screen. If continuity editing is done well, then the audience forget the editor's role as the film's narrative flows smoothly. Below are some features of conti- nuity editing to create realism:

Eyeline Match / 180 Degree Rule / Match on Action / Establishing Shots / POV Shots / Diegetic Sound / Shot and Reverse Shots.

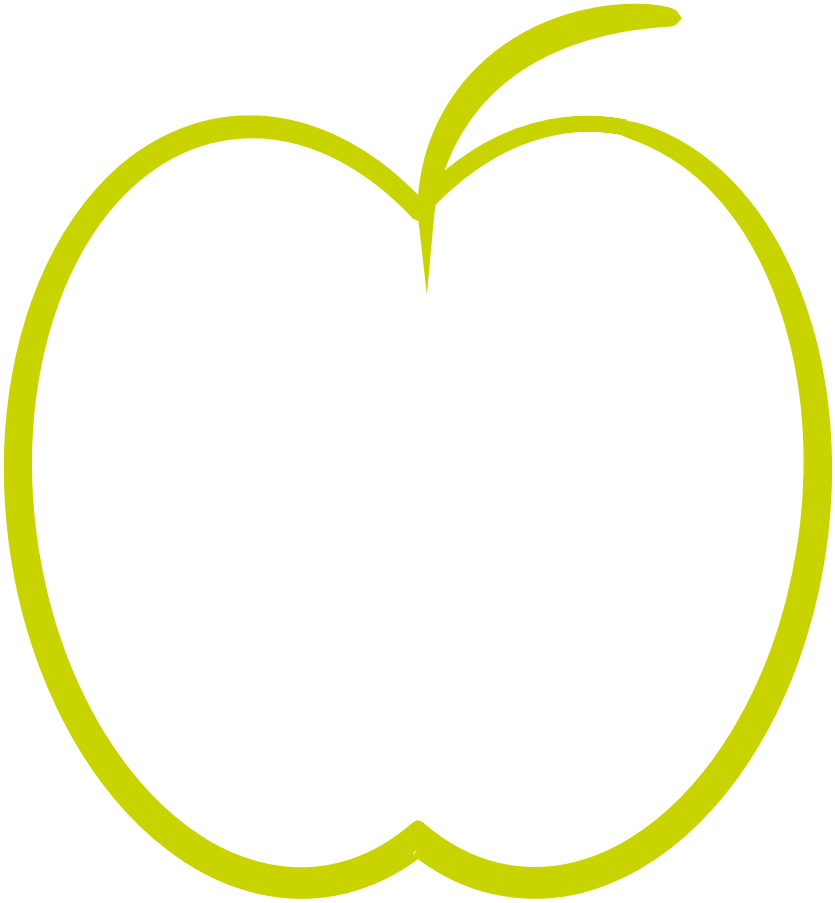
Visual Effects:

Superimposition - the exposure of more than one image on the same film strip.

CGI (computer generated imagery) - is the application of computer graphics to create or contribute to images in film.

Post-Production - work done on a film or recording aGer filming or recording has taken place.

Food



Food Preparation and Nutrition

Protein is a macronutrient. Proteins are made up of amino acids. Our bodies can make non-essential amino acids, but we have to get essential amino acids from food. Biological value is the number of essential amino acids a protein food contains. High biological value proteins (HBV), contain all the essential amino acids. Low biological value proteins (LBV), are missing one or more essential amino acid. Protein complementation: eating different LBV protein foods together, to get all the essential amino acids.

Carbohydrates are a macronutrient, being made up of 2 groups. 1. Sugars: Monosaccharides (glucose, fructose, galactose), made up of 1 sugar molecule. 2. Disaccharides: (sucrose, lactose, maltose), made up of 2 sugar molecules. These taste sweet 2. Complex carbohydrates: Polysaccharides (starch, pectin, dextrin, dietary fibre (also called non-starch polysaccharide-NSP), glycogen(made by our bodies). These are made up of many sugar molecules and do not taste sweet.

Fat is a macronutrient. Fats are solid at room temperature. Fats are called oils when they are liquid at room temperature.

- Fat molecules are made up of one unit of glycerol and three fatty acids. Fatty acids are either :-
  1. Saturated eg; butter ghee, lard, block vegetable fat, palm oil, coconut, chocolate suet
  2. Unsaturated (monosaturated or polyunsaturated) eg; oils (olive, rapeseed, sunflower) ,oily fish, avocado, nuts, seeds, vegetable fat spread
- Visible fats: fats found in foods you can see eg; fat on meat, butter
- Invisible fats: fats in foods that you cannot see, because they are part of the food eg; butter in pastry, oils in fried foods such as chips and crisps

Vitamins are a micronutrient.

- They are organic compounds that are needed by the body in small amounts to keep us healthy and alive.
- Fat soluble vitamins, A, D, E and K are found in fatty foods and can be stored in the body's fat tissue for future use
- Water soluble vitamins, C and the B group, aren't stored in the body and need to be taken in daily
- A deficiency disease is when our bodies do not get enough of a certain vitamin

Minerals are a micronutrient.

- They are a chemical element that our bodies need in small amounts
- Minerals often work together with vitamins eg; Vitamin D helps the body absorb calcium
- Rickets: A deficiency in children where bones are soft and weak (osteomalacia in adults)

Planning balanced meals for specific groups:

Lacto vegetarian: Someone who doesn't eat any meat, fish or eggs, but consumes milk and other dairy products

Lacto ovo vegetarian: Someone who doesn't eat meat or fish, but consumes milk, eggs and other animal products

Vegan diet: Someone who doesn't eat any products from animals eg. Meat, fish and all dairy products

High fibre diet: due to dietary complications, all refined food is replaced with high fibre alternatives

Low sugar diet: Avoid all free sugars that have been added to processed foods. Eat fresh foods and unsweetened dairy products

Fat reduced diet: avoid all food with hidden fat, eat naturally low fat foods

Low salt (sodium diet): avoid all processed foods high in salt; eat fresh foods, fruits, vegetables, milk and eggs

Energy needs:

- Energy is measured in either kilocalories (kcals) or kilojoules(kj)
- 1 Kcal = 4.2kj

Recommended amount of energy needed daily:-

- Carbohydrates 50% (most energy should come from starch and intrinsic sugars(naturally found in foods)
- No more than 5%, should come from fruit sugars and frees sugars (those added to foods

What affects the amount of energy needed by the body:

- Basel metabolic rate (BMR): the amount of energy needed to keep us alive and the body working normally
- Physical activity level (PAL) : a measure of how active you are/how much exercise you get
- Energy balance : The amount of energy consumed in food must be used up by the BMR and PAL

Diet- related diseases:

- Obesity: a condition where the body has accumulated too much fat
- Cardio- vascular disease: damage to the heart, blood vessels, eyes and kidneys, caused by high blood pressure
- Coronary heart disease: caused by a build-up of fatty deposits in coronary arteries
- Skeletal disease: rickets(in children), osteomalacia (adults)
- Tooth decay: caused by bacteria in the mouth turning sugars and other foods into acids
- Anaemia: a condition where you have reduced number of red blood cells, which carry oxygen around the body
- Type 2 diabetes: a disorder where blood glucose levels stay too high, because the pancreas either cannot produce enough insulin or the body resists it
- Risk factor : an action or a natural tendency that makes you more likely to develop a disease or a health issue

Micro -organisms

1. These are tiny living things eg; bacteria, moulds and yeasts. They live on or in food, where they multiply.
2. To prevent multiplication, food needs to be stored, handled, prepared and cooked properly.
3. To multiply, they need , warmth, moisture, food, time and the correct acidity or alkaline(PH)
4. Cross contamination: transferring potentially harmful bacteria from one thing to another
5. Danger zone: The range of temperatures (5°c to 63°c) in which bacteria multiply very quickly
6. Temperature probe: A device that is used to measure the internal temperature of food, to check it is cooked all the way through reaching and stabilising at least 75°c, for at least 2 minutes
7. High risk foods: Foods that contain a lot of moisture and protein and easily allow pathogenic microorganisms, particularly bacteria, to grow and multiply. (Also called perishable foods)
8. Pathogenic: something that is capable of causing illness
9. Food poisoning: an illness caused by pathogenic micro-organisms which have contaminated food
10. Symptoms of food poisoning: bad stomach ache, diarrhoea, feeling sick, headache, dizziness, a high temperature, feeling cold and shivery

Common food poisoning bacteria

1. Campylobacter: found in dirty water, raw poultry (eg chicken) and milk
2. Escherichia coli (E.Coli): found in dirty water, meat, minced beef (eg. Undercooked burgers),untreated milk
3. Salmonella: found in raw and undercooked poultry (eg. Chicken), meat, raw eggs and untreated (raw) milk
4. Listeria: Found in soft cheeses, cheeses made from untreated (raw) milk, unwashed salad leaves, pate
5. Staphylococcus Aureus (S. Aureus) : found in untreated (raw) milk, cold cooked meats, dairy foods

Buying food and storing foods, key terms:

- Shelf life : how long a food product will last before it becomes unsafe /unpalatable (unpleasant) to eat
- Use- by date: the date by which high risk/perishable foods should be eaten. After the use by date, food may not look or taste different, but IT WILL BE UNSAFE TO EAT.
- Best before / best before end (of month or year) date: after this date, a non- high risk food will still be safe to eat, but it will not be at its best quality, eg. Have begun to taste stale (changed in appearance, texture and flavour)
- Ambient: ordinary room temperature; average between 19°c and 21°c, but variable according to the season
- Tainted: when a food picks up the smell or flavour of another food, which spoils its palatability
- Refrigerated foods: Should be stored at 0°cto below 5°c (bacterial growth is slowed, but is still active
- Frozen foods: Should be stored between -18°c and -24°c (bacteria become dormant at these temperatures (alive but not active until the food is defrosted)

Cooking, cooling down and serving food

1. Cook food thoroughly. Core temperature = 75°c or hotter, for at least 2 minutes, using a food probe
2. Hot cooked food must be kept at 63°c or above
3. Left over hot cooked food should be cooled to 5°c or cooler within 1 ½ - 2 hrs
4. Left over food must only be reheated once to a minimum core temperature of 75°c for at least 2 minutes
5. Use different utensils to serve different foods to prevent cross contamination

Using a food probe:

1. Reset

2. Sterilise/use an antibacterial wipe

3. Insert into core of food

4. Do not touch hot pan with probe

5. Allow temperature to stabilise (75°c or hotter for 2 minutes)

6. Sterilise/ use antibacterial wipe after use

Food choices related to religious dietary laws:

- Buddhism: many are vegetarian or vegan Avoid foods where animals were harm
- Christianity: no dietary restrictions, celebrations with food include Pancake day, Lent , Good Friday, Easter and Christmas
- Hinduism: many are vegetarian, beef is not eaten as the cow is sacred, religious festivals
- Islam: Lawful food is 'halal', pork is not eaten, various religious festivals
- Judaism: food allowed is 'Kosher', pork and shellfish not eaten, dairy foods and meat not prepared or cooked together, various celebrations
- Rastafarianism: food eaten must be natural and clean and include lots of fruit and vegetables, pork and large fish are not eaten, various celebrations
- Sikhism: many are vegetarian, various celebrations

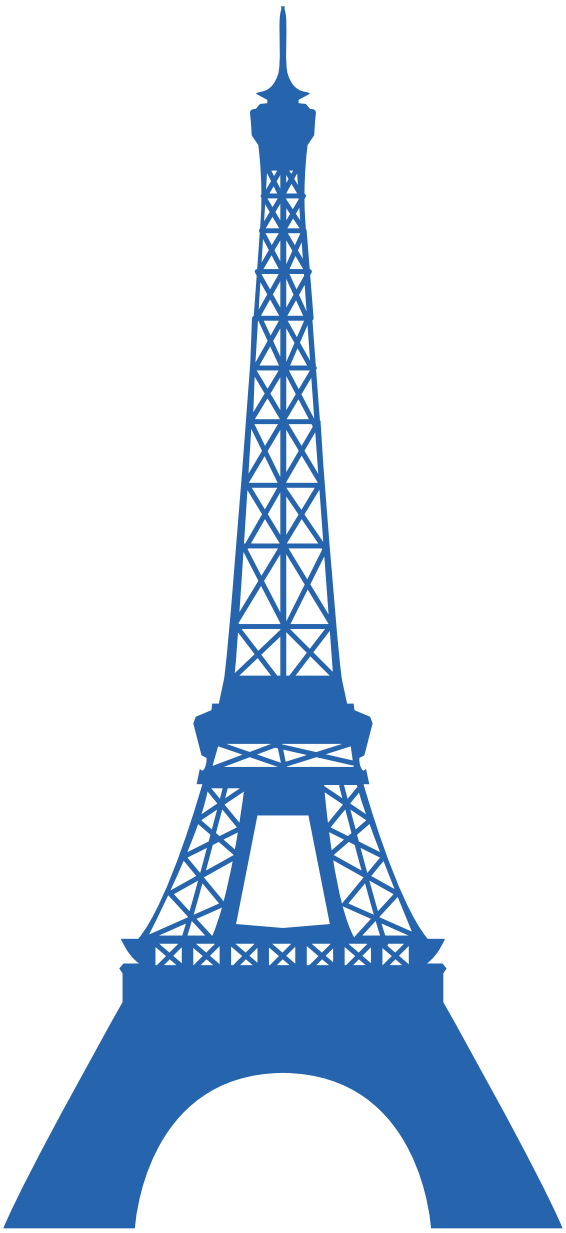
Food choices related to ethical and moral beliefs:	
Animal welfare	How well animals are reared and looked after
Fairtrade production	Making sure farmers in developing countries are paid fairly for their crops and their workers live in good conditions
Intensive farming	Use of pesticides/effects on the environment/conditions in which animals, birds and fish are kept/ using lots of land to grow crops and animal feed / using up natural resources, such as water
Genetically modified food	Effects on the environment/whether or not humans should alter food in this way/it may affect people who have allergies
Local produce	Few food miles/supports local producers/seasonal food/ may be cheaper/ more nutritious
Organic food production	Grown without the use of fertilisers/ virtually no pesticides used/better for the environment and soil

Food choices related to an intolerance	
Lactose intolerance	Lactose = natural sugar in milk, so they avoid eating dairy products
Coeliac	Gluten = the protein in wheat, oats barley and rye, so they must avoid all foods containing gluten.
Food choices related to an allergy	
Food allergy	someone with a food allergy has a serious reaction to certain foods or ingredients, causing severe, potentially life- threatening symptoms
An allergen	something that causes the symptoms of a food allergy

Further key facts:

1. Additive : something that's added to food to improve its properties
2. Aeration: when air is added to a mixture to help make it lighter
3. Alternative protein: a form of protein which is suitable for vegetarians eg. Tofu, TVP
4. Antioxidant: a substance that protects our bodies from free radicals (chemicals that can cause cancer) Vitamins A,C and E are examples of antioxidants
5. Basting: putting fat that has melted out of the food back on top of the food whilst it is cooking, eg. during roasting
6. Blanching: A cooking process that involves plunging a food eg, fruit or vegetables, into boiling water before cooling them in cold/iced water (often used before freezing)
7. Blended sauce: A sauce made from a liquid and a paste of cornflour and water/milk
8. Braising: low cooking food in a covered pot that also contains liquid, herbs and vegetables
9. Caramelisation: The browning of sugar and the change in its flavour when its heated
10. Carbon footprint: A measure of the impact something has on the environment based in the harmful greenhouse gases produced
11. Coagulation: When denatured proteins join together, changing the appearance and texture of food eg. when egg white turns solid
12. Conduction: The transfer of heat energy through solids by the vibration of particles
13. Convection: The transfer of heat energy through gases or liquids by circulating currents,
14. Cuisine: A style of cooking representative of a certain country or region

French



BRIDGNORTH Endowed

GCSE French writing ladder

	Idiomatic language	j'ai peur, ça vaut la peine, c'est dommage	
	Passive	Les vacances **sont adorées** par tout le monde (Holidays are loved by everyone)	
	Pluperfect tense (Imperfect + past participle)	j'avais regardé (I had watched) J'étais allé (I had been)	
	Subjunctive	bien que je **aie/sois/sache**, il faut qu'on **fasse**	
	Demonstrative pronouns	**celui** que je préfère, **celle** que j'aime	
	Après avoir/être + past participle	après avoir mangé – after having eaten après être allé/e – after having been	
	Present participle (en+ant)	**en** fais**ant** – by doing, **en** ay**ant** – by having	
	En + y	j'**y** vais – I go there, j'**en** fais – I do it	
	Quand + future tense	**Quand** je **serai** plus agé, **j'habiterai** en France	
	J'aurais préféré + infinitive	j'aurais préféré aller – I would have preferred to go	
	Si + present + future Si + imperfect + conditional	Si je **réussis**, **j'irai** à l'université Si **j'étais** riche, **j'achèterais** une voiture	
	Direct object pronouns (it)	je **l'**adore, je **les** regarde, je **la** trouve- i find 'it'	
	Depuis + present tense (for)	Je **joue** au tennis **depuis** huit ans	
	Il vaut/vaudrait mieux + infinitive	Il **vaut/vaudrait mieux** ne pas l'utiliser – It is/would be better not to use it.	
	Superlative (eg the funni**est)**	Le film **le plus amusant** est Despicable Me	
	Comparative(eg more than..)	Le tennis est **plus amusant que** le cricket	
	Ce que + opinion + c'est	**Ce que** j'aime, **c'est** le chocolat	
	Il faut + infinitive	**Il faut** recycler le papier – You must recycle paper	
	Future simple tense	je jouer**ai,** On jouer**a,** nous jouer**ons,** ils jouer**ent**	
	Conditional tense	je jouer**ais,** On jouer**ait,** nous jouer**ions,** ils jouer**aient**	
	Imperfect tense	je jou**ais,** On jou**ait,** nous joui**ons,** ils jou**aient**	
	Vary "parce que"	car, vu que, puisque, étant donné que	
	Future proche (aller + infinitive)	je **vais** jouer, on **va** jouer, nous **allons** jouer, ils **vont** jouer	
	Posh opinions	à mon avis, selon moi, j'ai une passion pour, je suis fan de, j'ai horreur de, ça me donne envie de, ça me rend,	
	Perfect tense	j'**ai** mang**é,** j'**ai vu,** je **suis allé(e)**	
	Negatives	ne..pas, ne…jamais, ne..plus, ne…que, ne..ni, ni	
	Intensifiers	vraiment, très, assez, un peu	
	Justified opinions	J'aime ma maison **car** c'est grande	
	Connectives	mais, aussi, pourtant, après, puis, d'habitude	
	Present tense	je suis, j'ai, je vais, je fais, je regarde, je bois	

Les nombres en français

Woodward French

0 zéro	10 dix	20 vingt	30 trente
1 un	11 onze	21 vingt-et-un	31 trente-et-un
2 deux	12 douze	22 vingt-deux	32 trente-deux
3 trois	13 treize	23 vingt-trois	33 trente-trois
4 quatre	14 quatorze	24 vingt-quatre	34 trente-quatre
5 cinq	15 quinze	25 vingt-cinq	35 trente-cinq
6 six	16 seize	26 vingt-six	36 trente-six
7 sept	17 dix-sept	27 vingt-sept	37 trente-sept
8 huit	18 dix-huit	28 vingt-huit	38 trente-huit
9 neuf	19 dix-neuf	29 vingt-neuf	39 trente-neuf
40 quarante	50 cinquante	60 soixante	70 soixante-dix
41 quarante-et-un	51 cinquante-et-un	61 soixante-et-un	71 soixante-et-onze
42 quarante-deux	52 cinquante-deux	62 soixante-deux	72 soixante-douze
43 quarante-trois	53 cinquante-trois	63 soixante-trois	73 soixante-treize
44 quarante-quatre	54 cinquante-quatre	64 soixante-quatre	74 soixante-quatorze
45 quarante-cinq	55 cinquante-cinq	65 soixante-cinq	75 soixante-quinze
46 quarante-six	56 cinquante-six	66 soixante-six	76 soixante-seize
47 quarante-sept	57 cinquante-sept	67 soixante-sept	77 soixante-dix-sept
48 quarante-huit	58 cinquante-huit	68 soixante-huit	78 soixante-dix-huit
49 quarante-neuf	59 cinquante-neuf	69 soixante-neuf	79 soixante-dix-neuf

80 quatre-vingts	90 quatre-vingt-dix
81 quatre-vingt-un	91 quatre-vingt-onze
82 quatre-vingt-deux	92 quatre-vingt-douze
83 quatre-vingt-trois	93 quatre-vingt-treize
84 quatre-vingt-quatre	94 quatre-vingt-quatorze
85 quatre-vingt-cinq	95 quatre-vingt-quinze
86 quatre-vingt-six	96 quatre-vingt-seize
87 quatre-vingt-sept	97 quatre-vingt-dix-sept
88 quatre-vingt-huit	98 quatre-vingt-dix-huit
89 quatre-vingt-neuf	99 quatre-vingt-dix-neuf

LES GRANDS NOMBRES

100 cent	800 huit-cents
101 cent-un	900 neuf-cents
200 deux-cents	1.000 mille
202 deux-cent-deux	2.000 deux-mille
300 trois-cents	10.000 dix-mille
305 trois-cent-cinq	100.000 cent-mille
400 quatre-cents	1.000.000 un-million
500 cinq-cents	2.000.000 deux-millions
600 six-cents	1.000.000.000 un-milliard
700 sept-cents	2.000.000.000 deux-milliards

