# KNOWLEDGE ORGANISERS

## YEAR 10

BODMIN COLLEGE

# SCHOOL DAY

| | |
|---|---|
| 08:50am | Tutor Time |
| 09:25am | Lesson 1 |
| 10.40am | Break 1 |
| 11:10am | Lesson 2 |
| 12:25pm | Lesson 3 |
| 1.40pm | Break 2 |
| 2.10pm | Lesson 4 |
| 3.25pm | End of School Day |

# EQUIPMENT


School Bag


Knowledge Organiser

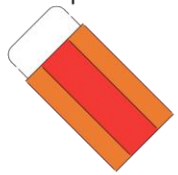

Black and Purple Pens


Pencil Case


Knowledge Organiser


Calculator

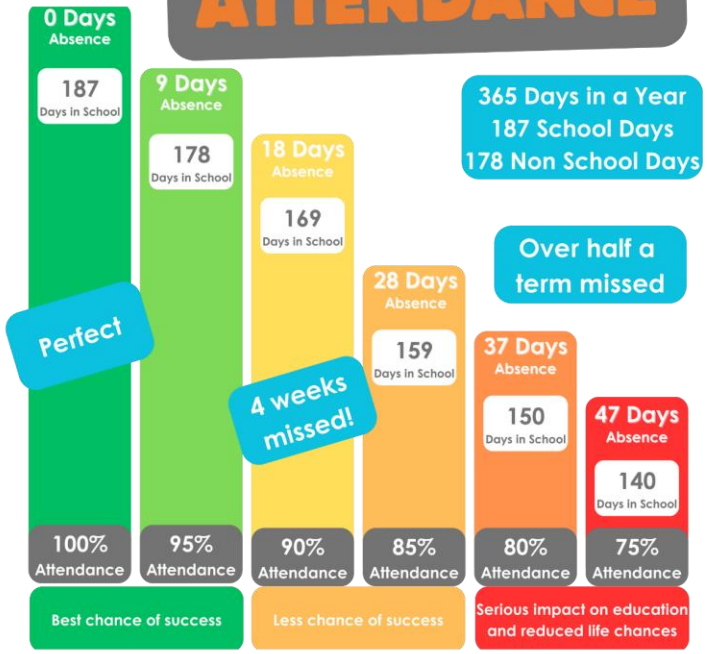

Pencil


Rubber


Ruler


Whiteboard and whiteboard pen

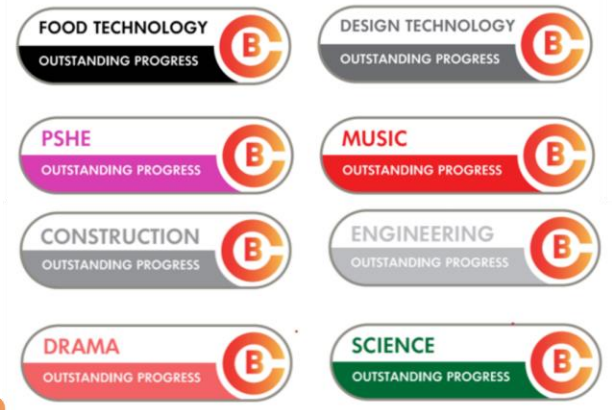
# ATTENDANCE




# REWARDS


Student Leaders

Subject Awards





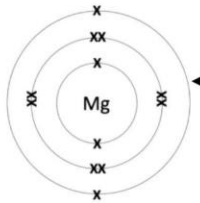
Merit Badges

# THE PERIODIC TABLE OF THE ELEMENTS

Group 1 – **Alkali Metals**

**Group number** – tells you the number of **electrons** in an elements **outer** shell.

Elements in the **same group** have **similar properties**.




**Magnesium** (Mg) has **12 electrons** in total. It is in **group 2** so has 2 electrons in its **outer** shell. Mg's electronic configuration is 2,8,2.

Element **symbol**

Element **name**

**Key**

relative atomic mass
**atomic symbol**
name
atomic (proton) number

**Mass Number** = number of **protons** and **neutrons** added together.

**Atomic / Proton Number** = number of **protons** which is the same as the number of **electrons**.

**Neutrons** = Mass number – Atomic number

Group 7 – **Halogens**

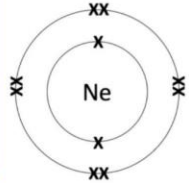
Group 0 – **Noble gases**

**Non-Metals**

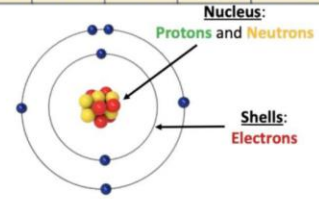
**Transition Metals**

| 1 | 2 | | | | | | | | | | | 3 | 4 | 5 | 6 | 7 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | 4 He helium 2 |
| 7 Li lithium 3 | 9 Be beryllium 4 | | | | | | | | | | | 11 B boron 5 | 12 C carbon 6 | 14 N nitrogen 7 | 16 O oxygen 8 | 19 F fluorine 9 | 20 Ne neon 10 |
| 23 Na sodium 11 | 24 Mg magnesium 12 | | | | | | | | | | | 27 Al aluminium 13 | 28 Si silicon 14 | 31 P phosphorus 15 | 32 S sulfur 16 | 35.5 Cl chlorine 17 | 40 Ar argon 18 |
| 39 K potassium 19 | 40 Ca calcium 20 | 45 Sc scandium 21 | 48 Ti titanium 22 | 51 V vanadium 23 | 52 Cr chromium 24 | 55 Mn manganese 25 | 56 Fe iron 26 | 59 Co cobalt 27 | 59 Ni nickel 28 | 63.5 Cu copper 29 | 65 Zn zinc 30 | 70 Ga gallium 31 | 73 Ge germanium 32 | 75 As arsenic 33 | 79 Se selenium 34 | 80 Br bromine 35 | 84 Kr krypton 36 |
| 85 Rb rubidium 37 | 88 Sr strontium 38 | 89 Y yttrium 39 | 91 Zr zirconium 40 | 93 Nb niobium 41 | 96 Mo molybdenum 42 | [97] Tc technetium 43 | 101 Ru ruthenium 44 | 103 Rh rhodium 45 | 106 Pd palladium 46 | 108 Ag silver 47 | 112 Cd cadmium 48 | 115 In indium 49 | 119 Sn tin 50 | 122 Sb antimony 51 | 128 Te tellurium 52 | 127 I iodine 53 | 131 Xe xenon 54 |
| 133 Cs caesium 55 | 137 Ba barium 56 | 139 La* lanthanum 57 | 178 Hf hafnium 72 | 181 Ta tantalum 73 | 184 W tungsten 74 | 186 Re rhenium 75 | 190 Os osmium 76 | 192 Ir iridium 77 | 195 Pt platinum 78 | 197 Au gold 79 | 201 Hg mercury 80 | 204 Tl thallium 81 | 207 Pb lead 82 | 209 Bi bismuth 83 | [209] Po polonium 84 | [210] At astatine 85 | [222] Rn radon 86 |
| [223] Fr francium 87 | [226] Ra radium 88 | [227] Ac* actinium 89 | [267] Rf rutherfordium 104 | [270] Db dubnium 105 | [269] Sg seaborgium 106 | [270] Bh bohrium 107 | [270] Hs hassium 108 | [278] Mt meitnerium 109 | [281] Ds darmstadtium 110 | [281] Rg roentgenium 111 | [285] Cn copernicium 112 | [286] Nh nihonium 113 | [289] Fl flerovium 114 | [289] Mc moscovium 115 | [293] Lv livermorium 116 | [293] Ts tennessine 117 | [294] Og oganesson 118 |