© Woodward French

(orthographe rectifiée de 1990)

www.woodwardfrench.com

100+ ways of not saying intéressant or ennuyeux

Theme	Positive		Negative	
Sport/activities	fascinant(e)	fascinating	dur(e)	hard
	passionnant(e)	exciting	astreignant(e)	demanding
	vivifiant(e)	exhilarating	difficile	difficult
	rapide	fast	malsain(e)	unhealthy
	sain(e)	healthy	barbant(e)	boring
	compétitif(-ive)	competitive	compliqué(e)	complicated
	plein(e) d'action	full of action	dangereux(-euse)	dangerous
	relaxant(e)	relaxing	effrayant(e)	scary
	intellectuel(le)	intellectual	monotone	monotonous
	stimulant(e)	challenging		
	énergique	energetic		
People	sage	wise/well-behaved	énervant(e)	annoying
	charmant(e)	charming	méchant(e)	naughty
	rigolo(te)	funny	bête	daft/silly
	généreux(-euse)	generous	pessimiste	pessimistic
	travailleur(-euse)	hard-working	égoïste	selfish
	mûr(e)	mature	sévère	strict
	doux(douce)	gentle	autoritaire	bossy
	insouciant(e)	carefree	râleur(-euse)	whingy
	sympathique	nice/likeable	impoli(e)	rude
	spirituel(le)	witty	pénible	annoying
	attentionné(e)	thoughtful	casse-pieds	irritating
	aimable	likeable	grincheux(-euse)	grumpy
	optimiste	optimistic	désagréable	unpleasant
	amical(e)	friendly	timide	shy
	bavard(e)	talkative/chatty	maladroit(e)	clumsy
	élégant(e)	elegant	jaloux(-ouse)	jealous
Film/tv programmes	drôle	funny	embêtant(e)	annoying
	génial(e)	brilliant	affreux(-euse)	awful
	éducatif(-ive)	educational	bête	stupid
	populaire	popular	compliqué(e)	complicated
	original(e)	original	choquant(e)	shocking
	unique	unique	effrayant(e)	scary
	instructif(-ive)	informative	funeste	gruesome
	romantique	romantic	ridicule	ridiculous
	emballant(e)	thrilling	compliqué(e)	complicated
House/Town/Visit	moderne	modern	bruyant(e)	noisy
	tranquille	quiet	laid(e)	ugly
	charmant(e)	charming	malsain(e)	unhealthy
	propre (after noun)	clean	désagréable	unpleasant
	dynamique	dynamic/busy	sale	dirty
	accueillant(e)	welcoming	miteux(-euse)	grotty/shabby
	animé(e)	lively	maussade	gloomy
	pittoresque	picturesque	pollué(e)	polluted
	historique	historic	urbanisé(e)	built-up
	spacieux(-euse)	spacious	surpeuplé(e)	over-populated
	marrant(e)	funny	affreux(-euse)	awful
	travailleur(-euse)	hard-working	barbant(e)	boring
	utile	useful	inutile	useless
School/career	juste	fair	démodé(e)	old-fashioned
	pratique	practical	stricte	strict
	marrant(e)	fun	chargé(e)	hectic
	stimulant(e)	challenging	monotone	monotonous
	motivant(e)	motivating	casse-pieds	boring
Food/health	sain(e)	healthy	malsain(e)	unhealthy
	léger(légère)	light	lourd(e)	heavy
	Savoureux	tasty		

Super structures to use…. Those in bold- aimed at grade7 +

Instead of je voudrais, use… J'aimerais J'ai envie de + inf J'ai l'intention de +inf **Je rêve de/d' + inf…** **J'ai hâte de + inf..**	**I would like…** I would like I'd fancy… I have the intention of… **I dream of…** **I'm excited for/looking forward to…**
Instead of je pense que, use… Personnellement Pour moi, Quant à moi Je crois que **Je dirais que** **Autant que je sache**	**I think that…** Personnally For me According to me I believe that **I would say that** **As far as I know**
Instead of c'est amusant.. Je le / la / les trouve (amusant) **Je l'ai trouvé**	 I find it… (fun) **I found it (past tense)**
Instead of j'aime… (noun) m'intéresse / … me fascine Eg le sport m'intéresse	 (noun) interests me / (noun) fascinates me I like sport
Afin de + inf/ pour + inf	In order to + verb
Avant de + inf	Before + verb
En + present participle	Whilst (doing something) Eg en lisant, en faisant
Après avoir + past participle, **Après être + past participle**	**After having + past participle** eg Après avoir mangé **After having + pp (être verbs)**
Si j'avais le choix… **Si je gagnais à la lotterie** **Si j'avais beaucoup de choix**	If I had the choice **If I had won the lottery** **If I had lots of money**
C'est le pied **J'ai la main heureuse** **Je suis aux anges**	It's great **I'm lucky** **I'm over the moon**
Je ne (verb) jamais **Je ne (verb) plus** **Je ne (verb) que**	I never (verb) **I no longer (verb)** **I only (verb)**
Il faut / il ne faut pas… On peut/ on ne peut pas + inf **On pouvait/on pourra**	You must / you must not You can/ you cannot + verb **You were able to / you could**
Je viens de + inf	**I have just + verb**
Je suis en train de + inf	**I'm in the process of (verb)**
Comparison: X est **plus/moins** (adjective) que X	X is **more /less** (adj) than…

Learn the following in blocks of ten. They could make a HUGE difference in your Reading and Listening exams. They are always used to try to trick you out.
It could make the difference of a grade!

LITTLE WORDS AND PHRASES

(moi) non plus	me neither
à partir de	from
à peu près	about
alors	so, then
après	after
assez	quite
au lieu de	instead of
au moins	at least
aussi...que	as...as
autre	other
avant	before
avantage	advantage
avec	with
bien	well
bientôt	soon
bon	good
ça depend	it depends
car	for, as, since
cependant	however
chez	at the house of
chose	thing
clair	light (colour)
comme	as. like
contre	against
d'abord	first of all
d'accord	ok, agreed
de	from
de bonne heure	early
début	beginning
déjà	already
demi	half
depuis	since, for
dernier	last
derrière	behind
désavantage	disadvantage
devant	in front of
different	different
donc	so, therefore

en bas	downstairs
en haut	upstairs
en même temps	at the same time
en retard	late
en train de	in the process of
enfin	finally
ensuite	next, then
entre	between
et	and
faux	false, untrue
fermé	closed
fin	end
foncé	dark (colour)
il s'agit de	it's about...
il y a (2ans)	(2 years)ago
libre	free
loin	far
maintenant	now
mais	but
mal	badly
malgré	despite
malheureusement	unfortunately
mauvais	bad
meilleur	better
même	even, same
mieux	best
moins	less
occupé	busy, engaged
ou	or
où	where
ouvert	open
par	by
par contre	on the other hand
parce que	because
partout	everywhere
pas encore	not yet
pas mal de	quite a few
pendant que	while

peu	few, not many
peut-être	perhaps
pire	worse
plein	full
plus	more
plus...que...	more... than...
plus mauvais	worse
plus tard	later
plutôt	rather
pour	for
pourtant	yet, however
premier	first
près	near
presque	almost
pressé	busy, in a hurry
prêt	ready
propre	own, clean
puis	then, next
puisque	since, as
quand	when
quelquefois	sometime
réduit	reduced
rester	to stay; have left

sans	without
sauf	except
sembler	to seem
seul	alone, only one
seulement	only
sous	under
souvent	often
sur	on (top of)
surtout	especially
tard	late
tôt	early
toujours	always
tous les jours	everyday
tout à coup	suddenly
tout de suite	straight away
très	very
trop	too
un peu de	a little
varié	varied
vers	towards
vide	empty
vrai	true

FALSE FRIENDS Look like cognates but DO NOT mean the same! Watch out!

addition	bill
announce	advertisement
baskets	trainers
belle-mère	mother-in-law
Car	since, as
Carte	menu/map
Casserole	pot, pan
Cave	cellar
Chaîne	channel (tv)
chance	luck
chariot	trolley
chips	crisps
doubler	overtake
essence	petrol
expérimenté	experienced
herbe	grass
joli	pretty
large	Wide
Licence	degree

location	hire
mince	thin
monnaie	(loose)change
note	mark
patron	boss
petit(e)-ami(e)	boy/girl – friend
pièce	room
pile	battery
pressé	in a hurry
propre	own;clean
prune	plum
raisin	grape
rayon	shelf
regime	diet
rester	stay;have left
sac	bag
sale	dirty
sensible	sensitive
stage	course/work exp

Describing a photo

sur la photo	in the photo
il y a	there is /are
deux personnes	two people
beaucoup de personnes	lots of people
une famille	a family
une bande d'amis	a group of friends

une personne est	one person is..
grand/petit	tall/small
une personne a	one person has
les cheveux....longs/courts	short/long hair
les yeux... bleus/verts/bruns	blue/green/brown eyes
une personne porte	one person is wearing
une chemise/une jupe/un costume/ une robe	a shirt/a shirt/a suit/a dress

c'est	it is
au bord de la mer	by the sea
en ville	in the city/town
dans un village	in a village
à la montagne	in the mountains
à la campagne	in the countryside
dans la forêt	in the forest
dans une maison	in a house
dans un bureau	in an office
au college	at school
il fait chaud	it is hot
il fait froid	it is cold
il pleut	it is raining
ils jouent	they are playing
ils parlent	they are talking
ils mangent	they are eating
ils font	they are doing
ils sont	they are
Ils boivent	They are drinking

Opinions, connectives, intensifiers & time frames

Selon moi	According to me
Je pense que	I think that
Je trouve que	I find that
À mon avis	In my opinion
Pour moi	For me
Autant que je sache	As far as I know
Je dirais que	I would say that

J'aime	I like
J'apprécie	I like
Je n'aime pas	I don't like
Je déteste	I hate
Je suis fan de	I am a fan of
Je me passionne pour	I love

ou/ où	or/ where
et	and
avec	with
mais	but
cependant	however
pourtant	however
par contre	however
aussi	also

très	very
assez	quite
un peu	a little
extrêment	extremely
vraiment	really

de temps en temps	from time to time
souvent	often
normalement	normally
quelquefois	sometimes
d'habitude	usually
hier	yesterday
le weekend dernier	last weekend
l'année prochaine	next year
ce weekend	this weekend

Key verbs in 3 key tenses

Past	
Je suis allé(e)	I went
J'avais	I had
J'ai mangé	I ate
J'ai joué	I played
J'ai regardé	I watched
J'ai fait	I did
J'ai bu	I drank
J'ai pris	I took
C'était	It was
Il y avait	There were

Present	
Je vais	I go/I am going
J'ai	I have
Je mange	I eat/I am eating
Je joue	I play/I am playing
Je regarde	I watch/I am watching
Je fais	I do/I am doing
Je bois	I drink/I am drinking
Je prends	I take/I am taking
C'est	It is
Il y a	There is/are

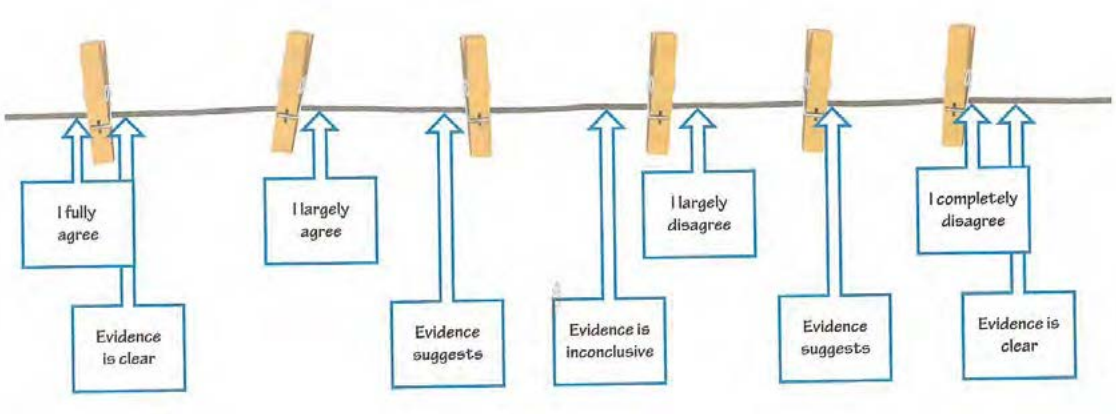
Future	
Je vais aller	I am going to go
Je vais avoir	I am going to have
Je vais manger	I am going to eat
Je vais jouer	I am going to eat
Je vais regarder	I am going to watch
Je vais faire	I am going to do
Je vais boire	I am going to drink
Je vais prendre	I am going to take
Ce sera	It will be
Il y aura	There will be

Geography

GCSE Geography essential knowledge

- Social means anything to do with people, anything that effects or impacts people's lives, specifically their quality of life.
- Economic means anything to do with people's money, and anything that affects a business's profits or ability to make a profit.
- Environmental means anything to do with the built environment (towns, cities) or natural environment.
- HIC = Higher Income Country
- LIC = Lower Income Country
- NEE = Newly Emerging Economy
- The term quality of life is used to evaluate the happiness and general well-being of individuals and societies. Many of the factors affecting it are basic human rights such as the right to freedom, to marry and live free from discrimination. None of these things are economic.
- In contrast, standard of living is based primarily on income and refers to the level of wealth, comfort and material goods that are affordable to a certain group of people in a certain geographic area. It can be quantified/measured.
- Causes = Something that has given rise to a geographical event or issue.
- Effects/Impacts = The result or consequence of this geographical event. Geographical hazards, issues, opportunities, challenges are created by and from these effects/impacts. Often split into immediate and long-term, or primary and secondary.
- Responses = What humans do as a result of these effects. Often split into immediate and long-term (preventative).
- 'Sustainable Development is development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.' Something is 'Sustainable' if it can be maintained, if it can continue to happen, for a long period of time.

- 'To what extent…' or 'Assess the extent..' mean you have to present evidence and explain why you agree or disagree with a give statement.



Challenge of Natural Hazards

- A Natural Hazard is any natural event that threatens people, that has the potential to cause damage, destruction and death.
- Plate Tectonics is a theory that explains the movement, formation and destruction of the **plates** that make up the Earth's crust.
- Plate Boundaries are where the edges of two or more of the Earth's tectonic plates meet, and where Tectonic Hazards (earthquakes, tsunamis and volcanoes) occur. There are four main types – constructive, destructive, conservative and collision.
- An earthquake is a sudden and violent shift in the Earth's crust, due to movement of the Earth's tectonic plates. This shift leads to the release of energy in the form of seismic waves, which leads to shaking and vibration of the Earth's surface.
- High air pressure occurs when air is sinking towards the Earth's surface. This leads to clear skies and dry weather as the air is warming and can hold more moisture – it doesn't condense to form clouds that lead to rain falling.
- Low air pressure occurs when air is rising away from the Earth's surface. As it does so it cools down leading to cloudy skies as the air is not able to hold the moisture within it. This leads to rain falling.
- Climate change – the large-scale, long-term shift in the planet's weather patterns. This can mean any change in temperature, rainfall, storms etc.
- Global warming - A gradual increase in the overall temperature of the earth's atmosphere. So global warming is a form of climate change, not the same thing.
- Mitigation deals with the causes of a problem. In this context mitigation strategies aim to reduce and minimize the production of greenhouse gases that lead to climate change.

- Adaptation is a response to the impacts of a problem. In this context adaptation strategies are responses to the impacts of climate change in order to either limit its impacts or to take advantage of the change.

The Living World

- An ecosystem is a natural system compromising abiotic (non-living) elements and the biotic (living) elements that interact with each other and their physical environment. Biomes (e.g. Tropical Rainforest, Hot Deserts) are large-scale ecosystems.
- Producer = An organism or plant that is able to absorb energy from the sun through photosynthesis. It also needs water, carbon dioxide and nutrients from soil/rock to produce what it needs for itself. It can then be a source of food/energy to primary consumers.
- Consumer = Creature that eats other animals and/or plant matter. They obtain the energy from what they eat.
- Decomposer = An organism such as a bacterium or fungus, that breaks down dead tissue, and recycles their nutrients back to the environment.
- Food Chains and Webs = The connections between different organisms (plants and animals) that result from relying upon one another as a source of food.
- Nutrient Cycling = A set of processes whereby organisms extract nutrients necessary for growth from soil or water, before passing them on through the food chain – and ultimately back to the soil and water when they die.
- Adaptations are the special features developed by plants and/or animals through evolution to enable them to survive in a particular environment.
- Biodiversity = The variety of life (plants and animals) found in a particular location.
- Sustainable uses of the rainforest are uses that allow current generations (people alive and working today) to make a living from the forest without destroying it and therefore preventing future generations (children, grandchildren etc.) from benefitting from it both economically and environmentally (i.e. as a carbon sink).
- A desert is an area that receives less than 250mm of precipitation per year.
- Desertification is the process by which land becomes drier and degraded and starts to turn into a desert.

Physical Landscapes of the U.K. (Fluvial and Coastal)

- A Physical Landscape is an area characterised by the result of the action and interaction between natural and human factors
- Fluvial (river) erosion is the removal of material from the land by the action of a river. Marine erosion is the same but it is the action of the waves that erode material.
- Transportation is the movement of eroded material along the river channel, or along the coast.
- Deposition is the process by which a river or the waves drop their load (the material it is carrying). Dropped material is called sediment.
- The Long Profile of a river shows how the gradient of a river changes along its course from source to mouth.
- The Cross Profile shows how the shape of the river channel (where the water flows) and valley (the surrounding land) changes along its course from source to mouth.
- A Waterfall is a steep, vertical drop in the course of a river.
- Meanders are bends in the course of a river.
- Levées are raised banks/embankment that follow the course of the river in its middle and lower courses.
- Flood plains are areas of flat land adjacent to a river channel in its middle and lower courses.
- The Hydrological Cycle is where water is stored and transferred between air, land, seas and rivers. It is a closed system – no water gets in or out, it is simply stored and transferred.
- The Drainage Basin is an area of land that is drained of water by a river system. It is part of the Hydrological Cycle but is an open system – water can enter and exit a basin.
- A flood (or storm) hydrograph is a way of displaying how the discharge of a river can change over time in response to a precipitation (rainfall) event.
- Discharge is the amount of water in a river that passes a given point every second.
- River flooding occurs when the volume of water present in the channel is too great to be contained by the channel; it exceeds bankfull discharge. Consequently the river bursts its banks and flows out onto land that is not normally covered by the river – the floodplain.
- Hard engineering methods involve the use of technology and/or large scale engineering projects to control rivers and prevent flooding, and protect land from the action of the waves. They are usually expensive and whilst often provide immediate benefits they can create problems in the future.

- Soft engineering methods try to work within the constraints of the natural river or coastal system to reduce the effects of flooding and erosion. They do not have a major environmental impact and are thought to be the more 'sustainable', as well as less expensive, approach. The benefits often take time to be felt.
- The coast is the narrow contact zone between land and sea.
- Waves are created by the transfer of energy from the air to the ocean surface due to friction between the air and the ocean surface creates waves.
- Constructive waves create beaches as they deposit more sand and sediment than they remove.
- Destructive waves **e**rode beaches as they remove more sand and sediment than they deposit.
- Weathering = The break down of rocks in situ.
- Mechanical weathering = Where rocks are disintegrated rather than decomposed.
- Chemical weathering = Caused by a chemical reaction that causes a rock to decompose.
- Freeze-Thaw = Happens when water enters cracks and freezes at night. It expands in volume and puts pressure on the surrounding rock. Daytime thawing releases this pressure. Repetitive freezing and thawing leads to rock fragments breaking away from a cliff face.
- Mass Movement = The downslope movement of rock, soil or mud under the influence of gravity.
- A slide occurs when heavy rain has infiltrated the soil and percolated down into the underlying bedrock. The soil is now a heavier, saturated and mass and it will eventually fall downslope along what is known as a slip plane – a line of weakness. A slide can start quickly and begins by tearing away the vegetation on the top of a cliff. Its descent is aided by the wet rocks underneath the soil.
- Rock slide = When a large amount of rock slides down a cliff. All the rock maintains contact with the cliff and the slide collects as a pile on the beach or in the sea below.
- Mud slide = Occur where vegetation cover is sparse and cannot hold the soil in place when it becomes saturated after a period of heavy rain. Occurs on steep slopes.
- Rock fall = Occur where exposed and well-jointed rocks are subjected to freeze-thaw weathering. Contact is lost between the falling rock and the cliff face.
- Headlands are hard rocks which are left jutting out into the sea. They are areas of higher land with near vertical cliff faces and are affected by destructive waves which can lead to the formation of caves, arches and stacks.
- A bay is a crescent shaped area of soft rock between two headlands. It usually has a sandy beach.
- Cliffs are found on the side of a headlands. They are near vertical, often over 40m in height with horizontal layers (bedding) of rock and a wave-cut notch at the base.
- A wave-cut platform gently slopes to the sea at an angle of 3-5 degrees. It is bare rock, smooth in places and pitted and cracked in others, leading to the presence of rock pools. They are covered at high tide and exposed at low tide.
- Caves can be several metres high and deep; they are at their widest and highest at the entrance and taper backwards.
- Arches are an extension of the headland with water passing below the unsupported top of the arch. They often have wave-cut notches at their base.
- A stack is a pillar of rock that is detached from the headland. Normally many metres high they also often have wave-cut notches at their base.
- A stump is a collapsed stack that is often submerged.
- A beach is the gentle sloping area of land located between the high and low water marks. They are created when waves deposit the material (sand and shingle) that they are carrying.
- A Spit is a long, narrow ridge of sand and shingle. One end is attached to land whilst the other extends into the open sea or across a river estuary.
- A Bar is a ridge of sand that runs across the entrance to a bay or river mouth, joining one part of the mainland to another.

Urban Issues and Challenges

- Urbanisation is the process by which an increasing percentage or proportion of a country's population lives in towns and cities, i.e. urban areas.
- Megacities are urban areas with a total population in excess of ten million people.
- The 'formal economy' refers to registered/legal employment where the workers' pay taxes to the government and the companies have a legal obligation to protect their workers, offer holidays and holiday pay, sick leave and pay regular wages.
- The 'informal economy' refers to jobs that are unregistered, work done without the official knowledge of the government. Therefore there is no minimum wage, the workers are unlikely to pay taxes, have no holiday rights and often work in dangerous or hazardous conditions.

- A place or community (group of people) is 'socially deprived' if it and its residents lack the things that are essential for a decent life – for example healthcare, education, employment etc.
- Urban regeneration refers to the revival of old parts of an urban area (that have become run-down, derelict, abandoned) by either installing modern technology and facilities in old buildings (renewal) or demolishing existing buildings and starting afresh (redevelopment).
- Sustainable urban living is where a city provides employment, a high standard of living, a clean healthy environment, and fair governance for all its citizens for a long period of time

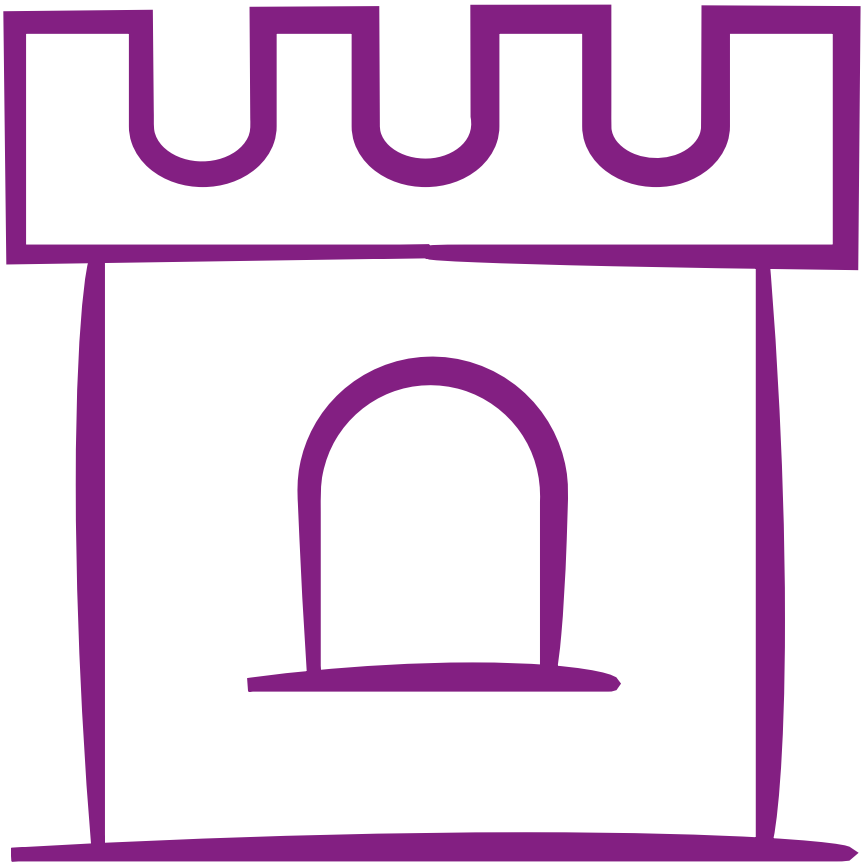
Changing Economic World

- Development is a process that uses resources and technology to increase wealth and improve people's standard of living and quality of life.
- Standard of Living = Economic well-being (how much money do people have). It refers to the level of wealth, comfort and material goods that people can afford and obtain.
- Quality of Life = Social well-being. Is used to evaluate the happiness and general well-being of individuals and societies based on their access to education, healthcare, leisure, if they have freedom of speech, free and fair elections and a transparent and fair justice system. None of these things are economic.
- Industrial structure: The relative proportion of the workforce employed in different sectors of the economy.
- Primary industries involve gathering raw materials from the Earth.
- Secondary industries involve making, building or processing raw materials into finished products, usually in factories.
- Tertiary industries provide a service.
- Quaternary industries do high-tech research to develop new things.
- Trans National Corporations (TNCs) are companies that operate globally – they have operations (or business interests) in at least 2 different countries.
- Deindustrialisation is the decline of a country's traditional manufacturing industry due to exhaustion of raw materials, loss of markets and competition from NEEs regarding lower labour and production costs.
- Globalisation is the process which has created a more connected world, with increases in the movements of goods (trade) and people (migration and tourism) worldwide.
- Government Policy is a plan or course of action decided by a government to manage issues in a country.
- Infrastructure is the stuff that makes a country work. It is the basic equipment, structures (such as roads, railways, airports), technology (high-speed broadband) and organisations (police, fire, health, education) that are needed for a country to function properly.

Challenge of Resource Management

- Organic produce is produced by organic farming, a type of farming that does not use chemicals such as fertilizers and pesticides.
- Food miles are the distance our food travels to get to our homes.
- Carbon Footprints are a measure of the impact of human activities on the environment in terms of the amount of CO_2 they produce.
- Water supply is the provision of water to individuals and communities by public bodies or companies.
- Water demand is the quantity of water required to meet people's needs
- Water transfer schemes move water via pipe or truck from areas of supply to areas of demand.
- Energy mix refers to the different sources of energy (of electricity) used in a country.
- A country has energy security when it can supply its citizens with the energy they need at an affordable price. These countries tend to have good reserves of energy, but also the ability to import any extra they may need. They have a positive/no energy gap.
- A country has energy insecurity when it has low reserves and lacks the ability to produce energy for their citizens, or import any extra energy that is needed to close the energy gap.
- The energy gap is the difference between the energy that countries can provide for their citizens (the supply) and how much energy is actually needed (the Demand).
- Sustainable energy supply = Energy that can be used well into the future without harming future generations.
- Energy conservation = Reducing energy consumption through simply using less energy and becoming more efficient in the use of existing energy sources.

History



BRIDGNORTH Endowed

History Revision: Key Facts. Paper 1: Medicine in Britain 1250-Present and the Trenches.

Medieval Medicine c.1250-c.1500

1. What did medieval people think were the 3 main causes of disease? [3] God punishing, astrology (alignment of the planets), 4 humours.
2. Who expanded on the concept of the 4 Humours with the Theory of Opposites? Claudius Galen
3. What 3 reasons helped Galen's theories remain popular? [3] Support from the Church, the importance of book learning (few people could read, so what was in books must be very clever, and right!), lack of scientific alternatives.
4. List 3 religious treatments. [3] Healing prayers and incantations, Paying for a special mass to be said, fasting, pilgrimages
5. How did they try to prevent disease?[3] Regimen Sanitatis, diet, purifying the air.
6. List 3 types of medieval medics [3] Physicians, apothecaries, barber-surgeons.
7. What did hospitals do? Care, not cure the sick. Offered hospitality to travellers and pilgrims.
8. Where else were people cared for? Home, using traditional healing methods (restorative foods, herbal remedies.
9. What did the people think caused the Black Death? [3] God deserting mankind – it was seen as a pestilence or punishment, Unusual positioning of the planets in 1345. Maisma – fumes of bad air.

- Test yourself!
- Make Revision Cards!
- Create mindmaps!

Renaissance Medicine c.1500-c.1700

10. List 4 new ideas that were developed during the renaissance:
    a. Increased use of chemical treatments – Paracelsus
    b. Circulation, as opposed to blood being created by the liver – Harvey 1628
    c. New microscopes produced by Robert Hooke, 1665
    d. Sydeham observes that illness caused by external factors rather than 4H, 1676
    e. Anthony van Leeuenhoek develops more powerful microscopes
11. List 3 ideas that changed a lot during this period. Less people believed the 4H, although it was still widely used. Much better understanding of anatomy. Urine no longer used for diagnosis.
12. Who was the 'English Hippocrates' and why was he different? Thomas Sydenham , Clinical observation, categorisation
13. What new method of treatment was used? Transference (transferring illness to an object or animal), chemical 'cures.'
14. Who was famous for his study of anatomy? Andreas Vesalius, famous for De Humani Corporis Fabrica
15. What did William Harvey specialise in and what theory of Galen did he disprove? Circulation, Blood not created in liver.
16. What did people believe caused the Great Plague of 1665? Astrology, Punishment from God, Miasma

Early Modern c.1700-c.1900

17. What replaced the 4 humours? The theory of spontaneous generation, the belief that decay created microbes. How did Pasteur discover Germ Theory? Using improved microscopes, he observed microbes spoiling wine in 1861
18. What did Robert Koch discover? The individual microbe that caused anthrax (and then TB (1882) and Cholera (1883)
19. Where did Florence Nightingale go in 1854? The Crimean War (Russia) (soldiers dying of infection/disease and wounds.
20. What 3 changes did she make? Cleaned the hospitals, Organised nursing better, provided clean bedding and good meals.
21. Who discovered Chloroform in 1847? James Simpson, John Snow developed an inhaler to avoid overdoses.
22. Who discovered Carbolic Acid could be used as an antiseptic? Joseph Lister, 1865
23. What did Edward Jenner do in 1796? Infected a local boy (James Phipps) with cowpox, and 6 weeks later with smallpox.
24. What steps did the government take to help prevent disease in cities? First Public Health Act 1848 (aimed to provide clean water, and set up boards of health) Non-compulsory, so not much change! Second (compulsory) Public Health Act 1875

Modern Medicine c.1900-Present

25. What was discovered by Watson and Crick? DNA, 1953, using Rosalind Franklin's X-rays. Helps genetic diseases.
26. What new methods have helped with diagnosis? Blood tests (from 1930s), Blood pressure monitors (from 1880s), Endoscopes (from 1900s) camera on tubes to look inside you (down or up…), Blood sugar monitoring (from 1960s), X Rays from 1890s, MRI Scans (from 1970s), CT Scans (from 1970s), Ultrasounds (from 1940s), ECGs (heart activity).
27. Who discovered the first magic bullet? Paul Erhlich, 1909, Salvarsan 606, cure for syphilis.
28. Who discovered penicillin? Alexander Fleming, 1928, rediscovered by Florey and Chain, 1941.
29. What was the problem? Needed to mass produce it (WW2 was underway). Did so in USA. Ready for D-Day Jun 1944.
30. Why is lung cancer so hard to treat? Late detection, means it is often advanced by the time it is discovered.
31. How is it diagnosed? CT Scan gives detailed picture inside the body, then either: PET CT scan or Bronchoscope into lungs.
32. What treatment can be carried out to try to cure lung cancer? Transplants, Radiotherapy, Chemotherapy

The Trenches 1914-18

33. What were the 5 stages of evacuation? Company Aid Post (CAP), Regimental Aid Post (RAP), Advanced Dressing Station (ADS), Main Dressing Station (MDS), Casualty Clearing Stations (CCS), Base Hospitals.
34. What 3 methods were used to deal with infected wounds? Wound excision and debridement – cutting away damaged and infected tissue; Amputation (by 1918, 240,000 men had lost limbs); The Carrel-Dakin method used after 1917 – cleans wounds using sterilized salt solution.
35. What did a Thomas Splint do? Stabilised broken leg bones caused by shrapnel or bullets, minimising internal bleeding.
36. Who discovered blood groups? Austrian Karl Landsteiner in 1901. American Ruben Ottenberg discovered O as the universal blood group in 1907.
37. Who was the most famous neurosurgeon (brain surgeon)? Harvey Cushing, from the US. (Local anaesthetic, magnets to get metal fragments out). Who pioneered plastic surgery? Howard Gillies

Paper 2a: Henry VIII and his Ministers

Henry and Wolsey, 1509-29

1. **What year did Henry come to the throne?** 1509
2. **In what areas did Wolsey carry out reforms?** Justice, Enclosures – 1517, (failed in Parliament 1523), Finance - introduced subsidy (income tax), Domestic and political aspects of Royal Household – Eltham Ordnances
3. **Describe the successes of Wolsey's Foreign Policy**. Treaty of London 1518, Universal peace, prestige for Henry and England; Field of the Cloth of Gold 1520; Treaty of More 1525, allies with France after being let down by Charles; Treaty of Westminster 1527, strengthened ties with France
4. **Describe 2 failures of Wolsey's foreign policy**. War with France 1522-5, let down by Charles, very expansive; Treaty of Cambrai between France and Spain leave England isolated.
5. **What were the three main reasons for the fall of Wolsey?** Amicable Grant failure, Failure to secure annulment, Failure to build alliances in Europe (Charles V)

Henry and Cromwell, 1529-40

6. What was Cromwell's solution to the annulment problem? To remove the decision from the Pope, and give it to the power to the King. The **Act in Restraint of Appeals** in 1533, made England an Empire, no longer under any Papal control.
7. What were the findings of the divorce hearing in May 1533? Original papal dispensation invalid, never been a legal marriage, Henry's secret marriage to Anne (Jan 1533) was legal.
8. **Explain why Anne was executed**. She failed to provide Henry with a male heir. Henry believed God disapproved of the marriage. He fell out of love with her personality – her quick, sharp mind and assertive personality began to irritate him. Henry began to fall for Jane Seymour (helped to prominence by conservative courtiers such as the Duke of Norfolk)
9. **Explain 3 ways in which Cromwell reformed Henry's government.** Reform 1: The Royal Council – simplified and professionalised to become the Privy Council, consisting of professional administrators and lawyers. Reform 2: Strengthened the Council of the North. Reform 3: Act of Union 1536 – Wales comes under English law and Parliament
10. **Explain 2 reasons why Cromwell fell from power.** Failed marriage to Anne of Cleves (Jan 1540) (alliance no longer needed, as Francis and Charles had fallen out, Henry not too keen on her Protestant alliances. The influence of the Duke of Norfolk (Catholic, hated Cromwell for his low birth, angry about Cromwell being made Earl of Essex, spread rumours that Cromwell dithering in securing the divorce of Anne (untrue)).

The Reformation and Its Impact, 1529-40

11. **Explain the 4 main reasons for Henry campaigning against the Catholic Church**. Succession, need for a divorce. Influence of Protestantism, Anne B, Tyndale's book 'The Obedience of the Christian Man,' 1528 – Church to be ruled by Kings, not Pope. Anti-Clericalism: Poor quality of clergy, moral laxity, corruption of the Church courts. Richard Hunne death/murder for not paying funeral fees. Money paid to Catholic Church would come to him instead.
12. Explain the following:
    a. The Act of Succession, 1534: Marriage to C of A invalid. Mary illegitimate. Anne's children inherit the throne.
    b. Act of Supremacy, 1534: Henry, not the Pope, now head of English Church. He could now decide on organisations, beliefs and key positions within the Church.
13. **What 2 measures did Cromwell take to ensure loyalty to the king in 1534?** Oath of Succession – Requirement to swear allegiance to Anne. The Treason Act – Death to anyone denying Royal Supremacy.
14. **What Protestant reforms did Cromwell carry out?**
    a. Act of Ten Articles July 1536, reduced sacraments, so was a step towards Protestantism.
    b. First set of Royal injunctions, Aug 1536, Priests ordered to speak in favour of Supremacy and Ten Articles.
    c. Bishops Book published July 1537, lessened importance of more Catholic beliefs.
    d. Second set of Royal injunctions Sept 1538, English bibles to be placed in churches, relics removed from churches.
15. **What statement of Catholicism did Henry issue in 1539?** Six Articles, which confirmed transubstantiation and purgatory.
16. **What were the stages of the Dissolution of the Monasteries?** Valor Ecclesiasticus Cromwell's Commission 1535, Visitations, first Act of Dissolution 1536, Second Act 1539.
17. **What four factors led to the Pilgrimage of Grace.** Religious: North was mainly Catholic. Social: Sick poor and travellers would lose out. Political: Northern nobility felt Cromwell was too powerful and hated him. Economic: 1534 Subsidy Act, normally only collected in war still being collected in peace in 1536, poor harvests, opposition to Statute of Uses (1536 land inheritance tax).
18. **How did Henry stop the Lincolnshire uprising?** Sent a threatening message. Dispatched a force of 3000 men.
19. **Who led the pilgrimage of Grace?** Robert Aske
20. **What happened?** The pilgrims gave Henry the Pontefract Articles made 24 demands, including that the Catholic Church be retained, restore the Pope as head of the Church, legitimacy of Mary restored, reverse Dissolution. Henry promised to honour them, but in the end had 178 pilgrims executed.

Early Settlement of the West, c1835-c1862

1. List two aims of the US Govt to address the growing conflict with Plains Indians? [1] Separation and Assimilation
2. What happened in 1830? [1] The Indian Removal Act, President Andrew Jackson
3. What happened in 1834? The Trade and Intercourse Act, creating the Permanent Indian Frontier
4. What were its terms? Gun and alcohol, whites not allowed to settle on Indian lands, US Army police the frontier
5. What Act caused the Southern Plains Indians to move onto reservations? The Indian Appropriations Act 1851.
6. What happened in 1849? The California Gold Rush
7. Where did Brigham Young take the Mormons? Salt Lake, 1847-8, using excellent Organisation, Training, Planning
8. List three things they did to help build their community once they had arrived. Irrigation, Variety of settlements utilising nat resources, variety of produce (crops, minerals, timber etc)
9. List 3 main problems with early farming on the Plains. Too few trees, too little rainfall, extreme climates.
10. List four problems with the Fort Laramie Treaty 1851. Choosing representatives, attendance, agreeing boundaries, translation difficulties.
11. List 2 things the government agreed to. Protect Indians, pay 450k per year
12. List 2 problems with the treaty. Lack of power of chiefs, lack of understanding, boundaries not maintained
13. List 4 crimes that prevailed in the West. Claim jumping, social unrest, theft, murder, alcohol issues, racial crimes
14. What were set up to keep the peace and what were the problems? Vigilance committees, paid by the highest bidder, no answerable to law.

Development of the Plains, c1862-c1876

15. What were the details of the Homestead Act? 1862, 160 Acres, $10 to register, live there for 5 years, build a house, 5 acres of crops, buy for $30.
16. Details of the Railroad Act? 1862, Union Pacific and Central Pacific Companies, met in the middle. Built 1863-69.
17. What the rail companies get? $16,000 per mile loaned by govt, 120m right of way either side, 12km blocks on either side
18. Why was it more successful than the Homestead Act? Companies had to sell land to make profit, created Bureaus of Immigration across Europe.
19. What improvements helped early settlers? In 1854, self-governing windmills, metal blades added 1870, Barbed wire 1874, Sulky plough (steel) 1875, Turkey red seeds 1873.
20. What was the sequence of progress for the cattle industry? 1866, Goodnight Loving Trail, first cattle drive; 1867, Joseph McCoy sets up Abeline, the first cow town, John Illif develops the first big ranch, breeding Texas cattle with existing herds. This created Open Range, and Cattle Barons.
21. Give 3 reasons why Open Range ended. Less demand, winter 1886-7, drought of 1883, smaller ranches more profitable
22. What did the US government promise when Native Americans moved onto reservations? They would lose no more land, protection from whites, payments, food, livestock and farming equipment.
23. What was the early reservation policy known as? Policy of Concentration, after 1868 The Small Reservations Policy
24. List 3 problems Little Crow encountered after ageing to move onto a reservation. Forced to pay back $200,000 to traders, not enough food on reservations, corrupt officials supplying rotten food etc, settlers taking reservation lands.
25. Give two reasons why Little Crow decided to rebel when he did. Civil War, so less troops to stop him. People starving, eating grass.
26. What did Col John Chivington do in 1864? Murdered some 130 men, women and children at the Sand Creek Massacre.
27. What angered Red Cloud? Prospectors using the Bozeman Trail through Sioux hunting grounds, after gold had been discovered in Montana. In the end, fighting occurred between 3000 Indians vs 700 soldiers, Fort Laramie Treaty 1868.

Conflicts and Conquest c1876-c1895

28. What did the US government offer the Sioux for the right to mine the Black Hills in 1874? $6 million OR $400,000 per yr.
29. How did the Sioux and Cheyenne react? Left their reservations, raids against prospectors. The govt ordered Indians back to reservations Dec 1875.
30. What happened at the Battle of Little Bighorn? 200 soldiers vs 2000 Indian warriors, all soldiers massacred.
31. List 4 impacts of Custer's defeat for the Native Americans. Increased pressure on government to act against the Indians; Pains Indians were to be kept on their reservations; Previous treaties could be ignored; Indians threatened with starvation, so had to move to smaller reservations; Military control of plains by US government.
32. Who was the leader of the Exoduster Movement and what did he do? Ben 'Pap' Singleton, moved to Kansas in 1873, encouraged other ex-slaves to follow in 1879, 40,000 followed with a year. False rumours of free land and $500 start-up money resulted in failure and disillusionment.
33. What were the Land Rushes? Indian lands freed up by the Dawes Act 1889, a series of land rushes, each claim was 160 acres. First rush in 1889, last one in 1895, 8 million acres given away.
34. Outline the Johnson County War. Ranchers (The Wyoming Stock Growers Association) put 70 homesteaders on a death list. 22 Texas gunmen hired, defeated by Red Angus and a posse of 40, along with 300 angry residents.
35. What happened to the buffalo? [2] S Plains: 1872-4, 4 ½ million killed by hunters. N Plains: All killed between 1880-3
36. List 4 ways in which the US government controlled the Indians towards the end of the period. Reduced sizes of the reservations; Took power away from chiefs by creating special councils, who were threatened and bribed; Government agents rewarded good behaviour, and created Indian police; Educated children to give up their culture, and they were punished if they spoke their language etc.
37. What was the Dawes Act? A Homestead Act for Indians (160 acres per family, 80 for single males, 40 for orphaned U18 children)

Paper 3 – Weimar and Nazi Germany 1918-39

The Weimar Republic 1918-29

1. Who was the Emperor of Germany in 1918? Kaiser Wilhelm, who Abdicated and fled to Holland on 10 November
2. Who came to power at the end of WW1? Social Democratic Party, biggest party in Parliament, led by Friedrich Ebert
3. What were the key terms of the Treaty of Versailles? Land, Army, Money, Blame. (LAMB)
4. How much money did Germany have to pay in reparations? £6.6 billion
5. Name right wing and left wing political uprisings. Kapp Putch, Spartacist Revolt (Karl Liebknecht and Rosa Luxemburg).
6. How many political deaths were there between 1919 and 1922? [1] 376, including Matthias Ertzberger, who signed the treaty of Versailles
7. Why did France invade the Ruhr? Germany stopped send coal from the Ruhr
8. What was the result? Crippled Germany, as the area contained 80% of German coal, iron and steel reserves.
9. What was the role of Gustav Stresemann from 1923-29? Foreign Secretary, introduced the Rentenmark a new currency.
10. What were the two key terms of the Dawes Plan in 1924? Reparations temporarily reduced to £50 million per year; US banks loan to German industry $25 billion, 1924-30
11. What treaty was signed in 1925? Locarno Pact
12. What pact was agreed in 1928? Kellogg-Briand, 62 countries signed it, promising not to go to war again
13. List 5 areas in which life improved under the Weimar Republic, 1924-9. Unemployment fell, Wages rose by 25%, More houses built, War veterans received pensions, Better education.