Noble gases have a **full outer shell** of electrons E.g., Neon (Ne)




| Subatomic Particle | Mass | Charge |
|---|---|---|
| Proton | 1 | +1 |
| Neutron | 1 | 0 |
| Electron | Negligible | -1 |



# HOW CAN I USE THE PHYSICS EQUATION SHEET?

## Triple only equations

**HT = Higher Tier only equations**

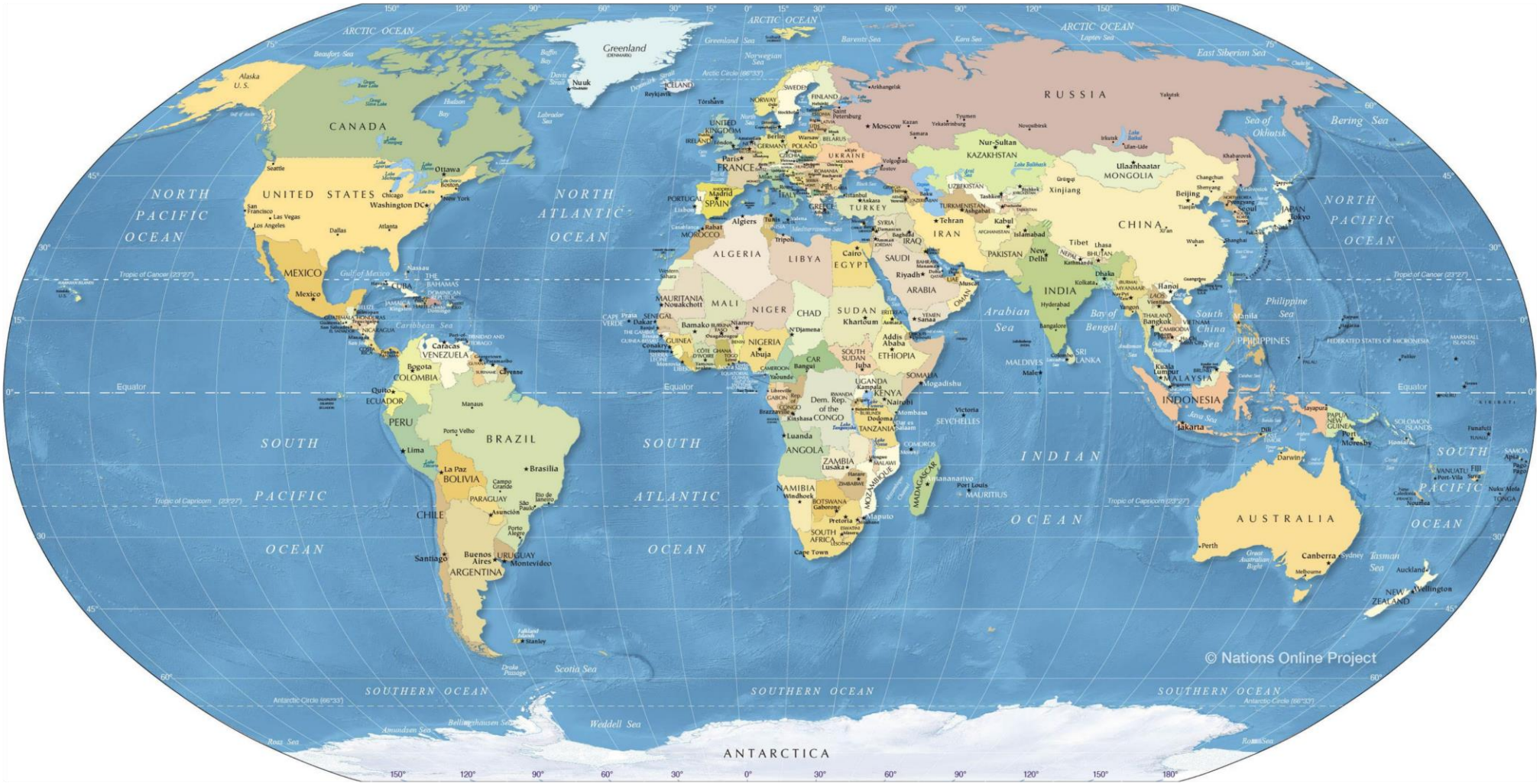
| | |
|---|---|
| kinetic energy = 0.5 × mass × (speed)$^2$ | $E_k = \frac{1}{2} m v^2$ |
| elastic potential energy = 0.5 × spring constant × (extension)$^2$ | $E_e = \frac{1}{2} k e^2$ |
| gravitational potential energy = mass × gravitational field strength × height | $E_p = m g h$ |
| change in thermal energy = mass × specific heat capacity × temperature change | $\Delta E = m c \Delta\theta$ |
| power = $\frac{\text{energy transferred}}{\text{time}}$ | $P = \frac{E}{t}$ |
| power = $\frac{\text{work done}}{\text{time}}$ | $P = \frac{W}{t}$ |
| efficiency = $\frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$ | |
| efficiency = $\frac{\text{useful power output}}{\text{total power input}}$ | |
| charge flow = current × time | $Q = I t$ |
| potential difference = current × resistance | $V = I R$ |
| power = potential difference × current | $P = V I$ |
| power = (current)$^2$ × resistance | $P = I^2 R$ |
| energy transferred = power × time | $E = P t$ |
| energy transferred = charge flow × potential difference | $E = Q V$ |
| density = $\frac{\text{mass}}{\text{volume}}$ | $\rho = \frac{m}{V}$ |

| | | |
|---|---|---|
| | thermal energy for a change of state = mass × specific latent heat | $E = m L$ |
| | For gases: pressure × volume = constant | $p V = \text{constant}$ |
| | weight = mass × gravitational field strength | $W = m g$ |
| | work done = force × distance (along the line of action of the force) | $W = F s$ |
| | force = spring constant × extension | $F = k e$ |
| | moment of a force = force × distance (normal to direction of force) | $M = F d$ |
| | pressure = $\frac{\text{force normal to a surface}}{\text{area of that surface}}$ | $p = \frac{F}{A}$ |
| HT | **pressure due to a column of liquid = height of column × density of liquid × gravitational field strength** | $p = h \rho g$ |
| | distance travelled = speed × time | $s = v t$ |
| | acceleration = $\frac{\text{change in velocity}}{\text{time taken}}$ | $a = \frac{\Delta v}{t}$ |
| | (final velocity)$^2$ – (initial velocity)$^2$ = 2 × acceleration × distance | $v^2 - u^2 = 2 a s$ |
| | resultant force = mass × acceleration | $F = m a$ |
| HT | **momentum = mass × velocity** | $p = m v$ |
| HT | **force = $\frac{\text{change in momentum}}{\text{time taken}}$** | $F = \frac{m \Delta v}{\Delta t}$ |
| | period = $\frac{1}{\text{frequency}}$ | $T = \frac{1}{f}$ |
| | wave speed = frequency × wavelength | $v = f \lambda$ |
| | magnification = $\frac{\text{image height}}{\text{object height}}$ | |
| HT | **force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density × current × length** | $F = B I l$ |
| HT | **$\frac{\text{potential difference across primary coil}}{\text{potential difference across secondary coil}} = \frac{\text{number of turns in primary coil}}{\text{number of turns in secondary coil}}$** | $\frac{V_p}{V_s} = \frac{n_p}{n_s}$ |
| HT | **potential difference across primary coil × current in primary coil = potential difference across secondary coil × current in secondary coil** | $V_p I_p = V_s I_s$ |