Hitler Rises to Power 1919-33

14. Hitler joined the DAP in 1919. What did it change into within 2 years? The NSDAP, known as the Nazi Party
15. What document outlined the manifesto of the NSDAP (Nazi Party)? 25 Point Plan
16. List the reasons for the Munich Beer Hall Putsch. Stab in the back – resentment of the Weimar government, Increased numbers of the NSDAP – 50,000 members by 1923, Mussolini's successful far right fascist party in Italy, Punishment by French via the invasion of the Ruhr to get coal
17. Long-term impacts? Publicity for Hitler, Change of strategy from violence to politics, Mein Kampf, Growing popularity of NSDAP despite ban
18. List four views expressed by Hitler in Mein Kampf? Nationalism, Socialism, Totalitarianism, Traditional German Values
19. Give two reasons why the NSDAP had limited support 1923-9. Economic recovery under Stresemann, better international relations, Hindenburg President.
20. What shook the financial world in 1929? Wall Street Crash, Oct 1929
21. Give two reasons why the SA helped the Nazis increase support? Nazis look strong. Disruption of opposition
22. What did Hitler promise the people? Restore law and order, Scrap Versailles.
23. What did Hindenburg and von Papen agree that appointing Hitler as chancellor would help avoid? [1] A military dictatorship under Von Schleicher.

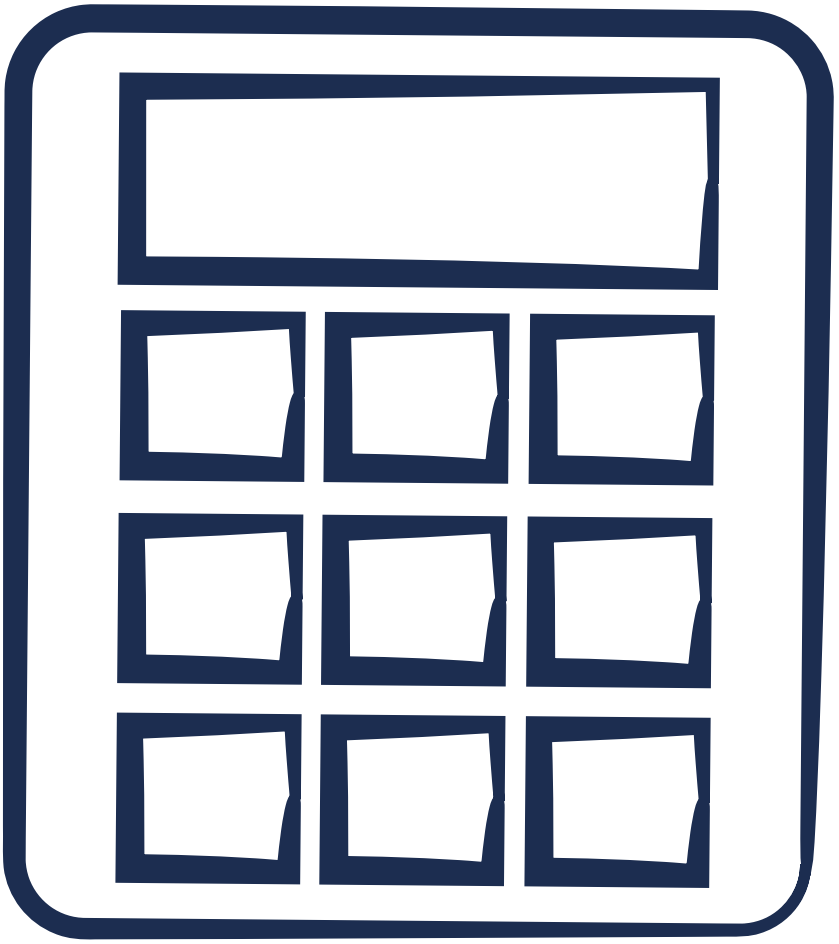
Nazi Control and Dictatorship 1933-9

24. What month and year did Hitler become chancellor? Jan 1933
25. What happened on 27 Feb 1933? Reichstag Fire, which made the communists look bad, by setting up van der Lubbe.
26. How did Hitler change the constitution of Germany in March 1933? The Enabling Act
27. How did Hitler get rid of internal opposition? The Night of the Long knives, 30 June 1934 (400 people killed).
28. What were the 3 key elements of Nazi state control? The SS (Protection squads, up to 240,000 in 1930s). The SD (Uniformed Secret Service). The Gestapo (Plain clothes, arrested 160,000 in 1939 alone!).
29. How did the Nazis control the legal system?
    - Control of judges via the National Socialist League for the Maintenance of the Law.
    - Control of the courts via the People's Court (No right to appeal, more death sentences (534 between 1934-9)).
30. What did he do with the Protestant Church? Created the Reich Church in 1936
31. Who was in charge of Nazi Propaganda? Joseph Geobbels (In charge of Censorship, Propaganda, Arts and Culture).
32. Which 3 key areas did the Nazis influence in order to control the attitudes of the German people? What did the Nazis set up in 1933 to control the arts and culture? Reich Chamber of Culture
33. Name 2 youth opposition groups. Edelweiss Pirates and Swing Youth

Life in Nazi Germany 1933-9

36. What medal did the Nazis create to encourage childbirth? Mother's Cross (Br 4-5, S 6-7, G 8, the Lebensborn project)
37. What was created to encourage marriage? Law for the Encouragement of Marriage 1933 (loans of up to 1000 marks)
38. Name 3 specific areas focused upon by youth groups for boys. Political, Physical, Military, Character
39. What were the 3 youth groups for boys? Pimfe (6-10), Deutsche Jungvolk (10-14) Hitler Jugend (14-18)
40. What was the girls youth organisation called? League of German Maidens
41. What does RAD stand for in English? [1] National Labour Service
42. List 2 ways in which the Nazis legitimately reduced unemployment Rearmament, Armed Forces, Public works
43. Describe 3 ways in which the Nazis concealed the real numbers of unemployed. Women, prisons, RAD, changing stats.
44. What did Hitler set up instead of trade unions? DAF (Labour Front)
45. What was the aim of Nazi 'racial hygiene.' Selecting Aryan parents to make the German race better and purer
46. What did the Law for the Prevention of Hereditary Disease Offspring do? Compulsory sterilisation for mentally ill, deformed, epileptic, deaf or blind
47. What was the T4 programme? Babies with severe mental of physical disabilities to be killed by starvation or lethal drugs. Children up to 17yrs old included, over 5000 killed this way.

Maths



BRIDGNORTH Endowed

Mathematics Department GCSE Facts

Numbers

Square: the number you get when you multiply a number by itself twice.
Cube: the number you get when you multiply a number by itself three times.
Prime: Has two factors itself and 1.
Factor: numbers you multiply together to get another.
Multiple: a number that appears in the times time of another.
Odd: A number *not* in the two times table..

Order of operations

Brackets ()
Indices x^2
Division ÷
Multiply ×
Add +
Subtract -

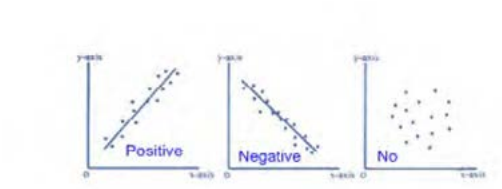
Unit conversion

1kg = 1000g
1km = 1000m
1m = 100cm
1cm = 10mm
1l =1000ml

Averages

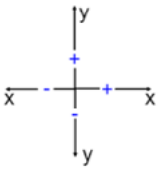
Mean: Don't be mean share it out!
Mode: Most common.
Median: Middle number when in order.
Range: Difference between biggest and smallest

Correlation



Symbols

< Less than
> Greater than
≤ Less than or equal to
≥ Greater than or equal to
≠ Not equal to
≡ Identity
∴ Therefore
θ Angle
∞ Infinity
π Pi



Bearings

From north
Clockwise
3 figures

Metric & Imperial

Measurement	Metric	Imperial
Length	mm/cm/m/km	ft/in/yards/miles
Volume	ml/l	pint/gallon/fluid ounces
Weight	mg/g/kg	ounces/pounds/stones

Probability Scale

Types of angles

Corresponding

Alternate

Vertically opposite

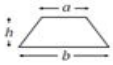
Areas

Rectangle: A=lw

Circle: $A=\pi r^2$

Triangle: A=1/2 bh

Trapezium: A=1/2 (a+b) h



Perimeter

Length around the outside of a shape
Rectangle: P=2w+2l

Circle: C=2πr or C=πd

BRIDGNORTH Endowed

BRIDGNORTH Endowed

Mathematics Department GCSE Facts

Laws of indices

Multiplication: $x^M \times x^N = x^{M+N}$

Division: $y^M \div y^N = y^{M-N}$

Brackets: $(z^M)^N = z^{MN}$

Power of zero: $g^O = 1$

Surds

$\sqrt{a} \times \sqrt{a} = a$

$\sqrt{(m/n)} = \sqrt{m}/\sqrt{n}$

Loci

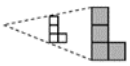
Locus: a path an object takes

Transformations

Reflection

Rotation

Enlargement



Translation

Trigonometry

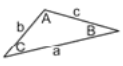
For right angles triangles:

SOH CAH TOA

For non-right angled triangles

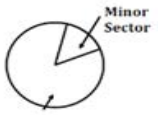
Cosine Rule: $a^2 = b^2 + c^2 - 2bc\cos A$

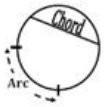
Si- ne Rule: $a/\sin A = b/\sin B = c/\sin C$



Area of triangle: $A = 1/2\ ab\sin C$

Circle words





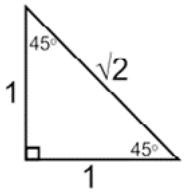
Similar: same shape different size

Congruent: same shape same size

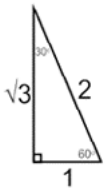
Quadratic Formula

$ax^2 + bx + c = 0$ only if $a \neq 0$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

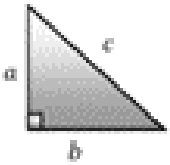


Special Triangles



Pythagoras

$a^2 + b^2 = c^2$



Types of triangles

Equilateral: - all the same

Scalene: none the same

Isosceles: two lengths/angles the same

Types of angles

Acute: between 0 and 90

Obtuse: between 90 and 180

Reflex: greater than 180

Right Angle: 90

Mathematics GCSE Examinations:

Paper 1 — 1 hour 30 minutes - non-calculator

Paper 2 — 1 hour 30 minutes—calculator

Paper 3 — 1 hour 30 minutes—calculator

"Those with A level Mathematics earn on average 10% more than those without"

BRIDGNORTH Endowed

BRIDGNORTH Endowed

Music

M A D T S H I R T

Melody	Articulation	Dynamics	Tempo	Structure	Harmony	Instruments	Rhythm	Texture
The Tune	*Musical Punctuation*	*The Volume*	*The Speed*	*Organisation of Sections*	*Note Combinations*	*Instruments and Ensembles*	*Pattern of Beats and Rests*	*Layers of Music*

Melody	
Key Word	**Definition**
Register	*High or low*
Range	*Distance between highest & lowest note*
Conjunct	*Moving in small steps*
Disjunct	*Moving in big leaps*
Chromatic	*Using ALL the notes of the keyboard*
Ostinato	*A repeating pattern*
Sequence	*A pattern that repeats but moves up or down in pitch each time*
Imitation	*One instrument copying another*
Answering Phrase	*When one instrument plays a short unfinished melody (question) and another answers it*
Improvisation	*Making it up as you go along*

Articulation	
Key Word	**Definition**
Staccato	*"bouncy" notes*
Legato	*"smooth" notes*
Accent	*slightly louder note*
Tenuto	*slightly longer note*
Trill	*Rapidly alternating between two notes*
Acciccatura	*Squeezing a note in quickly just before another one*
Syllabic	*When a singer sings one note per word/syllable*
Mellismatic	*When a singer sings lots of notes on one word/syllable*

Dynamics	
Key Word	**Definition**
Forte	*Loud*
Piano	*Quiet*
Mezzo Forte	*Medium Loud*
Mezzo piano	*Medium Quiet*
Fortissimo	*Very Loud*
Pianissimo	*Very Quiet*
Crescendo	*Gradually getting louder*
Diminuendo	*Gradually getting quieter*
Sforzando	*Suddenly very loud!*

Tempo	
Key Word	**Definition**
Presto	*Very Fast*
Allegro	*Fast*
Andante	*Walking Pace*
Adagio	*Slow*
Lento	*Very Slow*
Accelerando	*Gradually getting faster*
Rallentando	*Gradually getting slower*
Rubato	*Performer choosing tempo*

Harmony	
Key Word	**Definition**
Consonant	*"Pleasant" notes*
Dissonant	*"Clashing" notes*
Major Key	*"Happy" notes*
Minor Key	*"Sad" notes*
Chromatic	***ALL** different notes*
Drone	*One note held*
Pedal	*One note repeated*
Chord	*2 or more notes together*
Cadence	*Collections of chords commonly used together (4 types: perfect, imperfect, plagal, interrupted)*

Instruments	
Key Word	**Definition**
Orchestra	*Largest Classical ensemble*
Soprano	*Highest female voice*
Alto	*Lower female voice*
Tenor	*Higher male voice*
Bass	*Lowest Male voice*
Falsetto	*Vocal technique – singing higher than usual range*
Pizzicato	*Plucking strings*
Arco	*Bowing strings*
Mute	*Brass dampener*
Glissando	*Sliding up or down between notes*

Rhythm	
Key Word	**Definition**
Pulse	*The beat*
Syncopation	*OFF beat*
Tied notes	*2 notes joined together*
Triplets	*3 notes in the space of 2*
Swing	*Unequal pairs of notes*
Simple time	*Main beat is crotchet*
Compound time	*Main beat is dotted crotchet*
Anacrusis	*A "lead in"*

Structure	
Key Word	**Definition**
Binary	*2 sections (A B)*
Ternary	*3 sections (A B A)*
Rondo	*a section that keeps coming back (**A** B **A** C **A** D **A**)*
Sonata	*3 sections (exposition, development, recapitulation)*
Theme & Variations	*A main theme repeats but changes slightly each time*
12 bar blues	*12 bar long chord progression*
Verse	*Pop - tells story*
Chorus	*Pop – main theme/message (repeated)*
Bridge	*Pop – provides break/change*
Intro/Outro	*Pop – beginning & ending (fade)*

Texture	
Key Word	**Definition**
Monophonic	*Single line of music for soloist*
Homophonic	*Usually a main melody and chordal accompaniment*
Polyphonic	*Two or more melodies played together – weave in and out*
Call & Response	*One performer (Leader) Calls – a group responds*
Unison	*More than one instrument performing the same thing at same time*
Soloist (Lead)	*The lead performer – usually plays the main melody*
Acompany	*Music performed alongside a melody as support*
Canon (Round)	*A melody in one part is copied by another shortly after so they overlap*
Walking Bass	*Continually moving bass line – always on the beat and mainly conjunct*

Set Works – *2 pieces definitely on the Exam!*

STRUCTURE

BINARY FORM

A → B

Section A (repeated)	Section B (repeated)
Bars $0^2 - 16^1$ (16 bars)	Bars $16^2 - 40^1$ (24 bars)

TEXTURE

Homophonic

melody and accompaniment

SONORITY

Flute, String orchestra (violins, violas, cellos, double basses) and harpsichord **(basso continuo)**

BADINERIE

Knowledge organiser

7th movement of orchestral suite No. 2 by **J.S BACH**
Composed in 1738-1739

DYNAMICS

Mostly forte, including terraced dynamics

f

TEMPO

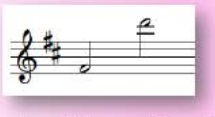
Allegro

RHYTHM & METRE

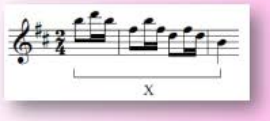
2/4
Anacrusis
Ostinato rhythms
mainly
Quavers / semiquavers

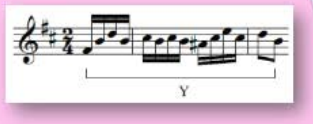
MELODY

Flute range (2 octaves pitch range):



2 main musical ideas. Use of ornaments and melodic devices (motifs, sequences). Triadic, disjunct and conjunct in places





HARMONY & TONALITY

Diatonic with modulation to dominant minor B minor to dominant minor: F# minor

STRUCTURE

VERSE – CHORUS FORM

Intro	Verse1	Chorus1	Link1	Verse2	Chorus2	Link2	Instru	Chorus3	Outro

TEXTURE

Homophonic

melody and accompaniment

SONORITY

Lead male singer, male backing vocals, lead guitar, bass guitar, synthesizers, drum kit and additional percussion

TOTO - AFRICA

Knowledge organiser

Recorded by American rock band Toto in **1981** for their fourth album Toto IV.
Written by David Paich & Jeff Porcaro

DYNAMICS

Mostly mezzo-forte but choruses forte

mf *f*

TEMPO

Moderately fast

RHYTHM & METRE

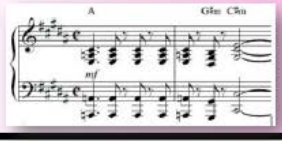
2/2 (split common)
Syncopations
Ostinato rhythms
Mainly quavers
Anacrusis for riff B

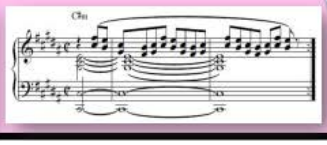
MELODY

Vocal range (less than 2 octaves (printed))

Mainly conjunct
Use of pentatonic scale in places
Vocal improvisation at the end of the song

A Use of riffs B





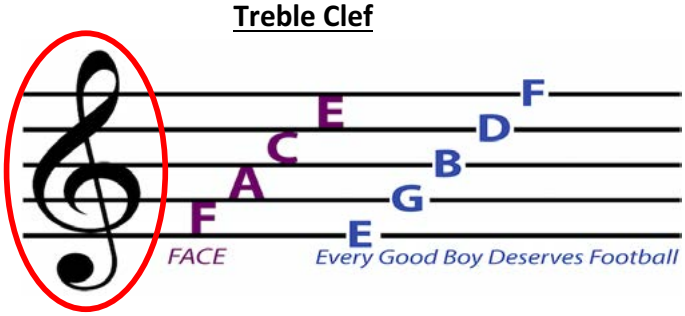
HARMONY & TONALITY

B Major for the majority of the song
A Major for choruses
Diatonic throughout

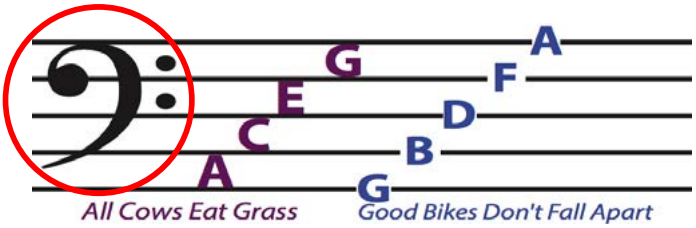
NOTATION

PITCH

Treble Clef

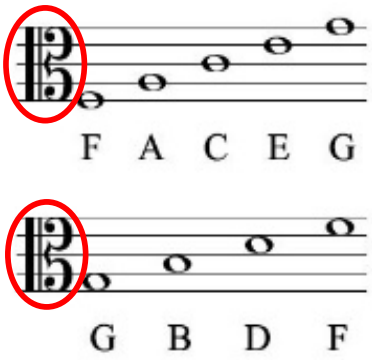


Bass Clef



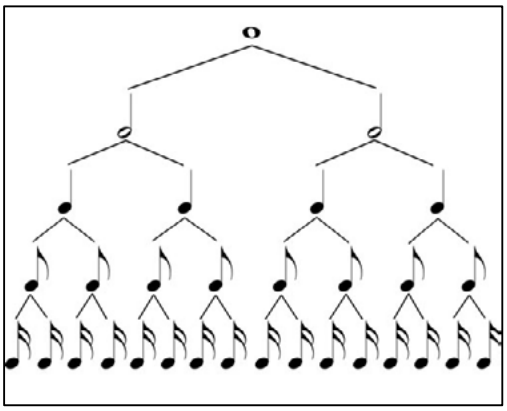
Symbol	Name	Function
♭	flat	lower note semi-tone
♯	sharp	raise note semi-tone
♮	natural	cancel previous accidental

Alto Clef



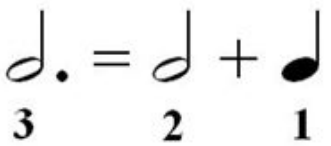
RHYTHM

Notes	Name		Value
𝅝	Semibreve	Whole note	4 beats
𝅗𝅥	Minim	Half note	2 beats
♩	Crotchet	Quarter note	1 beat
♪	Quaver	Eighth note	½ beat
𝅘𝅥𝅯	Semi-quaver	Sixteenth note	¼ beat



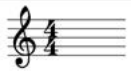
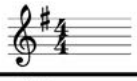
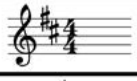
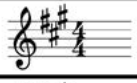
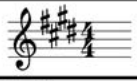
Dotted Notes

Dot Rule = Add half the value of the note to the note.