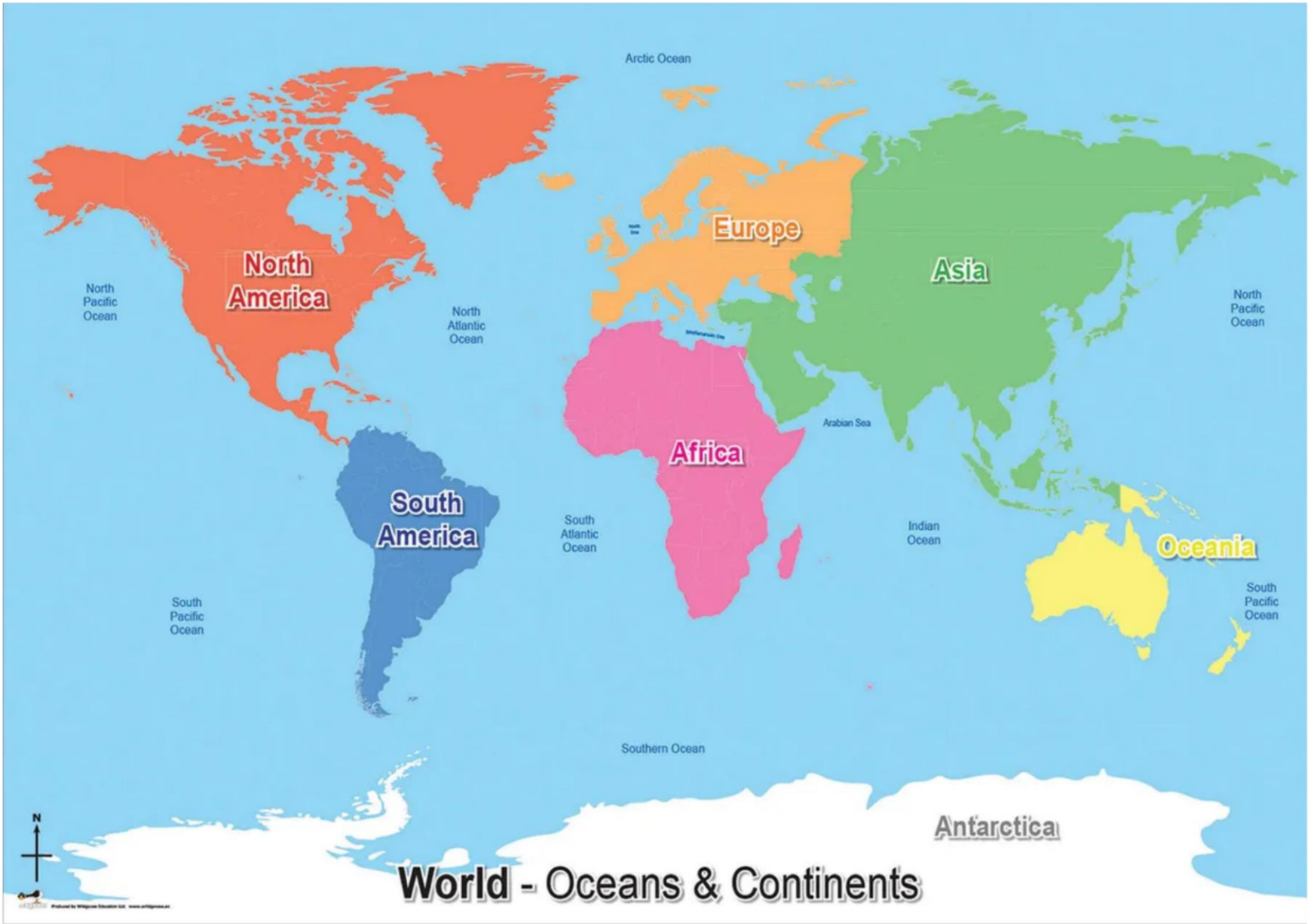
Give
Give
Want

1. What does it give you? What does it want you to calculate?
2. Do you need to rearrange?
3. Do you need to convert?
4. Include the figures
5. Do you need to put it into standard form?
6. Do you need to include the unit?
7. Do you need to give the answer in significant figures?

# WORLD MAP


ARCTIC OCEAN
Greenland
RUSSIA
CANADA
UNITED STATES
NORTH PACIFIC OCEAN
NORTH ATLANTIC OCEAN
CHINA
INDIA
AUSTRALIA
INDONESIA
BRAZIL
SOUTH PACIFIC OCEAN
SOUTH ATLANTIC OCEAN
INDIAN OCEAN
SOUTHERN OCEAN
ANTARCTICA
Equator
Tropic of Cancer (23°27')
Tropic of Capricorn (23°27')
Antarctic Circle (66°33')
© Nations Online Project

# CONTINENTS AND OCEANS



# PROTECTED CHARACTERISTICS

Sex

Sexual Orientation

Age

Disability

Gender Reassignment

Marriage and Civil Partnership

Pregnancy and Maternity

Race

Religion or belief

# BRITISH VALUES

## Democracy

- I can **influence** the decisions that affect me in the school
- I can work **effectively** with others in the school

## Liberty

- I am **free to think** as I see fit
- I have the freedom to **make choices** that affect me but I **recognise** I am **accountable** for **all my actions**

## Respect

- I recognise that **everyone is entitled** to their opinion as long as it **does not promote extremism**
- I understand that everyone is **entitled to a voice** within the classroom and I will **listen to others**

## Law

- I understand that the school **rules** are used to mirror **society laws** and must be respected
- I recognise that there will be **consequences for my actions**

## Responsibility

- I recognise that I am as **equally responsible** for my learning as the teacher
- I take **responsibility** for my actions - good or bad
- We **all** have a **responsibility** to **promote** and **protect** the wellbeing of others

## Tolerance

- I recognise that it is **unacceptable** to dismiss the **beliefs** and **opinions** of anyone
- I understand that discussions about **sensitive issues** will be **controlled** and **structured**

# STAYING SAFE AT SCHOOL

At Bodmin College we want to ensure that all of our students feel happy, safe and supported at all times. Everyone has a duty of care to safeguard your physical and mental health when at school.
During tutor and PSHE lessons you will be taught how to stay safe both in school, outside of school and online. There is always someone from the 'Safeguarding Team' to talk to during school hours, should you need to. However, you can talk to any member of staff that you feel comfortable talking to.

# FULL STOP

Bullying is not ok and we need to work together to stop it from happening.'Full Stop' is our online bullying report form, that allows you to report any occurrences of bullying, either in school, out of school, or online. You can complete the form through the QR code. A member of the pastoral team will then investigate the incident and behaviour sanctions will be issued if bullying has happened.

# LANYARDS

All staff, visitors and sixth form students where lanyards whilst on the college campus.

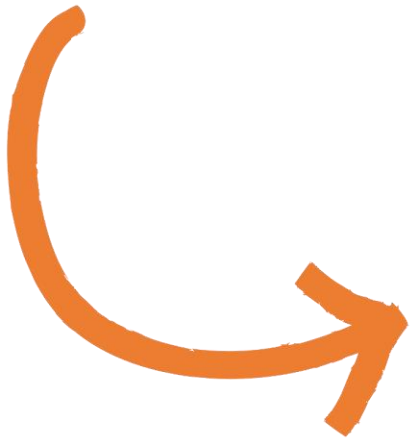
The purpose of lanyards are to keep our college campuses safe places to work and learn in. It is essential that all post-16 students, staff and visitors when on the college premises are easily identified and that we are aware of who everyone is on our campuses during all periods of the day. This is an important employability skill that you need to understand, as many sectors always require visible ID as a safeguarding requirement and a way of registering attendance.

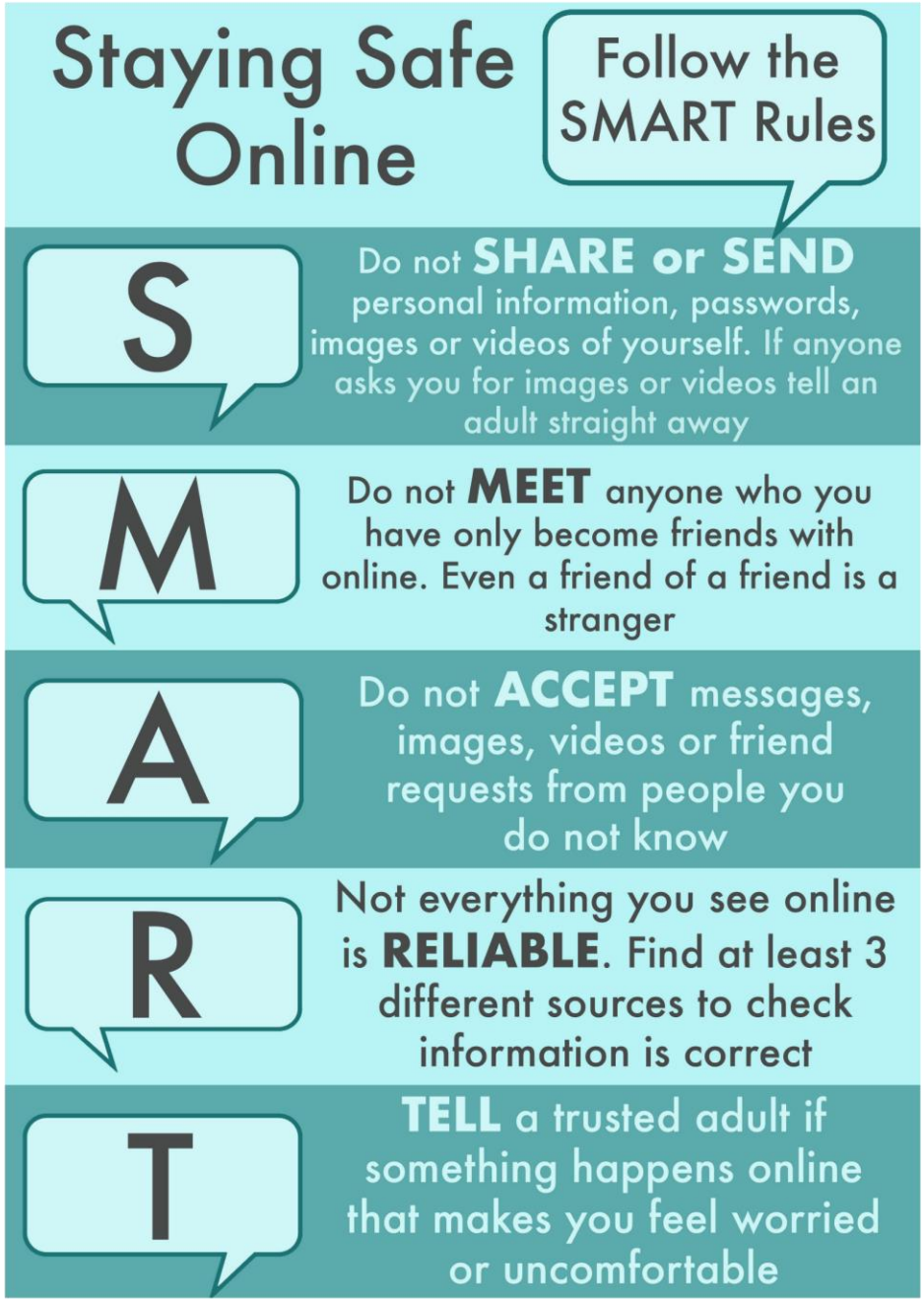
# ONLINE SAFETY

Staying safe online is really important, especially now that we have smartphones and devices connected to the internet all of the time.

In school we use a system called **Smoothwall** so monitor the use of computers and devices connected to the internet. This helps us to keep you and our school community safe.

There are lots of tops to help you keep safe online. Checkout out the SMART Rules here.





# Wellbeing

## Signposting

**External Support**
See websites below:

- kooth — Kooth.com
- YOUNGMINDS fighting for young people's mental health — Youngminds.org.uk
- childline ONLINE, ON THE PHONE, ANYTIME — Childline.org.uk
- Intercom Trust — Intercomtrust.org.uk

**Internal Pastoral Support**
Tutor, Director of Key Stage, Year Manager, Safeguarding Team

- CLEAR Emotional Trauma & Therapy Specialists — clearsupport.net
- Young People Cornwall Making Waves — Youngpeoplecornwall.org
- Penhaligon's Friends — Penhaligonsfriends.org.uk
- Cornwall Carers Service — Cornwallcarers.org.uk/young-carers
- withyou — wearewithyou.org.uk

# MENTAL HEALTH & WELLBEING

Five self care tips

## Get plenty of sleep

Teenagers need 8-10 hours of sleep per night

## Maintain a healthy diet

Eating well – a balanced diet full of vegetables and nutrients – can improve your sense of well-being and mood

## Exercise regularly

Even if it's just a walk around the block or to school - you'll feel better

## "Talk to someone"

Talking can provide stress relief, and can lighten the load of a concern you might be having. Talking about a problem can help to stop you from feeling so overwhelmed.

## Make time for yourself

Whether it's reading, watching a film or having a bath, making time for yourself is essential

# Animal Care

## Week 1

**Risk Assessment** – planning ahead to identify possible risks and prepare to deal with them to avoid injury to animal and handler.

**Harness** – equipment used to walk a dog more comfortably, releases pressure on the collar and therefore dog's neck.

**Bandage muzzle** – bandage used to temporarily secure a dog's snout to prevent biting.

## Week 2

**Restraint** –-equipment used to control the movement of an animal while handling it.

**Purpose** – why

**Health check** – looking at the animal to identify signs of ill health.

**Non - contact handling** – handling an animal without physically touching it, for example looking at a bearded dragon while it is in a plastic box.

## Week 3

**Sleep / wake cycles**

**Diurnal** – active during the day and asleep at night.

**Nocturnal** – active at night and asleep during the day.

**Crepuscular** – active at dawn and dusk.

# Animal Care

## Week 4

**Social interaction** – how animals engage with each other.

Intraspecies interaction – animals of the same species interacting with each other.

**Interspecies interaction** – animals of different species interacting with each other.

**Activity level** – young animals are more active than old animals, they run around more.

## Week 5

**Normal behaviour** – the behaviour a species would normally exhibit. This can be communication, grooming, sexual and feeding behaviours.

**Abnormal behaviour** – a behaviour that is not normal for a species, often caused by stress.

**Invariant behaviour** – an abnormal behaviour that has no purpose, for example pacing and feather plucking.

## Week 6

**Internal factors**
Things about the animal itself that affects behaviour – age, health, life span, gender etc.
Example - Male animals tend to be more aggressive than female animals.