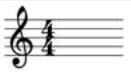
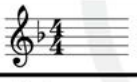
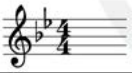
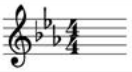
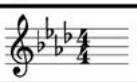


KEY SIGNATURES

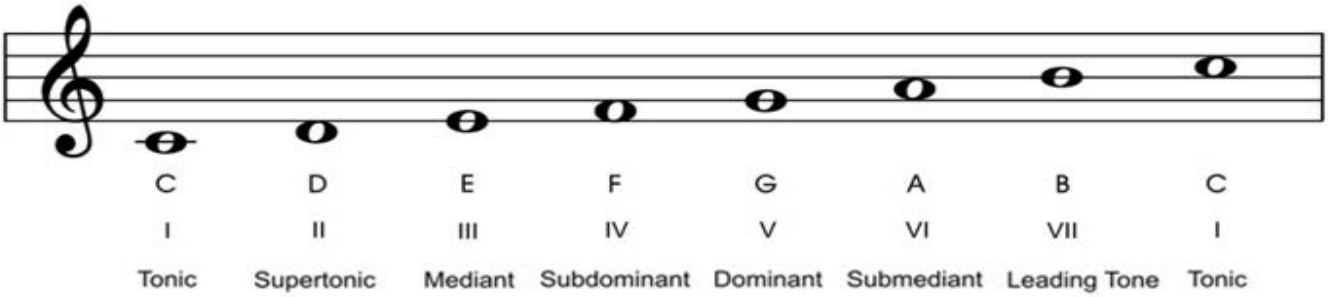
With sharps (♯)

Key Signature	Major Key	Minor Key
	C	a
	G	e
	D	b
	A	f sharp
	E	c sharp

With flats (♭)

Key Signature	Major Key	Minor Key
	C	a
	F	d
	B Flat	g
	E Flat	c
	A Flat	f

DEGREES OF THE SCALE (in C Major…)

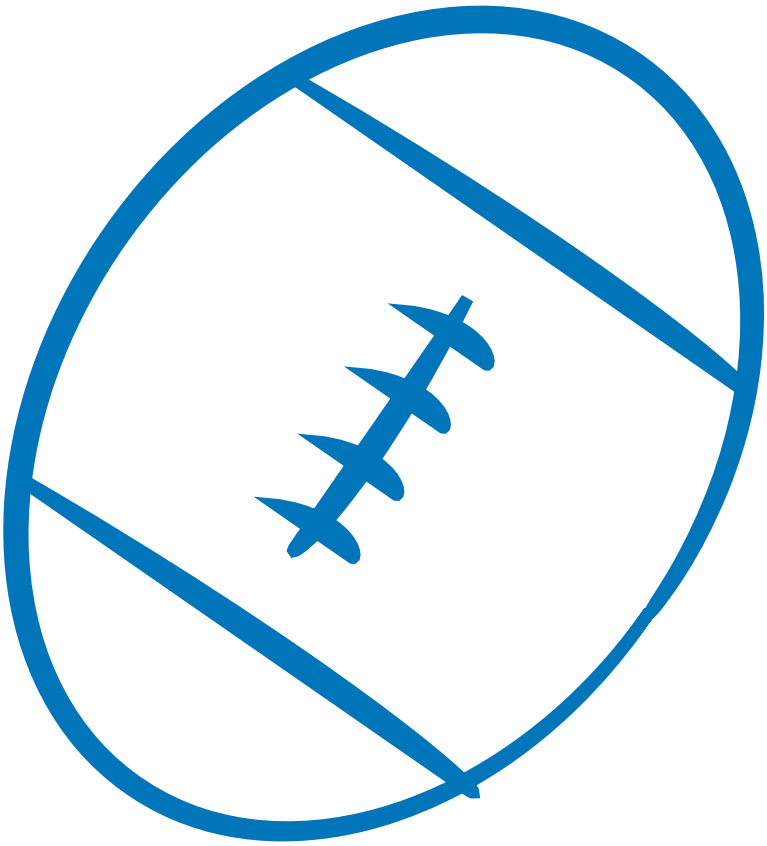


CADENCES

Perfect	**V – I**		**FINISHED**
Plagal	**IV – I**		
Imperfect	**I – V…**		**UNFINISHED**
Interrupted	**V – ?…**		

	Baroque Era	Classical Era	Romantic Era
			
Dates	**1600 – 1750**	**1750 – 1825**	**1825 – 1900**
Composers	➢ **Bach** ➢ **Handel** ➢ **Scarlatti**  *Bach*  *Handel*	➢ **Mozart** ➢ **Haydn** ➢ **Beethoven**  *Mozart*  *Beethoven*	➢ **Schubert & Schumann** ➢ **Chopin & Liszt** ➢ **Brahms**  *Schubert*  *Chopin*
Features	▪ Decorated melodies (trills, acciaccaturas, mordents etc.) ▪ Sequences melodies ▪ Counterpoint ▪ Terraced dynamics ▪ Sacred (religious) lyrics ▪ Early development of musical structures (dance suites & sonatas) ▪ "Mechanical" tone	▪ Well balanced melodies (question & answer) ▪ Melody dominated homophony texture ▪ Gradual dynamic changes ▪ Story-driven operatic lyrics ▪ Extended & better developed structures (symphony & concerto) ▪ "Elegant" tone	▪ Extremely complex and challenging (virtuosic) melodies and solo parts ▪ Lush Harmony & Soundscapes ▪ Extreme dynamics to convey mood or passion ▪ Nationalism in lyrics ▪ Additional new, complex, and lengthy structures (rhapsody, nocturne, song cycle) ▪ "Melancholy" tone
Instruments	▪ Small instrument groups (chamber) ▪ Harpsichords ▪ Violins & early strings ▪ Flutes & recorders	▪ More complex instruments: French horn, clarinet, timpani ▪ Medium size orchestras with traditional 4 sections ▪ More standardised ensemble groups (e.g. string quartet)	▪ Highly professional elite musicians much more common ▪ Extremely virtuosic music written to demonstrate skill ▪ Huge Orchestras full for spectacular concerts

PE



BRIDGNORTH Endowed

Fitness and training

Health – a complete state of physical, social and mental well-being.

Fitness – is the ability to meet the demands of your environment

Health related fitness components	DEFINTION	TEST	METHOD OF TRAINING	SPORT EXAMPLE
CV ENDURANCE	The ability of the heart and lungs to supply oxygen to the body for long periods	The Multi-stage Fitness Test (Bleep test)	Continuous training Fartlek training Long Interval training – 2x5X800m	A marathon runner needs a constant supply of oxygen for 26.4 miles
LOCAL MUSCULAR ENDURANCE	The ability of a muscle/s to work for long periods	The 1 min sit-up test The 1 min press-up test	Circuit training Weight training – low weight/high reps	A rower needs to move their arms and legs repeatedly throughout a race.
STRENGTH	The amount of force a muscle can exert against a resistance	The hand grip test The 1 rep max test	Weight training – High weight/low reps Circuit training	A weight lifter holding a weight above their head.
FLEXIBILITY	The range of motion (ROM) at a joint	The sit and reach test	Dynamic stretching Passive/PNF stretching	A gymnast performing a split move
BODY COMPOSITION	The percentage of body weight which is fat, muscle and bone	The skin calliper test	Weight training for muscles mass Nutrition to guide ideal weight	A swimmer needs a lean body to be streamlined
Skill related fitness	**DEFINITON**	**TEST**	**METHOD OF TRAINING**	**SPORTING EXAMPLE**
POWER	The ability to perform strength performances quickly	The vertical jump The standing long jump	Plyometrics – explosive jumping over a box	A shot putter using al out effort
SPEED	The ability to put body parts into motion quickly	The 30m sprint test	Short interval training 3x5x20m SAQ -	A player sprinting to win the ball
AGILITY	The ability to change the position of the body quickly and control the movement	The Illinois agility test	SAQ – dodging poles/stepping through ladders/mini hurdles	A player dodging a defender – side-step in rugby
COORDINATION	The ability to use two or more body parts together	The alternate ball throw test	Activity specific drills- Nets practice for a bowler/batter	A badminton player using their legs to move and their arms to hit the shuttle
BALANCE	The ability to maintain the body's centre of mass above the base of support	The standing stork test	Core/body strength exercises Balance board	A gymnast performing a routine on the beam
REACTION TIME	The time taken to respond to a stimulus	The ruler drop test	Activity specific drills – a goalkeeper routine drill	A sprinter reacting to the gun

PRINCIPLES OF TRAINING	
SPECIFICTY	The methods must be specific to the sport
PROGRESSION	Gradual increase in difficulty
OVERLOAD	Make the body work harder (FID)
REVERSIBILITY	Avoid a long break as training will be lost
TEDIUM	Avoid boredom through variety (variance)

FID	FREQUENCY (HOW OFTEN) INTENSITY (HOW HARD) DURATION (HOW LONG)

TRAINING ZONES	
MHR	Maximum heart rate = 220-age
Aerobic training zone	60-80% of MHR
Anaerobic training zone	80-90% of MHR

A 16 year old distance runner will need to train between 60-80% of their MHR during training. This would be between 122-163 bpm.

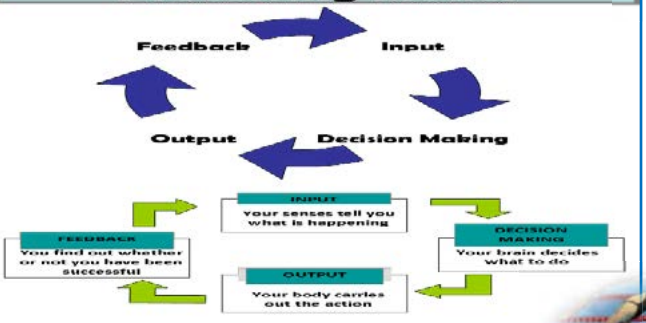
Stages of learning

COGNITIVE	ASSOCIATIVE	AUTONOMOUS
BEGINNER	INTERMEDIATE	ADVANCED
• inconsistent • Many mistakes • Lots of support • Visual guidance important • Repitition (fixed practice) • Positive feedback • Whole-part-whole practice	• Becoming more consistent • Understands the skill • Fewer mistakes • Concentrate for longer • Developing internal feedback • Part practice	• Consistent • Effective • Understands requirement of the skill • Minimum effort needed • Adapts performance • Good decision making • Whole practice

Characteristics of skill

Effective	Efficient	Responsive
Accurate Consistent Control Confidence	Technique Fluent Aesthetic	Decisions Adaptive

The Information Processing Model



Types of guidance

Visual	Gives a clear picture of what to do – demonstrations/video
Verbal	Gives specific points to focus on – instructions on technique/tactics
Manual	Helps to develop intrinsic feedback – being physically guided or supported
Mechanical	Gives confidence and safety – could be a float in swimming or a harness in trampolining/climbing

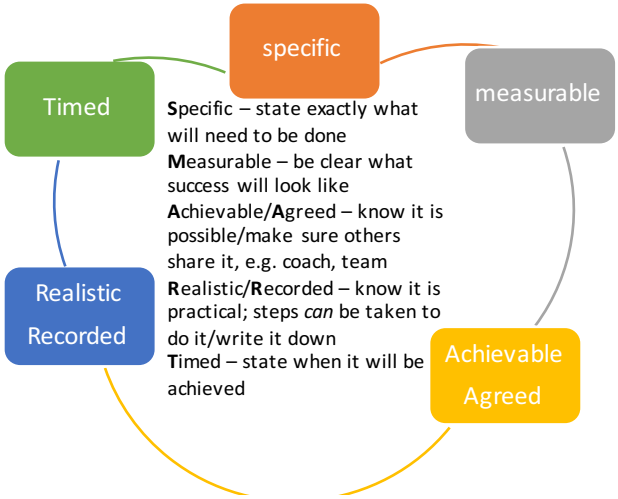
Types of practice

Whole	Part	Fixed	Varied
complete skills	breaking skill into parts	method used for closed skills	method used for open skills
skill cannot be broken down	complex skills	action is repeated, self paced	changing situations, can be self or externally paced
performer feels for the whole skill, externally paced	motivating, allows focus	conditions remain the same and basic	apply skills in different contexts

Types of feedback

INTRINSIC	EXTRINSIC	
	Knowledge of results	**Knowledge of performance**
• Felt by the performer • Landing on a mat in gymnastics • Holding a racket properly • Holding ball properly • All use intrinsic feedback	Focuses on the score, time, position or outcome achieved • Goal scored • Time run • On the podium • PB	Focuses on how well the athlete performed • Technique • Positioning • Tactics • Process orientated

Goal setting: gives direction, focus, motivates, monitors progress and shows success.

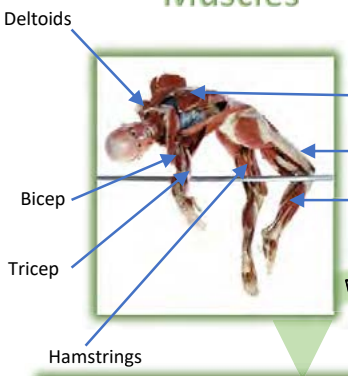


Technology in sport

Advantages	*Disadvantages*
For athletes	
Better performance – state of the art equipment; better medical care; improved kit is more comfortable, more efficient and safer;	Invades privacy; availability and cost – makes sport and success exclusive to wealthy people and countries;
For officials	
decisions and scoring are more reliable and accurate; there is increased confidence and trust in officials	Slows the game; not available at all levels of competition; no longer trust people's decisions; undermines respect for officials' knowledge and expertise;
For spectators	
More engaged in the sport; more informed about rules, players etc.; have a direct link to athletes	Detracts from actual play; reduces the atmosphere at live events;
For sport in general	
Increases participation; leads to more coverage and revenue; adds glamour; improves safety	increases costs to sports and participants; sponsors more interested in technology than sport or athletes

Physical Education Knowledge

Muscles



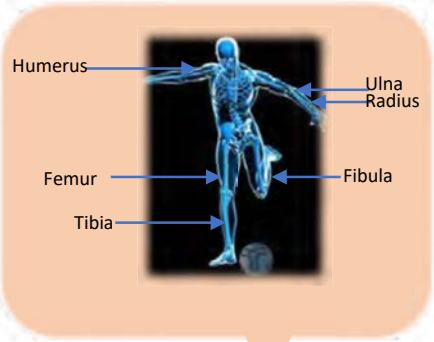
Muscles Can work in Pairs

Agonist ⟷ Antagonist

Muscle Types
Cardiac-Voluntary-Involuntary

Muscle Fibres
Type I Type II
Marathon Games

Bones



Classification of Joints

Pivot – Neck – Flexion/Extension – Heading
Hinge – Knee/Elbow/Ankle – Flexion/Extension/Plantar Flexion – Kicking/Landing
Ball and Socket – Shoulder/Hip – Abduction/Adduction/Rotation/Circumduction – Bowling/Side kick

Energy Systems

Energy Systems	Creatine Phosphate Anaerobic	Lactic Acid Anaerobic	Aerobic
Alternative Names	ATP-PC	Anaerobic glycolysis	Aerobic Glycolysis
Fuels Used	Creatine Phosphate stored in muscles	Carbohydrates stored as glycogen in muscles	Carbohydrates-preferred fuel during exercise
Duration	Short 10s	Short/medium 60-90s	2 minutes +
Intensity	High Intensity exercise	High Intensity activity	Medium
Examples	Athletics Field events Tennis serve Vault Golf shot	200m-400m 50m swim Extended tennis rally	10,000m race Marathon 2000m rowing event
Limiting factors	Depletion of phosphocreatine stores	Production of lactic acid	Depletion of glycogen stores
Waste Products	Nil	Lactic Acid	Carbon Dioxide Water
Benefits link to component of fitness	Muscular Strength Power Speed	Power LME Speed	CV endurance Recovery in anaerobic types strength, power

Respiratory System

Respiration at Rest/Exercise

Tidal Volume = normal air inspired/expired Increases during exercise

Vital Capacity = volume of air that can be forcibly expired following large inspiration

Gaseous exchange and diffusion

Oxygen breathed in moves from an **area of high concentration** in the lungs to an **area of low concentration** in the capillaries.

Alveoli assist gaseous exchange when supporting aerobic exercise

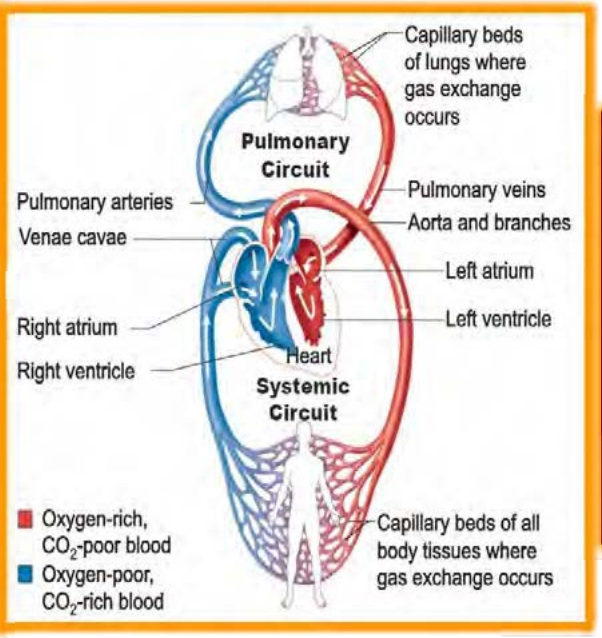
Functions of the pulmonary circulatory system

Transport de-oxygenated blood from the heart to the lungs

Re-oxygenate the blood through gaseous exchange in the lungs

Remove carbon dioxide from the blood at the lungs

Return oxygenated blood to the heart



Cardiovascular System

Functions of the systemic circulatory system

Transport oxygenated blood from the left side of the heart to the muscles

Supply nutrients to the working muscles

Transport de-oxygenated blood from the muscles back to the heart

Remove waste products carbon dioxide and lactic acid from the muscles

Regulation of body temperature. When exercising temperature increases. This is controlled by increasing blood flow to the skin for heat to be released.

Cardiac and Respiratory Values

Cardiac and Respiratory Values	Heart rate bpm	Stroke Volume ml	Cardiac output l/min	Breathing frequency b/min	Tidal Volume ml	Minute ventilation l/min
At rest	70	80	5.6	12	500	6
Aerobic exercise	120	150	16.5	25	1000	25
Anaerobic exercise	180-	160	28.8	40	2500	100

Physical Education Knowledge

Physical
Comfortable posture and movement
Endurance, muscular strength and flexibility
Absence of disease

Social
Interaction with other people in teams/groups
A feeling of belonging
Developing relationships with others

Mental
Feeling of happiness
Good level of self-confidence
Motivation to complete tasks
Lack of stress

Health
As state of physical, mental and social well-being, with the absence of disease

Lever systems

Neck Flexion Extension		
	Ankle Plantar Flexion Dorsiflexion	***Elbow*** Flexion Extension

Short-term Effects of Exercise

Occur immediately when we begin exercise. The body has to respond to the change in activity level in order to meet the demands of the exercise.

Muscular-skeletal responses

This system requires impulses from the nervous system. They are stronger and more frequent in the early stages of exercise. Due to the frequent contractions the body's temperature increases due to friction. The increased heat and blood flow makes the muscle more elastic and increases the range of movement at the joint.

Cardio-vascular and respiratory responses

These systems work harder as the activity level increases. Supplying more oxygen and nutrients and removing waste products. Just before exercise starts we have an anticipatory rise caused by adrenaline. An increase in heart rate causes an increase in Cardiac Output. As the breathing frequency increases so does minute ventilation for more oxygen uptake and removal of carbon dioxide. Blood pressure increases as the blood moves quicker to the working muscles and back to the heart. Blood vessels will maintain the blood pressure and regulate body temperature through vasodilation and vasoconstriction,

Energy system responses

The intensity and duration will determine which energy system is predominately used. But all three contribute to the early stages of exercise.