**External factors**
Things about the animal's environment that affect its behaviour – temperature, noise level, presence of other animals, predators near by etc.
For example – overcrowding in animal accommodation leads to fighting over resources. Dominant animals will control access to resources, lower ranked animals will go without.

# Animal Care

## Week 7

**Communication behaviours**

**Vocalisation** – making noises

**Scenting** – spraying an area, lamp post etc with a smell to let other animals know whose territory it is.

**Displays** – dancing, displaying feathers, teeth etc to attract a mate.

## Week 8

**Life Stages**

**Neonatal** – newborn animal up to 28 days old.

**Young** – animal that is young and not yet fully grown.

**Adult** – a fully grown animal.

**Senior** – an old animal.

**Geriatric** – a very old animal.

## Week 9

**Venomous** – animals that bite or sting to deliver toxins for example snakes, scorpions.

**Poisonous** – animals that deliver toxins when they are touched – for example fire bellied toads.

**Aggressive** – an animal that is likely to bite, scratch or kick when handled.

# Animal Care

## Week 10

**Catch pole** – a solid handle with a loop at the end to catch stary dogs.

**Burrito** – wrapping an animal in a towel – cat / rabbit

**Crush cage** – a cage to hold large animals in place.

## Week 11

TWO PRACTICAL LESSONS

Are you wearing the correct PPE?

Have you selected the correct tools?

Are you working safely?

Are you disposing of the waste correctly?

## Week 12

TWO PRACTICAL LESSONS

Have you completed a risk assessment?

Have you followed biosecurity guidelines?

# Art

## Weeks 1 & 2

**Key Words**

- **Vanitas -** A still life artwork which includes various symbolic objects designed to remind the viewer of their mortality and of the worthlessness of worldly goods and pleasures.
- **Explore –** experiment and create observations and insights using a variety of materials, techniques and processes in response to the theme.
- **Analyse -** Being able to analyse a work is an essential part of evaluating it. Recording this evaluation ensures that the creative process, influences and material choices is communicated clearly.

**Respond –** In your sketchbook complete a double page of visual and annotated/written research about the still life-based art movement Vanitas. This must include your own practical response. Include a traditional and contemporary artist.

## Weeks 3 & 4

**Key Words**

- **Mark-making -** The creation of patterns, lines. Textures and shapes to show texture and movement.
  **Stippling -** Stippling is the creation of a pattern simulating varying degrees of shading by using small dots.
  **Composition -** Composition is the way in which different elements of an artwork are combined or arranged.
  **Observation -** Carefully looking at the subject and noticing and recording the shapes, details and tones that you see.

**Draw –** A fruit or vegetable on a decorative plate using black fine liner pen and only the technique stippling. Respond to the work of C J Hendry, complete a single page of research about her works 50 photorealistic foods in 50 days.

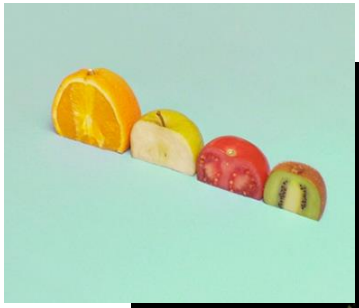
https://www.thisiscolossal.com/2015/04/artist-cj-hendry-draws-50-photorealistic-foods-in-50-days/

## Weeks 5 & 6

**Key Words**

- **Studio Lighting -** is artificial light source to either add to the light that's already there, or to completely light the object being photographed.
  **Edit -** Photo editing is the process of altering a photograph, such as by adjusting its colour, light, tone, composition, or focus. It's also known as post-processing.
  **Contact sheet -** a page with thumbnail images from a photoshoot. A contact sheet provides an overview of all the frames and their exposure.

Complete a **photoshoot** of fruit/vegetables, flowers or insects etc. And present this creatively in your sketchbook.



# Art

## Weeks 7 & 8

**Key Words**

- **Annotations –** Written notes, facts and opinions about the artist and artworks.

**Respond** – In your sketchbook complete a double page of visual and annotated/written research about the artist Abby Diamond. This must include your own practical response. .


## Weeks 9 & 10

**Key Words**

**Present -** the Sylvia Ji inspired Mexican Day of the Dead (Dia de los Muertos) photoshoot in your sketchbook. Experiment with scanning these images with other elements to create new compositions.

- **Scanography -** Known as scanner photography, is a photographic technique that uses a flatbed scanner to create art. Some artists arrange multiple objects on the scanner's flatbed, while others scan individual objects and arrange them later.

- **Photomontage -** Merging various images and photographic elements into a single composition, often exploring themes or narratives in a unique way.

## Weeks 11 & 12

**Key Words**

- **Research –** is the creative and organised work undertaken to increase the breadth of knowledge on a subject or artist. It involves the collection, organisation, and analysis of artwork, influences and material processes etc.
- **Explore –** experiment and create observation s and insights using a variety of materials, techniques and processes in response to the theme.
- **Analyse -** Being able to analyse a work is an essential part of evaluating it. Recording this evaluation ensures that the creative process, influences and material choices is communicated clearly.

**Respond –** In your sketchbook complete a double page of visual and annotated/written research about the artist Sylvia Ji. This must include your own practical response.

# Business Studies

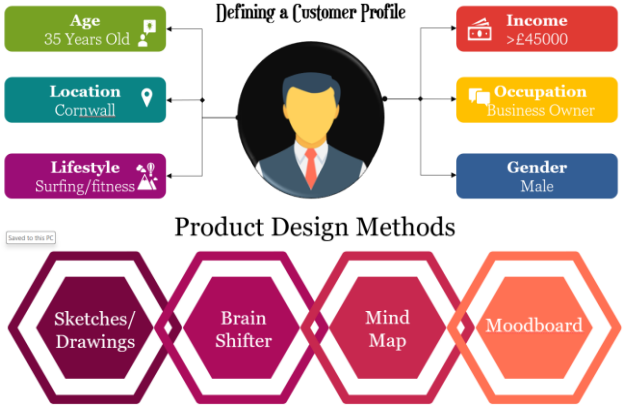
## Week 1

**Primary Research Methods**
- Observations
- Questionnaires
- Surveys
- Focus Groups
- Trials
- Pilot/Test Market

**Secondary Research Methods**
- Books
- Newspapers
- Trade Magazines
- Competitor Data
- Government Publications and Statistics

**Quantitative** (numerical, measurable)
**Qualitative** (qualities or characteristics)

**Sampling Methods**
- Cluster
- Quota
- Random
- Convenience




## Week 2

**Financial Viability: Costs and Pricing Strategies**

**Pricing Strategies**
- **Competitive** (below the lowest market price)
- **Penetration** (prices low to gain market share, will increase to normal price)
- **Skimming** (prices high to maximise income). E.g. Electric cars, (price will reduce over time)
- **Psychological** (seems less e.g £4.99)

**Calculation of Costs**
**Fixed**: These costs stay the same, no matter how many products you make
**Variable**: These costs are how much it costs to make one product x the number of products sold

| | £ | |
|---|---|---|
| Selling Price (SP) | | Use this table to calculate the profit per unit |
| Costs per unit Variable Costs (VC) | | |
| Profit per unit | | =SP – VC |

**Costs** = Fixed Costs + Variable Costs = FC + VC

**Sales Revenue** is how much money the business brings in through sales of products.

**Sales Revenue** = Price X No of Sales

**Profit** = Selling Price – Variable Costs
NB: This is the **Gross** Profit (the real, **Net** profit is when the Fixed costs are deducted as well)

## Week 3

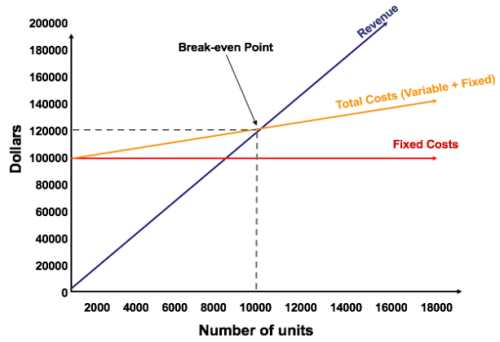
**Financial Viability, Calculating Break-even**
- Can the business cover the fixed costs?
- What is the impact of a changing price on profit?

$$\text{Break Even Point} = \frac{\text{Fixed costs}}{\text{Selling Price – VC (per unit)}}$$

| # of bags sold | 100 | 200 | 300 | 400 | 500 |
|---|---|---|---|---|---|
| Fixed Costs | 20000 | 20000 | 20000 | 20000 | 20000 |
| Variable Costs | 1000 | 2000 | 3000 | 4000 | 5000 |
| Total Costs | 21000 | 22000 | 23000 | 24000 | 25000 |
| Sales Revenue | 6000 | 12000 | 18000 | 24000 | 30000 |
| | Loss | Loss | Loss | Break-even | Profit |

This business needs to sell at least 400 products, to break-even

To consider *viablility* you need to predict:
- Breakeven level of sales
- Predicted number of sales
- Predicted revenue
- Predicted total costs
- Predicted profit (Total Revenue – Total Costs)
- Pricing decisions



# Business Studies

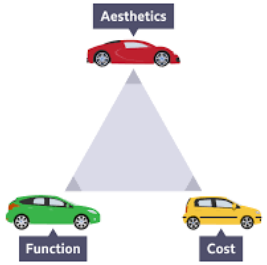
## Week 4

**Risks & Challenges:**
Identify external factors using STEEPLE Analysis.


**Points to also Consider:**
- Competitors
- Business Experience (of owner)
- Making a loss (what will happen)
- Overestimating/underestimating consumer demands


## Week 5

**Recap on Task 3 Design Proposal**
**Aesthetics:**
Visual and sensory appeal
Design:
- Colour
- Shape
- Overall look




**Function:**
How well the product performs its intended purpose

**Cost (Economic Manufacture):** cost of producing the product – materials – labour & overheads. It also considers the Selling Price you can also consider how you can add value

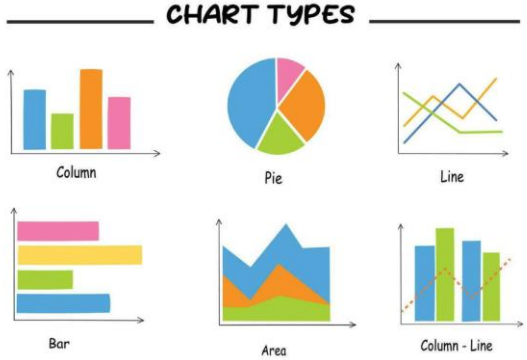

**How can you review your designs?**
Self Assess
Get Feedback
- Verbal
  - Peer discussions
  - Telephone surveys
  - Focus groups with target consumers
- Written
  - Questionnaire
  - Email surveys
- Online
  - Social Media
  - Online communities
  - Online survey forms (e.g. Forms)

## Week 6

**Recap Collating Data**

**Ways of collating**
- Frequency Table
- Tally Chart
- Table

**Presenting Data**
- Tables
- Diagrams
- Charts




**Use the correct chart for the PURPOSE**

| | |
|---|---|
| Bar | • **Purpose**: To compare different categories or groups.<br>• **Best Use**: When you want to show the differences in quantities across various categories. |
| Pie | • **Purpose: To show the proportions of a whole.**<br>• **Best Use: When y**ou want to illustrate how different parts make up a whole. |
| Line | • **Purpose: To show trends over time.**<br>• **Best Use: W**hen you want to track changes or trends in data over a continuous period. |
| Scatter graph | • **Purpose**: To show the relationship between two variables.<br>• **Best Use**: When you want to identify correlations or patterns between two sets of data. |

# Business Studies

## Week 7

**NEA,** Mark scheme to plan your approach

**Task 1 Market Research:**

*A **comprehensive** explanation of the overall aims of the market research. **Comprehensive** justification of the sampling method(s) to be used, evidencing **clear** understanding.*

*Creates <u>three</u> **comprehensive**, accurate and **fully** effective market research tools resulting in completed research outcomes that are **fully** relevant to the aims.*

*Collates the results and uses **effective** method(s) to present the research outcomes.*

***Comprehensive** review of the collated results.*

**Market Research (Primary & Secondary)**
Quantitative & Qualitative

- Questionnaires/Forms (hardcopy/digital)
- Observation
- Focus Groups
- Trials

**Secondary** research, usually desk research. Particularly important to study competitors

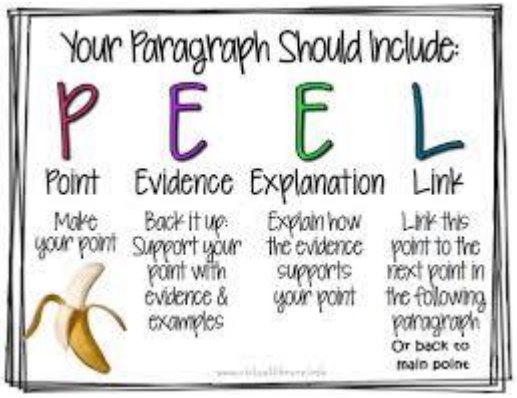
## Week 8

**NEA,** Mark scheme to plan your approach

**Task 2 How to identify a customer profile:**

*Describes **in detail** the features of a specific customer profile using market segmentation techniques.*

***Detailed** justification of the selected customer profile, with reference to the market research findings.*


## Week 9

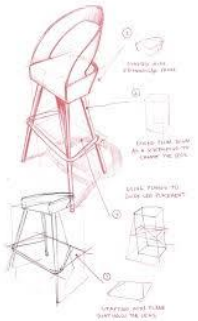
**NEA,** Mark scheme to plan your approach

**Task 3 Develop a product proposal:**

*Creates an outline of an appropriate design mix with **comprehensive** justification.*

*Generates product design ideas with **effective** use of creative techniques.*

***Comprehensive** description of how the design mix and market research findings have informed one of the designs.*




**What** are your design choices?

- Aesthetics
- Function
- Cost

And **why**?

# Business Studies

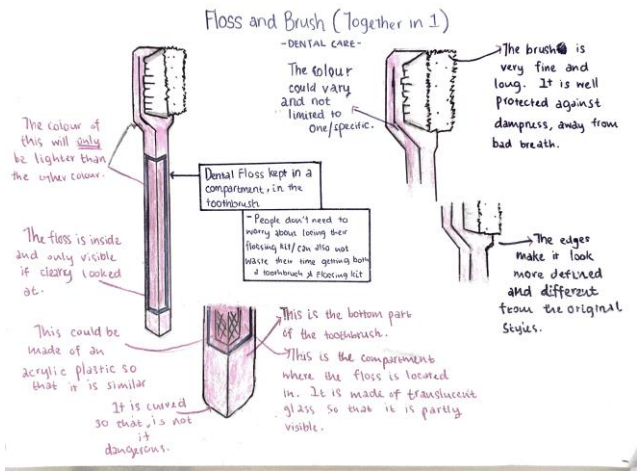
## Week 10

**NEA,** Mark scheme to plan your approach
**Task 4 Develop a Product Proposal:**

A **comprehensive** summary of the strengths and weaknesses of the design proposals is produced. **Detailed** reference is made to the self-assessment and the verbal and written feedback gathered.