Benefits of Health

Physical
Reduced body fat
Strengthened heart, lungs and muscles
Ability to achieve physical tasks with ease

Social
Ability to deal with emotions
Experience of coping with success and failure
Developing communication skills

Mental
Improved self-confidence
Good levels of motivation
Relief of Stress

Long term effects of exercise

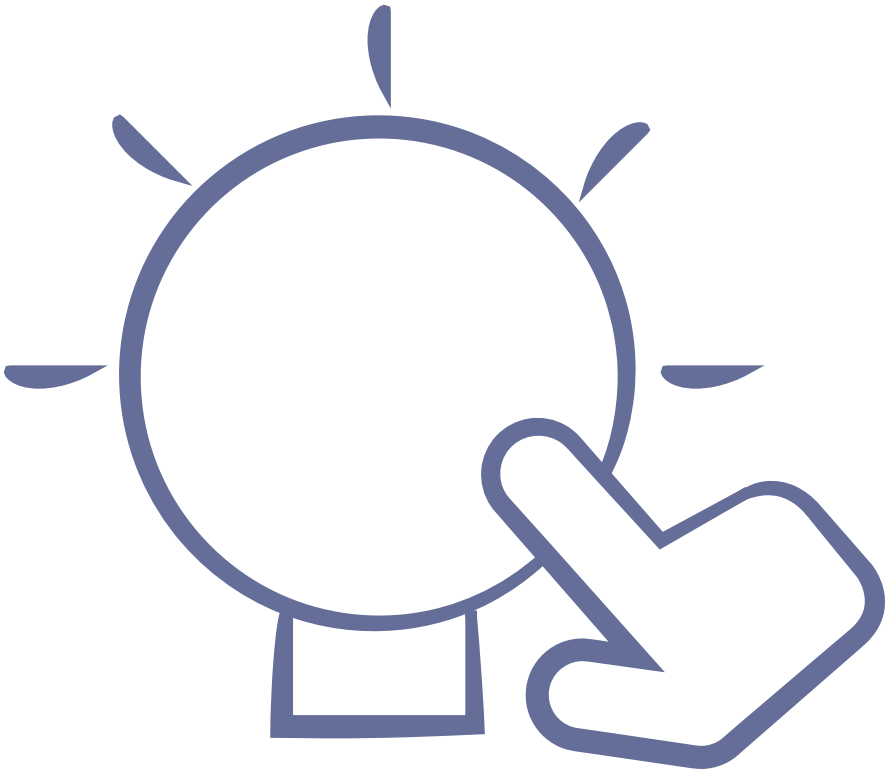
Body System	Adaption	Type of Training (intensity/duration)
Muscular	Hypertrophy increase in muscle size	Weight: high intensity, short duration, low reps, heavy weights
Skeletal	Bone density increases and bones become stronger	High Intensity; impact
Cardio-vascular	Reduced resting heart rate and blood pressure. As the heart and vessels become more efficient they don't have to work as hard to transport the same amount of oxygenated blood.	Continuous (endurance) in the aerobic training zone.
Cardio-respiratory	Increase in minute ventilation and decrease in breathing frequency, leads to increased ability to take in more oxygen and remove more carbon dioxide.	75-80% max heart rate, working at steady state for prolonged periods
Energy systems	More blood vessels transport and diffuse oxygen, carbon dioxide and lactic acid (increased capillarisation of muscles and lungs); therefore fatigue is offset.	Anaerobic threshold for prolonged periods
Psychological	Creation of a 'feel good factor' improved self-esteem and self image; sense of achievement; potential social benefits	Any exercise

Energy Expenditure

Sleep | **Rest** | **Inactivity** | **Light activity** | **Moderate activity** | **Strenuous activity**

The more intense and prolonged the activity the more energy used and potential weight loss. Link duration and intensity =winning formula

Product Design



BRIDGNORTH Endowed

PROPERTIES OF MATERIALS

Key Terms - Strength: Elasticity: Hardness: Toughness: Brittleness: Durability: Stability:

TIMBER

Hard Wood- Deciduous: grows slowly, over many decades (70 – 80 years). It is close grained, strong and expensive. Used in high quality furniture for its aesthetic qualities or buildings due to high strength. Eg. Ash, Oak, Mahogany, Teak, Birch, Iroko

Soft Wood – Coniferous: grows quickly (20 years). It is widely available and used in many applications including building (roof trusses, timber frames), cheaper furniture and paper making. Eg Pine, Spruce, Douglas Fir, Yew

Process for drying timber

Air and Kiln drying to reduce moisture content down to 12-18%, this shrinks but hardens the timber to make it suitable for making furniture and buildings

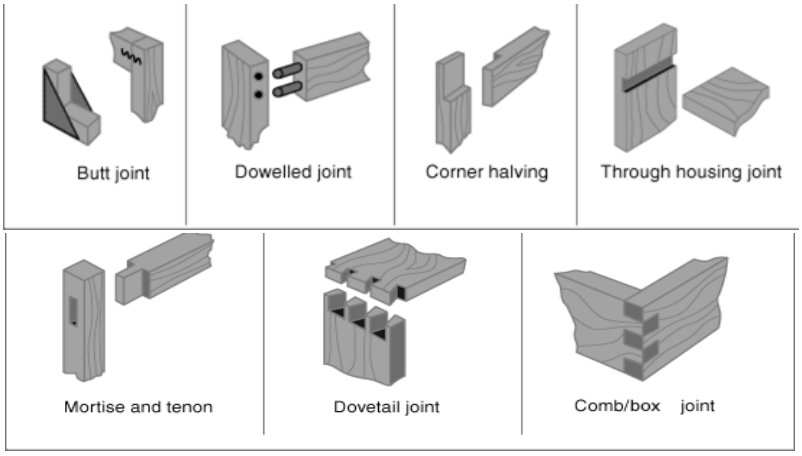
Stock forms of Timber

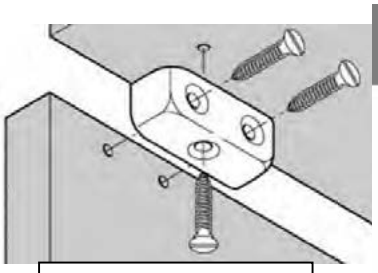
Rough sawn, PSE (planed square edge). PAR (planed all round) Dowel Mouldings

JOINING WOOD – TRADITIONAL JOINTS and KNOCK DOWN FITTINGS

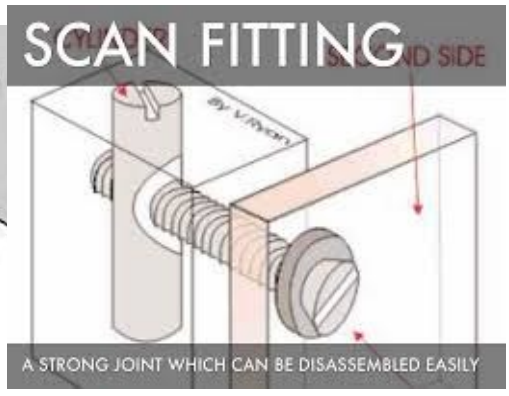
KD fittings are used instead of traditional joints. Knock-down fittings are those that can be put together easily, normally using only a screw driver, a drill, a mallet/hammer and other basic tools. They are temporary joints although many are used to permanently join together items such as cabinets and other pieces of furniture that are purchased in a flat pack.

CNC is used to machine the timber and assembly is usually by the purchaser. Low labour costs due to semiskilled workers unlike traditional cabinet making (highly skilled). EG Modesty Block, Scan fitting (barrel and bolt), Cam fittings.





Modesty Block KD.



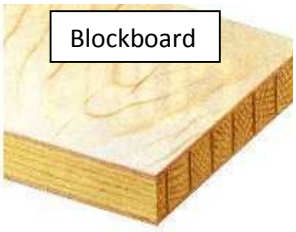
WOOD FINISHES: A finish is the surface coat applied to a material to protect and enhance its aesthetic (how it looks) properties. You need to be very specific about finishes in the exam.

Staining: involves applying a water-based pigment (colour) to improve the look of the wood.

Polyurethane Varnish: a tough, clear coating that seals the wood, but allows the grain to be seen. Used for outdoor furniture.

Oil Based Paint: provides a waterproof seal for exterior woodwork – external doors, window frames etc

Acrylic lacquer: Modern finish, wood can be dipped or sprayed. Very clear, hard wearing finish.



MANUFACTURED BOARDS: **Man-made** boards are the most economical method of using wood products. They allow much bigger sheets to be produced than could be cut from a tree, are stable and free of defects (knots, splits etc). They can be covered in a **veneer** (thin sheet) of more expensive material to improve their aesthetic qualities. Chipboard is often covered in a layer of thermosetting plastic to give the impression of a higher quality product. Kitchen worktops are a good example of this.

Birch Plywood, Chipboard, Medium Density Fibreboard (MDF), Block board, Hardboard

MANUFACTURING IN WOOD and MANUFACTURED BOARD

Steaming and **Laminating** for creating curves. **Routering** for cutting slots,rebates and finishing edges. **Lathe Turning** for making timber round and creating bowl shapes. Machining with a **circular saw** and **thicknesser planer** to cut timber to size.


Steam Bent Chair

METALS

Source: Mined from open or underground mines. Iron Ore to create steel. Bauxite to create Aluminium

Ferrous metals contain Iron and corrode when exposed to water and oxygen. Steel is ferrous.

Non-ferrous metals do not contain Iron eg Copper and do not corrode but oxidise.

Aluminium: High strength to weight ratio**,** lightweight, easy to machine, can be anodised a colour – Planes, Cycles, car wheels.

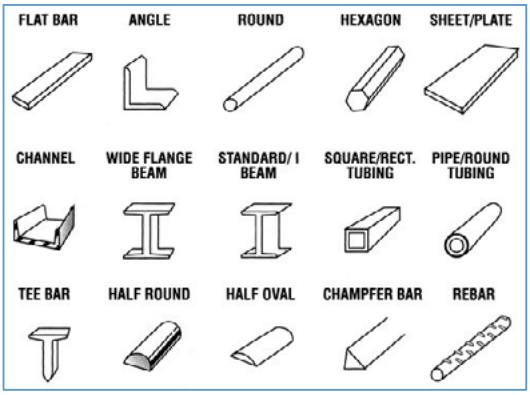
Mild Steel: strong, Malleable, can be welded, corrodes unless protected – Car bodies, Ships, Buildings, Bridges, Furniture.

Copper: malleable, excellent electrical conductor, ductile (drawn into wire) – Pots pans, Water tanks, tubing

Pewter: Low melting point. Can be cast into detailed shapes – Jewellery, tankards.

High Carbon Steel: Brittle but extremely hard steel – Drill bits, Milling and lathe tools.

STOCK FORMS OF METALS



JOINING METALS

Welding pieces of metal are melted along the joints, fusing together as they cool. Electric arc (MiG) or Tungsten Inert Gas (TIG for alloys)) and gas (oxy-acetylene) are the main types.

Bolts nuts, bolts and washers are used where a joint needs to be taken apart.

Pop rivets enable you to complete the joint while only having access to one side of the work. They are usually used for joining thin sheets together

METAL PROCESSES

Casting, Die Casting: where metals are heated until liquid and poured into a Die. Eg Intricate/complex shapes such as cycle brakes, car wheels. **Extrusion:** liquid metal if forced through a Die eg Aluminium window frames. **Forging:** Hot metal (not liquid) is forced into a shape using force such as a hammer (horse shoe) or a drop hammer (car crankshaft)

Press Forming – using hundreds or thousands of tons of hydraulic pressure to force sheet metal into a shape eg car body

Deep Drawing – using a punch and die to shape sheet metal eg Coke Can. **Spinning:** sheet metal is rotated on a lathe and a tool is used to press the metal against a former eg Light shades.

Press forming – tooling and formed sheet metal (car inner wing)

FINISHING METALS.

Galvanizing - process of plating mild steel with zinc to prevent rusting. Eg. Steel fences, electricity pylons

Plastic dip coating involves dipping a heated metal into thermoplastic powder, which melts to provide an attractive coating. Grips for hand tools.

Cellulose and Acrylic based paints provides a waterproof seal for ferrous metals and also an attractive finish. Car bodywork.

Anodizing involves staining the oxide layer of aluminum with a pigment to introduce colour and reduce oxidisation. Mountain bike parts.

PLASTICS (POLYMERS)

Thermoplastic These are altered by the application of heat. They can be heated and reset many times, making them suitable for recycling. Nearly all plastic products are made from thermoplastic materials.

Polystyrene - Vacuum formed. Yoghurt pots etc
Nylon - Injection moulded. Washers, nuts, bolts
Polypropylene - Injection moulded. Bottle tops,
Acrylic - Hand/CAM cut. Sales display. CD rack
ABS - Injection moulded. Car bumpers
PVC - Extruded. Drain pipes, Packaging
PET - Blow moulded. Coke bottles, Water bottles
HDPE - Injection moulded. Buckets, wheelbarrow
LDPE - Blow moulded. Shampoo + hair gel packs, washing up bottles (fairy)

Thermosetting plastics: cannot be altered by heat once they are made, eg once an egg is boiled further heat will not soften it. Used where melting plastic would be dangerous. E.g. electrical plug sockets. Impossible to recycle.

Polyester Resin: - Used for casting (pouring into a mould) Mixed with glass fibres to make fibreglass eg canoe/speed boat

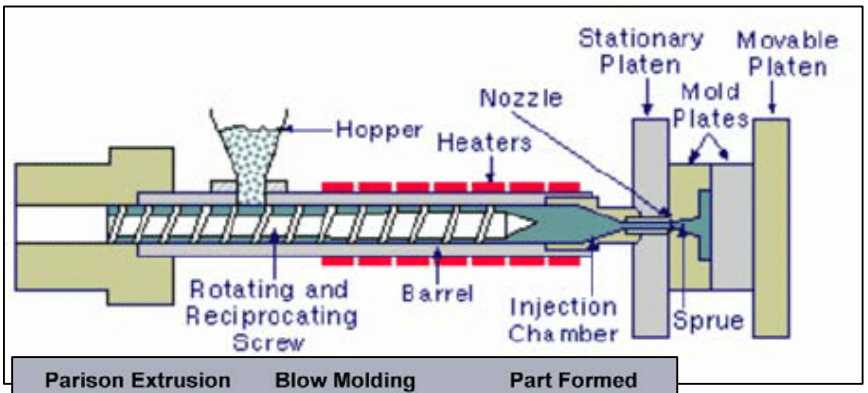
Epoxy Resin: - Adhesive (Araldite) for bonding wood to metal. Plastic to metal etc.

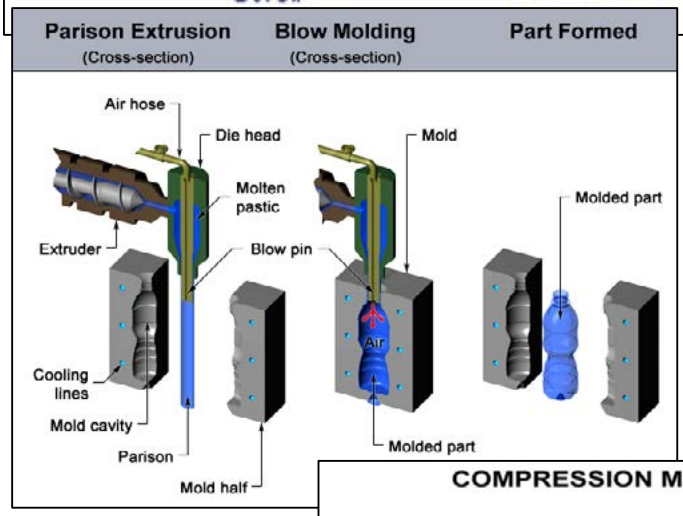
Melamine: - Plastic coating for chipboard kitchen worktops

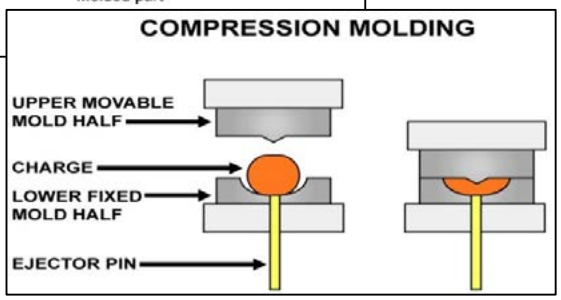
Urea Formaldehyde: - Electrical components. Plugs, fuse boxes, light switches etc. Compression moulded

PLASTIC PROCESSES

Injection moulding – hot plastic chips are forced by pressure into a mould, for complex shapes eg TV remote, some mobile phones.
Extrusion – Hot plastic forced through a die eg window frames.
Injection blow moulding- hot plastic extruded into a Parison (tube of hot plastic) and blown outwards into the shape of a mould eg water bottles, Fairy washing up liquid.
Rotational – Plastic Powder is heated inside a mould, for large hollow objects eg football, water tank.
Calendaring – is a speciality process for high-volume, high quality plastic film and sheet, mainly used for PVC.
Compression Moulding – A "slug" of plastic is heated in a mould and hydraulic pressure closes the mould to squash the thermosetting plastic into shape, like making waffles!. Eg light switch, plug sockets.





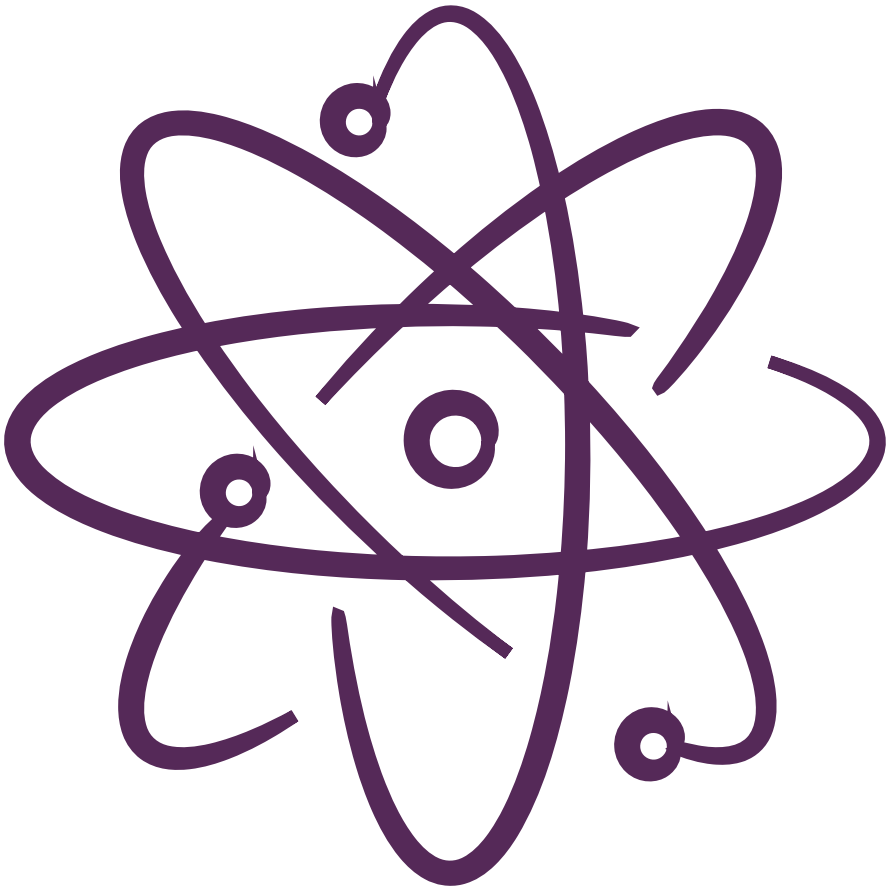


SMART MATERIALS

"Smart" materials respond to environmental stimuli. Depending on changes in some external conditions, "smart" materials change either their properties - mechanical, electrical, appearance, their structure or composition, or their functions.
Photochromic materials change reversibly colour with changes in light intensity. Eg sunglasses that are clear when dark
Thermochromic materials change reversibly colour with changes in temperature.
Phosphorescent or afterglow materials produce light after they have been "charged" with light. Eg watch face glows in the dark.
Hydrochromic inks are those that change colour when they make contact with water. Eg plastic moisture tester is pushed into the soil alongside the plant to show when the soil is dry.
Shape-Memory Alloys are metals that, after being strained, at a certain temperature revert back to their original shape. Eg Stent used in arteries that expand when heated by the blood. Mobile phone antennas, orthodontic braces and frames for glasses. Made from Nickel titanium alloy or NiTi for short!.
PolyMorph: is a biodegradable polyester with a very low melting point of 60C. Heated with just hot water and then moulded by hand or pressed into shape using a die. Once it cools it hardens into a hard nylon-like plastic. Used to rapid prototype products

Remember this is not the whole of the course!

Science



BRIDGNORTH Endowed

Command words: Science

Balance: Students need to balance a chemical equation.

Calculate: Students should use numbers given in the question to work out the answer.

Choose: Select from a range of alternatives.

Compare: This requires the student to describe the similarities and/or differences between things, not just write about one.

Define: Specify the meaning of something.

Describe: Students may be asked to recall some facts, events or process in an accurate way.

Design: Set out how something will be done.

Determine: Use given data or information to obtain and answer.

Draw: To produce, or add to, a diagram.

Estimate: Assign an approximate value.

Evaluate: Students should use the information supplied, as well as their knowledge and understanding, to consider evidence for and against when making a judgement.

Explain: Students should make something clear, or state the reasons for something happening.

Give: Only a short answer is required, not an explanation or a description.

Identify: Name or otherwise characterise.

Justify: Use evidence from the information supplied to support an answer.

Label: Provide appropriate names on a diagram.

Measure: Find an item of data for a given quantity.

Name: Only a short answer is required, not an explanation or a description. Often it can be answered with a single word, phrase or sentence.

Plan: Write a method.

Plot: Mark on a graph using data given.

Predict: Give a plausible outcome.

Show: Provide structured evidence to reach a conclusion.

Sketch: Draw approximately.

Suggest: This term is used in questions where students need to apply their knowledge and understanding to a new situation.

Use: The answer must be based on the information given in the question. Unless the information given in the question is used, no marks can be given. In some cases students might be asked to use their own knowledge and understanding.

Write: Only a short answer is required, not an explanation or a description.