Design modifications, with **clear** relevance to self-assessment and feedback, are carried out with **full** description.

The reasons for choosing the final design are **fully** justified.




## Week 11

**NEA,** Mark scheme to plan your approach
**Task 5a Review whether a business proposal is financial viable:**

Identifies **all** relevant costs relating to the chosen product design. Variable cost calculations for the product design are **accurately** completed.

Predicts a number of units sold in the first month showing **detailed** reasoning.

Selects an **appropriate** pricing strategy and selling price for the product design. Reasoning is **clearly focused** on the identified customer profile.

Calculates the predicted total costs and predicted total profit for the first month **accurately**.

**Task 5b Review whater a business proposal is financially viable:**

Applies the break-even formula to calculate break-even for the business proposal **accurately**. Shows a **clear** understanding of the results.

Provides a **comprehensive** description of the impact of a change in price on the break-even level of sales for the business proposal.

**Full** evaluation of the financial viability of the business proposal.

## Week 12

NEA, Mark scheme to plan your approach
**Task 6 Review the likely success of the business proposal**

**Comprehensive and realistic** explanation of the risks and challenges involved with producing and launching a new product.

**Fully** evaluates the impact that risks and challenges faced may have on the success of the business proposal. **Detailed** reference made to how these risks and challenges could be minimised/overcome.

# Cambridge National in Sport

## Weeks 1 & 2

### Continuous Training

- This type of training involves a steady but regular pace at a moderate intensity which should last for at least 30 minutes. Activities can include running, walking, rowing or cycling.
- Maximum HR = 220-Age
- Heart rate should be kept between 60-80 % of maximum heart rate.
- This type of training is good for long-duration sports including team games.

### Fartlek Training

- This means Speed Play in Swedish.
- It is a combination of different intensities
- Works on both aerobic and anaerobic fitness due to the varying intensities
- Fartlek training is used by team games performers as it suits the movements necessary for a game. This can be completed over different terrains, woods, hills and roads.


## Weeks 3 & 4

### Interval Training

- This training involves periods of work followed by periods of rest.
- This type of training can be adapted to any sport that has a change in intensity, for example racket sports
- To improve endurance, decrease the number of rests and length of time recovering, decrease the intensity of work

| Advantages |
|---|
| Good for short events that have recovery periods |
| No equipment needed |
| Can easily be progressed |
| Can reduce boredom as intensity changes |

| Disadvantages |
|---|
| Higher risk of impact injuries |
| Environmental factors if outside |

### Circuit Training

- Circuit training is a series of exercises completed one after another
- Each exercise is called a station. Each station should work a different area of the body to avoid fatigue.
- Stations can be designed to suit any sport
- When training for muscular endurance the focus should be on high repetitions and low load.

## Weeks 5 & 6

### HIIT Training

- High-Intensity Interval Training (HIIT) involves periods of high intensity work and rest breaks. This anaerobic burst is typically for 30-40 seconds with 15-20 seconds' rest.
- Can be adapted to any sport that require a high intense burst of energy.

| Advantages | Disadvantages |
|---|---|
| Burns calories and use fats quickly | High intensity can lead to injuries |
| Can be completed quickly | High levels of motivation |
| Balance or work and rest | Can leads to nausea/dizziness |

### Plyometric training

- Explosive power
- Plyometrics training refers to any exercise that enables the muscle to reach maximal force in the fastest possible time.
- Plyometrics exercises cause the muscle to lengthen (eccentric action) before a maximal muscle shortening (concentric action)

# Cambridge National in Sport

## Weeks 7 & 8

**Organising and Planning a fitness programme**

Before designing a training programme, the following considerations need to be addressed, a coach should think about:

- Facilities/equipment
- Safety/risk assessments
- Aims/goals/objectives
- Current fitness levels/injuries
- Organisation
- Environment
- Skills to be improved

**Safety Risk assessments**

When designing safe training programme, coaches should consider the personal profile of an athlete and implement training based on,

- Weight of athlete
- Age
- Physical activity levels
- Access to facilities
- Injuries/health issues
- Training preferences

Lifestyle and physical activity history can be obtained through questionnaires The **Physical Activity Readiness Questionnaire (PAR-Q)** is a common method.

If an athlete answers yes to any of the medical conditions experienced, they should be checked over by a GP prior to starting an exercise programme.

A **risk assessment** is a document that outlines all the potential risks and are graded, red, yellow and green. The document highlights ways to minimise the risk.

## Weeks 9 & 10

**Goalsetting**

When setting goals, the **SMART principle** is most effective ways to ensure your aims are focused. This stands for:

**Specific**
**Measurable**
**Achievable**
**Realistic**
**Time-bound**

**Applying the principes of training**
**Using SPOR and FITT**

It is vital a trainer uses these principles when designing and carrying out a programme.

**Specificity**

A sprinter would likely carry out interval and plyometrics training to ensure speed and power are worked on. The specific target area would be the legs and the muscles in this region.

**Progression and Overload**

An athlete will progress when the body adapts, and it becomes easier. This could involve running at a higher intensity and or for longer.

**Frequency** – As training gets easier, they will increase the number of sessions per week.
**Intensity** - They will use heart rate as a guide for intensity.
**Time** – If an athlete has trained for 30 minutes it can be increased to 40 and then 50mins
**Type** – The athlete will likely continue to use the type of training best suited to the event, however circuit and weight training may also be used to vary the programme.



## Weeks 11 & 12

**Reversibility**

Any athlete training full time will work 5-6 times a week to prevent reversibility and allow for sufficient recovery.

**Overload application**

Understanding **target heart rate zones** and **exercise intensity** will help the individual to get the most out of training.

An estimate of **maximum heart rate** is calculated as **220-age**

To improve fitness from regular exercise you must push your heart rate above a certain level, known as the **training thresholds..** There are two training thresholds.

Aerobic 60-80% of maximum HR
Anaerobic 80+ of maximum HR.

The elements of a training programme include:

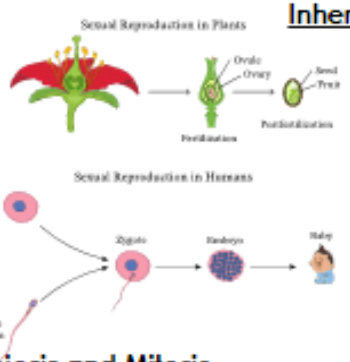
- Suitable warm up/cool down
- Activities/main content
- Duration of session
- Equipment and facilities
- Coaching points
- Adaption of the programme and mid-term testing

All sessions should follow the phases of a warmup
1: Pulse Raiser
2: Mobility exercises
3: Dynamic Stretches
4: Skill rehearsal
A cool down should gradually lower HR and finish with stretches.