Biology

To calculate the size of objects under the microscope you will need the following formula:

$$\text{Size of real object} = \frac{\text{Size of image}}{\text{Magnification}}$$

To calculate the magnification you need to re-arrange the formula:

$$\text{Magnification} = \frac{\text{Size of image}}{\text{Size of real object}}$$

To calculate the change in something as a percentage change, you need the following formula:

$$\text{Percentage change} = \frac{\text{change in value}}{\text{original value}} \times 100$$

Cell biology keywords:

- Diffusion: The movement of particles in a gas or solution from an area of high concentration to low concentration down a concentration gradient.
- Osmosis: The diffusion of water through a partially permeable membrane from a dilute solution (high concentration of water) to a concentrated solution (low concentration of water) down a concentration gradient.
- Isotonic: Where the solution has the same concentration both inside and outside of the cell.
- Hypertonic: Where the concentration of the solution outside of the cell is higher than the internal concentration.
- Hypotonic: Where the concentration of the solution outside of the cell is lower than the internal concentration.
- Active transport: The movement of substances from a more dilute solution to a more concentrated solution against a concentration gradient. This requires energy released from food in respiration.

Using Units

- 1 Kilometre (Km) = 1000 metres (m)
- 1m = 100 centimetres
- 1cm = 10 millimetres
- 1mm = 1000 micrometres (µm)
- 1µm = 1000 nanometres (nm) –
- A nanometre is 0.000 000 001 metres (or 1×10^{-9}m standard form)

Infection and response (Diseases you need to know)

- Measles (Bacteria) Spread by droplet infection. Causes a fever and rash. Fatal
- HIV/AIDS (Bacteria). Spread by sexual contact or bodily fluids. Initially flu like illness. Can be controlled by antiretroviral drugs. If unsuccessful then AIDS will occur when the body's immune system will become damaged.
- Tobacco mosaic virus (Bacteria). Spread by contact and vectors. Damages leaves in a plant preventing successful photosynthesis.
- Salmonella (Virus) Food poisoning. Spread by undercooked food.
- Gonorrhoea (Virus) Sexually transmitted disease.
- Rose black spot (Fungus) Spread by wind and water. Damages leaves so they drop off.
- Malaria (Protist) Spread by the Mosquito which is the Vector. Damages blood and liver cells and cause fevers and shaking. Can be fatal.

Biology

Bioenergetics key equations:

Aerobic respiration:

- glucose + oxygen → carbon dioxide + water (energy)
- $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_20$

Anaerobic respiration (animals):

- glucose → lactic acid (energy)

Anaerobic respiration (yeast):

- glucose → carbon dioxide + ethanol (energy)

Photosynthesis:

- carbon dioxide + water $\xrightarrow{\text{light}}$ glucose + oxygen
- 6CO2 + 6H2O → C6H12O6 + 6O2

Food tests:

- Benedict's: Tests for the presence of sugars. Turns from blue to brick red on heating.
- Biuret: Tests for the presence of protein. Turns lilac if protein is present.
- Ethanol: Tests for the presence of lipids. Gives a cloudy white layer if a lipid is present.
- Iodine: Tests for starch. Turns from yellow to blue/black if starch is present.

The Nervous system

- Receptors: Cells that detect changes in the internal or external environment.
- Stimuli: Changes to the external or internal environment.
- Coordinators: areas that receive and process the information from receptors.
- Effectors: Muscles or glands that bring about responses to a stimulus.
- Neurone: A special cell which carries an electrical impulse. A nerve is made of bundles of many neurones.
- Impulse: Electrical signal which travels along a neurone.
- Synapse: A gap between neurones where chemicals pass the impulse on to the next one.

Stimulus → receptor → coordinator (CNS) → effector

Hormones in hormonal control:

- Insulin: causes muscle and liver cells to store glucose as glycogen.
- Glucagon: causes glycogen to be broken down and released as glucose
- Oestrogen: causes lining of uterus to develop, inhibits the release of FSH and stimulates LH
- Luteinising hormone: triggers ovulation
- Follicle stimulating hormone: causes egg to mature, stimulates the release of oestrogen
- Progesterone: maintains the uterus lining, inhibits the release of LH and FSH
- ADH: Anti diuretic hormone – tells the kidneys how much water to reabsorb from the blood

Biology

Cell division and Genetic terms

- Mitosis: The division of body cells to produce two identical cells each with 23 pairs of chromosomes. Important for the growth and repair of organisms.
- Meiosis: Division and formation of sex cells in which the number of chromosomes are reduced by half in preparation for fertilisation. This occurs in the gametes.
- Chromosome: Found in the nucleus of a cell which contain the genes for instructions to make new cells.
- Gamete: Sex cells (sperm and egg)
- Zygote: Fertilisation of an egg and sperm.
- Allele: Different forms of the same gene (for instance eye colour: BB, Bb, bb)
- Haploid: Half the usual number of chromosomes (sperm and egg)
- Diploid: Complete set of chromosomes. Fertilised egg (Zygote/fetus)
- Genotype: The allele present or genetic makeup of an individual characteristic (BB, Bb, bb)
- Phenotype: The physical appearance of an individual characteristic (eye colour)
- Homozygote: An individual with two identical alleles for a characteristics (BB, bb)
- Heterozygote: An individual with different alleles for a characteristic (Bb)

Data Interpretation

- Independent variable: The one which is changed in the investigation
- Dependent variable: The one which is measured for each change in the independent variable
- Bar charts: If the data is not continuous (Numbers of people with blue eyes)
- Line Graph: If the data is continuous (Cooling of a liquid, change in heart rate)

Chemistry Equations

We represent reactions using equations. These can be word equations (written using the names of the reactants and products) or symbol equations (written using the chemical formula of the reactants and products using their symbols on the periodic table.)

Symbol equations should be balanced. This means there is an identical number of each type of atom on each side of the equation. (To balance equations we can only change the number of molecules, not the formula of the substances.)

Symbol equations usually include state symbols. These tell us the physical state of each reactant and product: solid $_{(s)}$, liquid $_{(l)}$, gas $_{(g)}$ and aqueous $_{(aq)}$ which means dissolved in water.

C1 Atomic structure and periodic table

Reaction of Group 1 (Alkali metals) and water:
metal + water → metal hydroxide + hydrogen
Lithium + water → Lithium hydroxide + hydrogen
$2Li_{(s)} + 2H_2O_{(l)} \rightarrow 2LiOH_{(aq)} + H_{2(g)}$

Reaction of (Group 1) metal and oxygen
metal + oxygen → metal oxide
Sodium + oxygen → sodium oxide
$4Na_{(s)} + O_{2(g)} \rightarrow 2Na_2O_{(s)}$

Reaction of Group 1 (alkali metals) and Group 7 (halogens)
sodium + chlorine → sodium chloride
$2Na_{(s)} + Cl_{2(g)} \rightarrow 2NaCl_{(s)}$

Reaction of Group 7 (halogens) and iron
Iron + halogen → Iron halide
Iron + bromine → iron bromide
$2Fe_{(s)} + 3Br_{2(g)} \rightarrow 2FeBr_{3(s)}$

Displacement reactions
A more reactive element will displace a less reactive element from a compound or a salt solutions.
Chlorine + potassium bromide → potassium chloride + bromine
$Cl_{2(aq)} + 2KBr_{(aq)} \rightarrow 2KCl_{(aq)} + Br_{2(aq)}$

C3 Quantitative Chemistry

Concentration (g/dm^3) = mass of solute (g) ÷ volume of solution (dm^3)
To convert to dm^3 from cm^3 concentration (g/dm^3) = ((mass of solute (g) ÷ volume of solution (cm^3)) x 1000

R_f = distance travelled by solute ÷ distance travelled by solvent

C3 Higher tier and Chemistry
Number of Moles = mass(g) ÷ M_r
Number of Moles = mass(g) ÷ A_r
(Where A_r is the atomic mass and M_r is the molecular mass – find these on the periodic table if not given.)

Avagadro constant = 6.02×10^{23}
This is the number of atoms, molecules or ions contained in one mole of any substance.

C3 Chemistry only
Percentage yield = (mass of product produced ÷ maximum theoretical mass of product possible) x100%

Percentage atom economy = (M_r of desired product ÷ sum of M_r of all reactants) x 100%

Moles of gas = (volume of gas dm^3 ÷ 24 dm^3) = (volume of gas cm^3 ÷ 24000 cm^3)

C4 Chemical Changes

General Equations for chemical reactions

Oxidation:
$metal_{(s)} + oxygen_{(g)} \rightarrow metal\ oxide_{(s)}$

Reduction:
$metal\ oxide_{(s)} + carbon_{(s)} \rightarrow metal_{(l)} + carbon\ dioxide_{(g)}$
$metal\ oxide_{(s)} + hydrogen_{(g)} \rightarrow metal_{(s)} + water_{(g)}$

Neutralisation reactions:
$metal_{(s)} + acid_{(aq)} \rightarrow salt_{(aq)} + hydrogen_{(g)}$

$metal\ carbonate_{(s)} + acid_{(aq)} \rightarrow salt_{(aq)} + water_{(l)} + carbon\ dioxide_{(g)}$

$acid_{(aq)} + base_{(s)} \rightarrow salt_{(aq)} + water_{(l)}$

$acid_{(aq)} + alkali_{(aq)} \rightarrow salt_{(aq)} + water_{(l)}$

C4 Higher tier and Chemistry
Strong and weak acids
Strong acids fully ionise in water, weak acids do not. We can show this by the symbol we use when writing the equation. → represents the reaction of strong acids going to completion (fully ionising). ⇌ represents a position of equilibrium being reached by weak acids where whole molecules and their ions are present.
Hydrochloric acid → hydrogen ions + chloride ions
$HCl_{(aq)} \rightarrow H^+_{(aq)} + Cl^-_{(aq)}$
Ethanoic acid ⇌ ethanoate ions + hydrogen ions
$CH_3COOH_{(aq)} \rightleftharpoons CH_3COO^-_{(aq)} + H^+_{(aq)}$

Naming salts

Name of acid	Formula of acid	Name of salt
Hydrochloric acid	HCl	Metal chloride
Sulfuric acid	H_2SO_4	Metal sulfate
Nitric acid	HNO_3	Metal nitrate

Displacement reactions

A more reactive element will displace a less reactive element from a compound or a salt solutions.

Zinc + lead nitrate → zinc nitrate + lead

$Zn_{(s)} + Pb(NO_3)_{2(aq)} \rightarrow Pb_{(s)} + Zn(NO_3)_{2(aq)}$

Ionic equations

Only show the atoms or ions that change in a reaction. For example in the displacement reaction between magnesium and copper sulfate the sulfate ions do not change, so we do not show them in the ionic equation.

Word equation: magnesium + copper (II) sulfate → magnesium sulfate + copper

Symbol equation: $Mg_{(s)} + CuSO_{4(aq)} \rightarrow Cu_{(s)} + MgSO_{4(aq)}$

Ionic equation: $Mg_{(s)} + Cu^{2+}{}_{(aq)} \rightarrow Cu_{(s)} + Mg^{2+}{}_{(aq)}$

C4 Higher tier and Chemistry

Ionic and Half equations in redox reactions

OIL RIG: Oxidation is loss of electrons, reduction is gain of electrons.

Word equation: iron + copper (II) sulfate → iron sulfate + copper

Symbol equation: $Fe_{(s)} + CuSO_{4(aq)} \rightarrow Cu_{(s)} + FeSO_{4(aq)}$

Ionic equation: $Fe_{(s)} + Cu^{2+}{}_{(aq)} \rightarrow Cu_{(s)} + Fe^{2+}{}_{(aq)}$

Half equations show what happens to each reactant (electrons are shown as e^-):

$Fe_{(s)} \rightarrow Fe^{2+}{}_{(aq)} + 2e^-$

This can also be written $Fe_{(s)} - 2e^- \rightarrow Fe^{2+}{}_{(aq)}$

$Cu^{2+}{}_{(aq)} + 2e^- \rightarrow Cu_{(s)}$

C4 Higher tier and Chemistry

Half equations in electrolysis: molten compounds

Half equations show what happens at each electrode (electrons are shown as e^-):

$Pb^{2+} + 2e^- \rightarrow Pb$

$2Br^- \rightarrow Br_2 + 2e^-$

This can also be written $2Br^- - 2e^- \rightarrow Br_2$

Half equations in electrolysis: in solutions

At the cathode (-) the least reactive of the metal (M) or hydrogen will be made.

$M^+ + e^- \rightarrow M$

or $2H^+ + e^- \rightarrow H_{2(g)}$

At the anode (+) water will be made unless there is a halide present, which will form a halogen (X).

$4OH^-{}_{(aq)} \rightarrow 2H_2O_{(l)} + O_{2(g)} + 4e^-$

or $2X^-{}_{(aq)} \rightarrow X_{2(g)} + 2e^-$

Electrolysis of aluminium oxide

Aluminium oxide → aluminium + oxygen
$2Al_2O_{3(l)} \rightarrow 4Al_{(l)} + 3O_{2(g)}$

C4 Higher tier and Chemistry
Electrolysis of aluminium oxide
$Al^{3+}_{(l)} + 3e^- \rightarrow 3Al$
$2O^{2-} \rightarrow 2O_{2(g)} + 4e^-$

C4 Chemistry only
Fuel cells
$2H_{2(g)} + 4OH^-_{(aq)} \rightarrow 4H_2O_{(l)} + 4e^-$
$O_{2(g)} + 2H_2O_{(l)} + 4e^- \rightarrow 4OH^-_{(aq)}$

C6 The Rate and extent of chemical change

Rate of reaction

Mean rate of reaction = quantity of reactant used ÷ time
or Mean rate of reaction = quantity of product formed ÷ time

Concentration and rate of reaction required practical

Calcium carbonate + hydrochloric acid → Calcium chloride + carbon dioxide + water
$CaCO_{3(s)} + 2HCl_{(aq)} \rightarrow CaCl_{2(aq)} + CO_{2(g)} + H_2O_{(l)}$

Sodium thiosulfate + hydrochloric acid → sodium chloride + sulfur dioxide + sulfur + water
$Na_2S_2O_{3(aq)} + 2HCl_{(aq)} \rightarrow 2NaCl_{(aq)} + SO_{2(aq)} + S_{(s)} + H_2O_{(l)}$

Reversible reactions

In most chemical reactions the reactants react completely to form the products, we show this with an arrow: A + B → C + D

However, some reactions are reversible: the products can react together to form the reactants. We show this using two half arrows, to show that the reaction can go in both directions: $A + B \rightleftharpoons C + D$

Examples of reversible reactions:

Hydrated copper (II) sulfate (blue) ⇌ anhydrous copper (II) sulfate (white) + water
$CuSO_4.5H_2O \rightleftharpoons CuSO_4 + 5H_2O$

Ammonium chloride ⇌ ammonia + hydrogen chloride
$NH_4Cl_{(s)} \rightleftharpoons NH_{3(g)} + HCl_{(g)}$

C7 Organic Chemistry

Complete combustion

Hydrocarbon + oxygen → carbon dioxide + water

Propane + oxygen → carbon dioxide + water

$C_3H_{8(g)} + 5O_{2(g)} \rightarrow 3CO_{2(g)} + 4H_2O_{(g)}$

Incomplete combustion

In the absence of enough oxygen to fully oxidise the hydrocarbon incomplete combustion occurs. This reaction also produces carbon monoxide.

Cracking hydrocarbons

Long chain hydrocarbons are heated. Thermal decomposition occurs. The products are a mixture of alkanes (hydrocarbons which only contain carbon – carbon single bonds) and alkenes (hydrocarbons which contain at least one carbon – carbon double bond). For example:

decane → pentane + propene + ethane

$C_{10}H_{22} \rightarrow C_5H_{12} + C_3H_6 + C_2H_4$

C7 Chemistry only

Reactions of alkenes

Combustion

ethane + oxygen → carbon dioxide + water

$C_2H_{4(g)} + 3O_{2(g)} \rightarrow 2CO_{2(g)} + 2H_2O_{(g)}$

Addition reactions with halogens

ethene + bromine → dibromoethane

$C_2H_4 + Br_2 \rightarrow C_2H_4Br_2$

Addition reaction with hydrogen

ethene + hydrogen → ethane

$C_2H_4 + H_2 \rightarrow C_2H_6$

Reaction with water (steam)

ethene + steam → ethanol

$C_2H_4 + H_2O \rightarrow C_2H_5OH$

C7 Chemistry only

Reactions of alcohols

Fermentation (in the presence of yeast)

glucose → ethanol + carbon dioxide

$C_6H_{12}O_{6(aq)} \rightarrow 2C_2H_5OH_{(aq)} + 2CO_{2(g)}$

Combustion

ethanol + oxygen → carbon dioxide + water

$C_2H_5OH + 3O_2 \rightarrow 2CO_2 + 3H_2O$

Reaction with sodium

ethanol + sodium → sodium ethoxide + hydrogen

$C_2H_5OH + 2Na \rightarrow 2C_2H_5Ona + H_2$

Oxidation

ethanol + oxygen atoms from an oxidising agent → ethanoic acid + water

$C_2H_5OH + 2[O] \rightarrow CH_3COOH + H_2O$

C7 Chemistry only

Carboxylic acids and esters

Carboxylic acids – typical acid reactions

For example:

metal carbonate$_{(s)}$ + acid$_{(aq)}$ → salt$_{(aq)}$ + water$_{(l)}$ + carbon dioxide$_{(g)}$

sodium carbonate + ethanoic acid → sodium ethanoate + water + carbon dioxide

$Na_2CO_{3(s)} + 2CH_3COOH_{(aq)} \rightarrow 2CH3COONa_{(aq)} + H_2O_{(l)} + CO_{2(g)}$

Carboxylic acids are weak acids

Only a small proportion of the molecules ionise, so equilibrium lies to the left:

ethanoic acid ⇌ ethanoate ions + hydrogen ions

$CH_3COOH_{(aq)} \rightleftharpoons CH3COO^-_{(aq)} + H^+_{(aq)}$

Making esters

carboxylic acid + alcohol ⇌ ester + water (in the presence of an acid catalyst)

ethanoic acid + ethanol ⇌ ethyl ethanoate + water (in the presence of a sulphuric acid catalyst)

$CH_3COOH_{(aq)} + C_2H_5OH \rightleftharpoons CH3COOC_2H_5 + H_2O$

C7 Chemistry only

Polymers

Addition polymers

Many monomer units are joined together to form a polymer. For example:

ethene monomers → polyethene

propene monomers → poly(propene)

You need to be able to show these reactions using displayed formulae.

Condensation polymerisation

These reactions form both the polymer and a small molecule. For example:

A diol + a dicarboxylic acid → a polyester + water

Glucose monomers → starch polymers + water

Glucose monomers → cellulose + water

Amino acid monomers → protein + water

Nucleotides → DNA + water

C8 Chemical analysis

Chromatography

R_f = distance travelled by solute ÷ distance travelled by solvent

Testing for gases

Hydrogen: a lighted splint makes a squeaky pop

Hydrogen + oxygen → water

Oxygen: a glowing splint relights

Carbon dioxide: lime water turns milky / cloudy white.

calcium hydroxide + carbon dioxide → calcium carbonate + water

Chlorine: damp blue litmus paper is bleached to white.

C8 Chemistry only

Tests for ions

Metal cation tests with sodium hydroxide

You need to recall the colours of the precipitates formed.

Example reactions:

aluminium sulfate + sodium hydroxide → sodium sulfate + aluminium hydroxide

$Al_2(SO_4)_{3(aq)} + 6NaOH_{(aq)} \rightarrow 3Na_2SO_{4(aq)} + 2Al(OH)_{3(s)}$

Ionic equation: $Al^{3+}_{(aq)} + 3OH^-_{(aq)} \rightarrow Al(OH)_{3(s)}$

Tests for negative ions: Carbonates

Dilute acid added to a carbonate will produce carbon dioxide, for example:

magnesium carbonate + hydrochloric acid → magnesium chloride + water + carbon dioxide

$MgCO_{3(aq)} + 2HCl_{(aq)} \rightarrow MgCl_{2(aq)} + H_2O_{(l)} + CO_{2(g)}$

Ionic equation: $CO_3^{2-}{}_{(s)} + 2H^+_{(aq)} \rightarrow CO_{2(g)} + H_2O_{(l)}$

In limewater carbon dioxide react with calcium hydroxide forming a precipitate of calcium carbonate which turns the limewater cloudy.

Tests for negative ions: Halides

Nitric acid + silver nitrate + halide → precipitate, for example:

sodium chloride + silver nitrate → sodium nitrate + silver chloride

$NaCl_{(aq)} + AgNO_{3(aq)} \rightarrow NaNO_{3(aq)} + AgCl_{(s)}$

Ionic equation, where X^- is the halide ion: $Ag^+_{(aq)} + X^-_{(aq)} \rightarrow AgX_{(s)}$

Tests for negative ions: sulfates

dilute hydrochloric acid + barium chloride + sulfate → precipitate, for example:

potassium sulfate + barium chloride → barium sulfate + potassium chloride

$K_2SO_{4(aq)} + BaCl_{2(aq)} \rightarrow 2KCl_{(aq)} + BaSO_{4(s)}$

Ionic equation: $Ba^{2+}_{(aq)} + SO_4^{2-}{}_{(aq)} \rightarrow BaSO_{4(s)}$

C9 Chemistry of the atmosphere

Photosynthesis

energy from sunlight

carbon dioxide + water → glucose + oxygen

$6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$

Reactions of methane and ammonia with oxygen

Methane + oxygen → carbon dioxide + water

$CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$

Ammonia + oxygen → nitrogen + water

$4NH_4 + 3O_2 \rightarrow 2N_2 + 6H_2O$

C10 Using Resources

Rusting

Rust is a form of iron (III) oxide, Fe_2O_3 , that has water loosely bonded in its structure. It is said to be hydrated. The reaction can be summarised as:

iron + oxygen + water → hydrated iron (III) oxide

C10 Using resources Chemistry only

Making ammonia – the Haber process

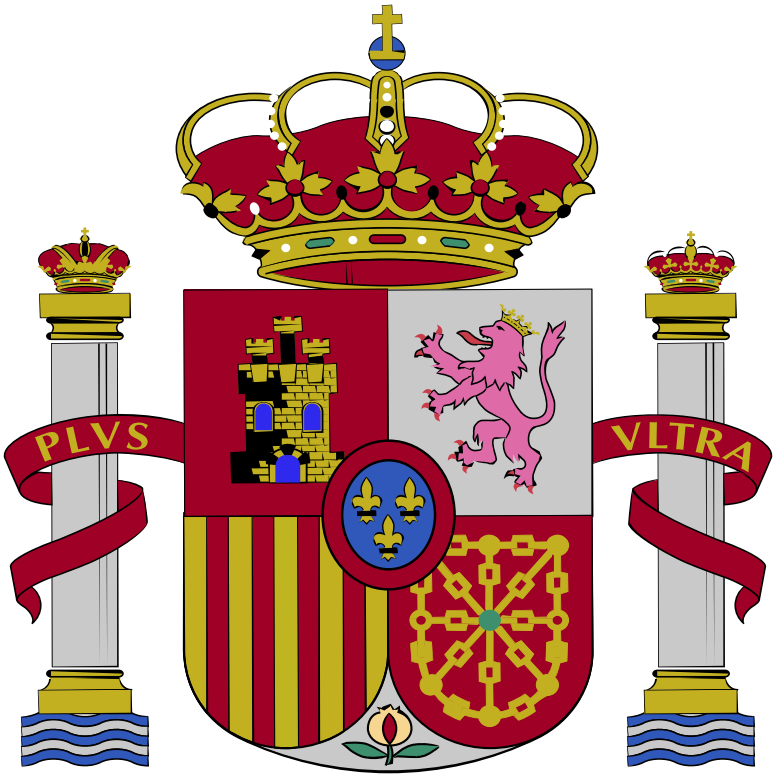
Nitrogen + hydrogen ⇌ ammonia (in the presence of an iron catalyst).

$N_{2(g)} + 3H_{2(g)} \rightleftharpoons 2NH_{3(g)}$

Physics equations

1	Weight = mass x gravitational field strength	$W = mg$
2	Work done = force x distance	$W = Fs$
3	Force applied to a spring = spring constant x extension	$F = k\,e$
4	Distance travelled = speed x distance	$S = v\,t$
5	Acceleration = $\frac{\text{change in velocity}}{\text{Time taken}}$	$A = \frac{\Delta v}{t}$
6	Resultant force = mass x acceleration	$F = ma$
7 HT	Momentum = mass x velocity	$P = mv$
8	Kinetic energy = 0.5 x mass x (speed) ^{2}	$E_K = \frac{1}{2} mv^2$
9	Gravitational potential energy = mass x field strength x height	$E_P = mgh$
10	Power = $\frac{\text{work done}}{\text{time}}$	$P = \frac{w}{t}$
11	Power = $\frac{\text{energy transferred}}{\text{time}}$	$P = \frac{E}{t}$
12	Efficiency = $\frac{\text{useful output energy transfer}}{\text{Total input energy transfer}}$	
13	Efficiency = $\frac{\text{useful power output}}{\text{Total power input}}$	
14	Wave speed = frequency x wavelength	$V = f\,\lambda$
15	Charge flow = current x time	$Q = It$
16	Potential difference = current x resistance	$V = IR$
17	Power = potential difference x current	$P = VI$
18	Power = (current)^2 x resistance	$P = I^2R$
19	Energy transferred = power x time	$E = Pt$
20	Energy transferred = charge flow x potential difference	$E = QV$
21	Density = $\frac{\text{mass}}{\text{volume}}$	$p = \frac{m}{V}$

Spanish



BRIDGNORTH Endowed

Spanish Writing Ladder

Complex structures

	Subjunctive examples	si fuera, cuando vaya, dudo que pueda, quizás tenga
	Si **clauses**	si + present + future. **Si** estudio, aprobaré español
	Conditional tense verbs	hablaría, comería, escribiría, sería, haría, tendría
	Direct and indirect subject pronouns	**lo** vendí ayer (I sold **it** yesterday)
	The imperfect continuous tense	estaba comiendo (I was eating)
	The pluperfect tense	ya había comido (I had already eaten)
	Uses of ser and estar	ser (permanent), estar (temporary and locations)
	The imperfect tense	hablaba, comía, escribía, era, hacía, tenía
	The perfect tense	he cantado, he comido, he vivido
	Simple future tense verbs	hablaré, comeré, escribiré, seré, haré, tendré
	Reflexive verbs	me, te, se, nos, os, se. **Me** ducho, **se** llama, **nos** quejamos
	The present continuous tense	estoy cant**ando** (I'm singing) // **ar (ando), er-ir (iendo)**
	Radical-changing verbs	jugar-j**ue**go, poder-p**ue**do, preferir-pref**ie**ro
	Verbs with prepositions	empezar **a**, ayudar **a**, tratar **de**, insistir **en**
	Expressions with tener	tengo hambre-sed-sueño-suerte-miedo-calor
	Common expression + infinitive	acabar de (to have just), tener que (to have to), suelo (I tend to), dejar de (to quit/stop)
	Modal verbs and expressions	se puede (you/one can), se debe (you/one should), hay que (it´s necessary to), se necesita (you/we need to)
	Possessive pronouns	mío (mine), tuyo (yours), suyo (his/hers/its)…
	Possessive adjectives	mi (my), tu (your), su (his/her), nuestro (our)…
	Superlatives	el más interesante // mejor, peor // buenísimo…
	Comparatives	más… que, menos… que, tan… como // mejor, peor
	Questions	¿Hablas español? - ¿Qué haces? ¿Cuánto cuesta?

The basics

	Verbs + infinitive constructions	quiero comer, puedo hablar, necesito ir…
	The immediate future tense	voy a comer, vas a salir, vamos a hablar…
	Preterite tense verbs	hablé, comí, viví // fue, fui, hice, tuve
	Negatives	no hablo español, no tengo dinero…
	Sequencers	primero, después, luego, por último
	Irregular verbs	conjugated forms of ser, estar, tener, ir, hacer
	Quantifiers-intensifiers	un poco, bastante, mucho, muy…
	Adverbs (time phrases)	normalmente, a veces, siempre, hoy, mañana…
	Justified opinions	me gusta el fútbol porque es divertido
	Connectives-conjunctions	y, pero, también, porque, aunque, sin embargo…
	Adjectives (have to agree in gender)	**o** (masculine), **a** (feminine), **e** (both)
	Present tense verbs (regular)	yo canto, tú cantas, él canta, nosotros cantamos…

LOS ADJETIVOS	o a os as es s		
(des)agradable	(un)pleasant	guapo / feo	handsome / ugly
(mal) educado	(im)polite	hablador	chatty
aburrido / divertido	boring / fun	hermoso	beautiful
acogedor/a	welcoming, friendly, cosy	histórico	historic
activo/a	active	importante	important
alegre / triste	happy / sad	impresionante	impressive
alucinante	amazing	increíble	incredible
amable	nice / kind	infantíl	childish
animado / tranquilo	lively / quiet	joven / viejo	young / old
antiguo / moderno	old / modern	limpio / sucio	clean / dirty
atrevido	daring	listo / tonto	clever / silly
bonito / feo	pretty / ugly	lujoso/a	luxurious
bueno / malo para la salud	good / bad for your health	lleno / vacío	full / empty
cariñoso	loving, affectionate	molesto	annoying
caro / barato	expensive / cheap	nervioso	nervous
cerca / lejos	near / far	peligroso / seguro	dangerous / safe
cómodo / incómodo	comfortable / uncomfortable	pequeño / grande	small / big
competitivo/a	competitive	picante	spicy
contento / triste	happy / sad	pintoresco/a	picturesque
creativo	creative	precioso/a	gorgeous, lovely
decepcionante	disappointing	realista	realistic
delicioso / asqueroso	delicious / disgusting	relajante / estresante	relaxing / stressful
dificil / fácil	difficult / easy	repetitivo/a	repetitive
dulce	sweet	ruidoso / tranquilo	noisy / quiet
educativo	educational	sabroso	tasty
egoista	selfish	salado / soso	salty / bland
emocionante	exciting	(mal) sano	(un)healthy
entretenido/a	entertaining	simpático / antipático	nice / (un)kind
estricto/a	strict	terrible	awful
exigente	demanding	tímido	shy
fenomenal / fatal	great / awful	tolerante	tolerant
frío / caliente	cold / hot	trabajador / perezoso	hard-working / lazy
fuerte / débil	strong / weak	turístico / industrial	touristy / industrial
genial / fatal	great / awful	un deporte de equipo	a team sport
gracioso / serio	funny / serious	una pérdida de tiempo	a waste of time
gratis	free	útil	useful

Essential verbs

Modals – infinitive structures		Most important verbs			
Puedo	**I can**	**Presente**	**inglés**	**pasado**	**futuro**
Se puede	**You can (we can)**	Hago	**I do / make**	Hice	Voy a hacer
Quiero	**I want**	Hace	**It does / makes**	Hizo	Va a hacer
Necesito	**I need**	Soy	**I am**	Fui	Voy a ser
Prefiero	**I prefer**	Es	**He/she/it is**	Fue	Va a ser
Se debe	**You should (we should)**	Tengo	**I have**	Tuve	Voy a tener
Hay que	**You must (we must)**	Tiene	**He/she/it has**	Tuvo	Va a tener
Tengo que	**I have to**	Estoy	**I am (place)**	Estuve	Voy a estar
Tenemos que	**We have to**	Está	**He/she/it is**	Estuvo	Va a estar
Está prohibido	**It is forbidden**	Voy	**I go**	Fui	Voy a ir
No se permite	**It is not allowed**	va	**He/she/it goes**	fue	Va a ir
Deberías	**You should**	**RANGE of STRUCTURES**			
Es necesario	**It is necessary to**	Ni … ni, tampoco		**Not … or, nor**	
Es esencial	**It is essential to**	Mas … que / menos … que		**More …than / less … than**	
Es importante	**It is important to**	Tan … como		**As … as**	
suelo	**I usually**	Lo mejor / lo peor		**The best / the worst**	
solía	**I used to usually**	Desde hace / desde		**Since / for**	

Essential verbs in Spanish

1 Las vacaciones				2 Mi instituto			
Presente	**inglés**	**pasado**	**futuro**	**Presente**	**inglés**	**pasado**	**futuro**
voy	**I go**	fui	Voy a ir	Estudio	**I study**	estudié	Voy a estudiar
Viajo	**I travel**	Viajé	Voy a viajar			**Imperfect**	
Como helados	**I eat ice cream**	comí	Voy a comer	llevo	**I wear**	llevaba	Voy a llevar
Saco fotos	**I take photos**	Saqué fotos	Voy a sacar	Hay	**There is / are**	Había	
Compro recuerdos	**I buy souvenirs**	Compré recuerdos	Voy a comprar	Tiene	**It has**	Tenía	
Tomo el sol	**I sunbathe**	Tomé el sol	Voy a tomar	Es / son	**It is / they are**	Era / eran	
Descanso	**I rest**	descansé	Voy a descansar	está	**It is (situated)**	estaba	
Nado en el mar	**I swim in the sea**	Nadé en el mar	Voy a nadar	Empieza(n)	**It / they start**	Empezaba (n)	
Hace sol/frío/calor	**It is sunny/cold/hot**	Hizo sol/frío/calor	Va a hacer	Termina(n)	**It / they finish**	terminaba (n)	
Llueve	**It rains**	llovió	Va a llover				
nieva	**It snows**	nevó	Va a nevar				

3 Mi gente				4 Mi tiempo libre		
Presente	**Inglés**	**pasado**	**futuro**	**Presente**	**pasado**	**futuro**
Hablo	**I speak**	Hablé	Voy a hablar	Escucho	Escuché	Voy a escuchar
Mando	**I send**	Mandé	Voy a mandar	Veo	Vi	Voy a ver
Chateo	**I chat**	Chateé	Voy a chatear	Descanso	Descansé	Voy a descansar
Busco	**I look for**	Busqué	Voy a buscar	Leo	Leí	Voy a leer
Descargo	**I download**	Descargué	Voy a descargar	Juego	Jugué	Voy a jugar
Juego	**I play**	Jugué	Voy a jugar	Voy	Fui	Voy a ir
Veo	**I see**	Vi	Voy a ver	Salgo	Salí	Voy a salir
Leo	**I read**	Leí	Voy a leer	Hago natación	Hice	Voy a hacer
Comparto	**I share**	Compartí	Voy a compartir	Hago equitación	hice	Voy a hacer
Es / son	**It is/they are**	Fue / fueron	Va(n) a ser	Monto a caballo	monté	Voy a montar
tengo / tiene	**I have, he/she has**	Tuve / tuvo	Voy/va a tener	**Conditional**	**Inglés**	
Discuto	**I argue**	discutí	Voy a discutir	Sería	I/He/she/it would be	
Conozco	**I know**	conocí	Voy a conocer	Habría	There would be	
Me llevo bien/mal con	**I get on well/badly with**			Tendría	I/He/she/it would have	
Me peleo con	**I fight with**			Haría	I/he/she/it would do	
Me divierto con	**I have fun with**			iría	I/he/she/it would go	

5 Ciudades				6 de costumbre		
Presente	**inglés**	**pasado**	**futuro**	**Presente**	**pasado**	**futuro**
Vivo	**I live**	Viví	Voy a vivir	Desayuno	Desayuné	Voy a desayunar
Hay	**There is / are**	Había		Almuerzo	Almorcé	Voy a almorzar
Está	**It is (situated)**	Estaba		Como	Comí	Voy a comer
Compro	**I buy**	Compré	Voy a comprar	Bebo	Bebí	Voy a beber
Voy de compras	**I go shopping**	Fui de compras	Voy a ir de …	Ceno	Cené	Voy a cenar
construir	**To build**	construí		Tomo	Tomé	Voy a tomar
Futuro simple		**El tiempo - weather**		Meriendo	Merendé	Voy a merendar
Haré / á	**I / it will do**	Hace sol	**Sunny**	Me levanto	Me levanté	Voy a levantarme
Tendré / á	**I / it will have**	Hace frío	**Cold**	Me acuesto	Me acosté	Voy a acostarme
Podré / á	**I / it will be able to**	Hace calor	**Hot**	Me despierto	Me desperté	Voy a despertarme
habrá	**There will be**	Hace buen tiempo	**Good**	Me visto	Me vestí	Voy a vestirme
Conditional		Hace mal tiempo	**Bad**	Me afeito	Me afeité	Voy a afeitarme
Mejoraría	**I would improve**	Hay niebla	**Foggy**	Me ducho	Me duché	voy a ducharme
Podría	**I / it could**	Hay tormenta	**Stormy**	Me cepillo	Me cepillé	Voy a cepillarme
Habría	**There would be**	Llueve	**Rainy**	Me lavo	Me lavé	Voy a lavarme
sería	**It would be**	nieva	**snowing**	Me duele(n)	Me dolía	

7 A currar				8 Un mundo mejor			
Presente	**inglés**	**pasado**	**futuro**	**Presente**	**inglés**	**pasado**	**futuro**
Trabajo	**I work**	trabajé	Voy a trabajar	Apago	**I switch off**	apagué	Voy a apagar
gano	**I earn**	gané	Voy a ganar	Separo	**I separate**	Separé	Voy a separar
Soy	**I am**	Fui	Voy a ser	Reciclo	**I recycle**	Reciclé	Voy a reciclar
eres	**You are**	Fuiste	Vas a ser	Cierro	**I close**	Cerré	Voy a cerrar
es	**He/she /it is**	fue	Va a ser	Desenchufo	**I unplug**	Desenchufé	Voy a desenchufar
Infinitive structures with future intention				(no) malgasto	**I (don't) waste**	(no) malgasté	No voy a malgastar
Tengo la intención de	**I intend to**			Ahorro	**I save**	Ahorré	Voy a ahorrar
Pienso	**I intend to**			Uso	**I use**	Usé	Voy a usar
Quiero	**I want**						
espero	**I hope**			Me salto	**I skip (a meal)**	Me salté	Voy a saltarme
Me gustaría (ser)	**I'd like (to be)**			**infinitives**			
				Evitar	**to avoid**	Evité	Voy a evitar
				Cambiar	**to change**	Cambié	Voy a cambiar
				Engordar	**to get fat**	Engordé	No voy a engordar
				Tomar	**to take (drugs)**		No voy a tomar
				fumar	**To smoke**		No voy a fumar

Answer boosters

ANSWER BOOSTER	SOLID ANSWER (4/5)	HIGHER (6)	TOP (7/8)
VERBS	past (preterite or imperfect), present and near future Different types of verbs (regular, irregular, reflexive, stem changing)	Different persons of the verb **Verbs + infinitive:** tener que, decidir, intentar, hay que, está prohibido, se debe, poder, querer, tener ganas de, soler, acabar de, se puede(n), se debería, sirve para etc. **Phrases + infinitve:** para, sin, antes de, después de, al **Phrases to refer to future plans:** espero, pienso, quiero, tengo la intención de + infinitive	**A wide range of tenses:** preterite and imperfect: Cuando llegamos era… present tense & present continuous perfect future conditional pluperfect passive – fue fundado Avoiding the passive – se celebra, se construyen Cuando + subjunctive: Cuando sea mayor, cuando temine **Phrases with more than one tense:** creo que voy a visitar… **Unusual verbs:** parecer, desarrollar, enseñar, suspender, apoyar, escoger, conocerse, llevarse, divertirse, disfrutar de, desplazarse, aprovechar si + present + future Es importante/imprescindible/inútil/esencial que + subjunctive

ANSWER BOOSTER	SOLID ANSWER (4/5)	HIGHER (6)	TOP (7/8)
OPINIONS AND REASONS	me chifla, me encanta, me apasiona, me interesa, me fastidia, no soporto, no aguanto porque… pienso que, creo que	**Exclamations:** ¡Qué suerte! ¡Qué va! ¡Qué horror! ¡Que pesado! ¡Que rico! ¡Que horror! ¡Qué timo! ¡Que pena! ¡Qué rollo! ¡Qué miedo! ¡Qué guay! ¡Ni hablar! **Other people's opinions:** A mi padre le mola… nos encanta **Comparatives**: es más/menos … que **Absolute superlatives:** carísimo, importantísimo, muchísimo, importantísimo **Opinion verbs:** me importa, me preocupa, me apetece + infinitive, no aguanto, me apasiona	**Reasons**: ya que, dado que, puesto que, por eso, así que, por lo tanto, a causa de **Opinions**: creo que, a mi modo de ver, en mi opinión, desde mi punto de vista, para mí, a mi juicio **Opinions in the past:** me gustó, me encantó, me lo pasé bien / fenomenal / bomba / mal / fatal Fue inolvidable / increíble / impresionante / flipante / horroroso / un desastre tan…como

ANSWER BOOSTER	SOLID ANSWER (4/5)	HIGHER (6)	TOP (7/8)
CONNECTIVES	y, pero, también	además, sin embargo, no obstante, aparte de eso desafortunadamente, por desgracia, por ejemplo, sobre todo, incluso, en cambio	aunque, por un lado, por otro lado, mientras que, una ventaja…otra ventaja… una desventaja…, lo bueno es, un inconveniente es, a pesar de… un/otro beneficio es… Antes… pero ahora… ya no, todavía primero…segundo… no solo…sino también… tanto…como… gracias a…

ANSWER BOOSTER	SOLID ANSWER (4/5)	HIGHER (6)	TOP (7/8)
OTHER FEATURES	**Intensifiers**: muy, realmente, un poco, bastante, demasiado **Sequencers**: primero, luego, después, más tarde **Adjectives**: pintoresco, agotador, simpático, monótono, emocionante, original, lluvioso, conocido, sabroso, rico, emocionante **Time phrases**: el año que viene, el trimestre pasado, la última vez que…, a menudo, siempre, a veces, de vez en cuando, una vez al / a la, **Negatives**: no, nunca	cuando, donde, si **negatives**: no…ni…ni, tampoco, nunca, ningún/ninguna **desde hace** tres años para + infinitive tan, tanto/a/os/as **Phrases with tener**: suerte /sueño/hambre/sed/prisa Different uses of saber / conocer **Indirect object pronouns**: te da la oportunidad, te permite	lo bueno/lo malo, lo mejor/lo peor, lo que más/menos me gustó, una (des)ventaja es… **Interesting/specialist vocab/phrases**: veranear, un pinchazo, me permite expresarme, te da la oportunidad de, recién renovado, aprovechar, hacer el vago, la campeona, el argumento, me ayuda a desconectar, la gran pantalla, zona peatonal, gangas, navideño, un belén, los seres queridos, los fuegos artificiales, valer/merecer la pena, alistarse, estoy harto/a de…, una caminata patrocinada, una sociedad de usar y tirar, un circulo vicioso **Object pronouns**: me/te/lo/la/los/las **idioms**: hay mucha marcha **Complex sentences with si**: si tuviera / fuera + conditional **Other complex structures**: por si eso fuera poco, ¡Ojalá no fuera…!

Notes

BRIDGNORTH Endowed

Bridgnorth Endowed School Northgate Bridgnorth Shropshire WV16 4ER
01746 762103 admin@bridgnorthendowed.co.uk www.bridgnorthendowed.co.uk

Printed by Badger Print & Design - 01952 730511 • www.badgerprint.co.uk