# Combined Science

## Week 1

### Inheritance and evolution

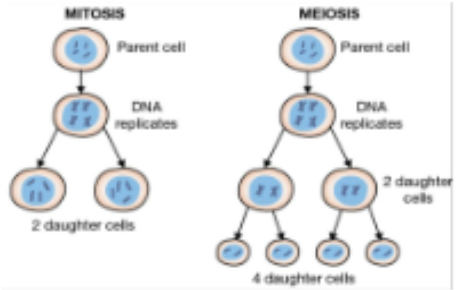


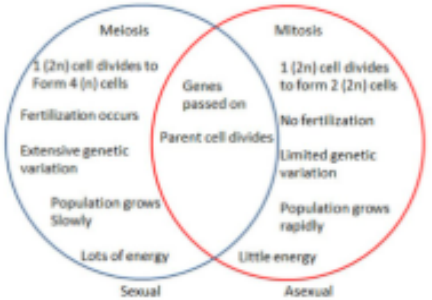

#### Sexual and asexual reproduction

- **Sexual** - The formation of a new organism by **combining the genetic material** of **two** organisms, **using meiosis**
- **Asexual** – reproduction with only **one parent, using mitosis**

#### Meiosis and Mitosis

- **Meiosis** – A type of cell division that produces 4 non identical haploid gametes
- **Mitosis** – A type of cell division that produces two identical diploid cells
- **Haploid** - A **sex cell** (gamete) that contains **one set of chromosomes**
- **Diploid** - Cells that contain **two sets of chromosomes**
- **Gametes – sex cells**, e.g. **egg or sperm**
- **Fertilisation** - fusion of the **nucleus** of a **male gamete** with the **nucleus of a female gamete**




#### DNA and the genome

- **DNA - Deoxyribonucleic acid.** The genetic material inside the nucleus of cells
- **Genome** - complete set of DNA found in an organism.

## Week 2

#### Gender and inheritance

- **Alleles** – **different versions of a gene**
- **Dominant** - An **allele** that **always expresses itself** whether it is partnered by a recessive allele or by another like itself.
- **Recessive** - **masked or suppressed** in the **presence of the dominant variant.**
- **Heterozygous** – a **genotype** where **two alleles** for a particular characteristic are **different.**
- **Homozygous** - a **genotype** in which the **two alleles** for the characteristic are **identical.**
- **Genotype** – An organism's **combination of alleles**
- **Phenotype** – The **characteristics** an organism has

#### Genetic disorders

- **Cystic fibrosis** – a **recessive genetic disorder** of the **cell membranes**.
- **Polydactyly** – a **dominant genetic disorder** where a baby's born with **extra fingers or toes**
- **Gene therapy** - **inserting** a **normal allele into the chromosomes** of an individual who carries a **faulty allele.**

#### Variation and mutations

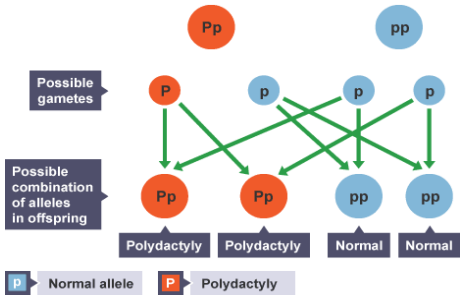
- **Variation** – **differences in characteristics** of organisms
- **Mutations** - a **permanent change** in the nucleotide sequence of **DNA**

| | | Mother | |
|---|---|---|---|
| | | X | X |
| Father | X | XX | XX |
| | Y | XY | XY |

XY = Male 50% chance
XX = Female 50% chance

| | E | e |
|---|---|---|
| **E** | EE | Ee |
| **e** | Ee | ee |

Outcome: One is EE (homozygous dominant), two are Ee (heterozygous) and one is ee (homozygous recessive).

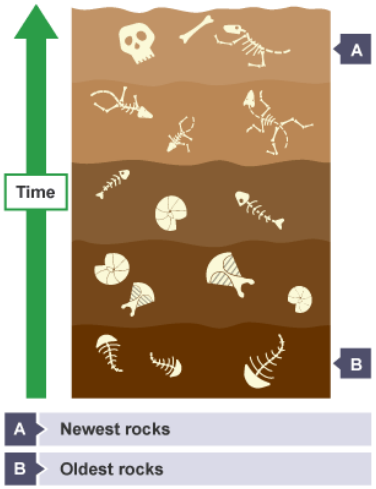


# Combined Science

## Week 3

### Natural selection

- **Evolution** - process of **change in the inherited traits** of a population of organisms **from one generation to the next.**
- **Natural selection** - the **best-adapted** individuals **survive** longer, have **more offspring** and **pass on** their **advantageous alleles**
- **Species** - Individuals capable of **interbreeding successfully** to produce **fertile offspring**.

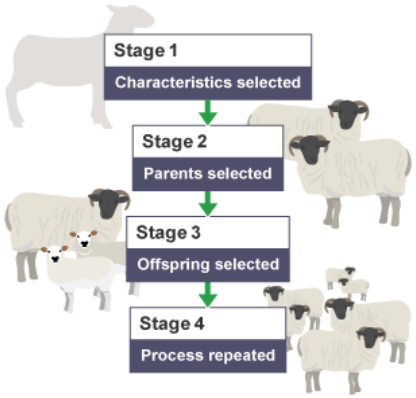



### Extinction and endangered species

- **Extinction** – when **no individuals** of a species **remain**
- **Endangered** - if they are not helped, they are **likely to become extinct**
- **Biodiversity** - The **range of animals and plants in a given area**

### Selective breeding

- **Selective breeding -** when humans breed plants and animals for particular genetic characteristics

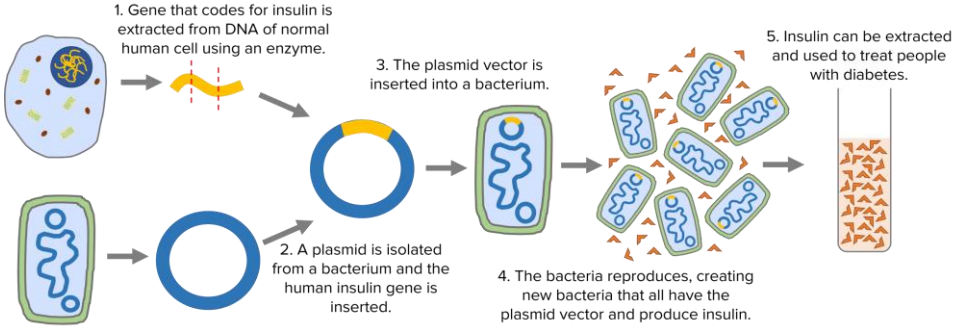



**•Desired characteristics in animals**:
•animals that produce **lots of milk or meat**
•**chickens** that lay **large eggs**
•**domestic dogs** that have a **gentle nature**

## Week 4

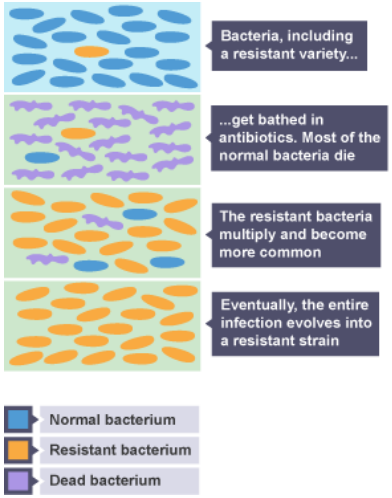
### Genetic engineering

- **GE or GM (genetic modification) -** involves **modifying the genome** of an organism by **introducing a gene** from **another organism** to result in a desired characteristic
- **Examples**: **Human insulin** from bacteria, **Golden rice** with vitamin A




### Antibiotic resistance

- **Antibiotic resistance** – where **bacteria cannot** be **destroyed** by the antibiotic – this is an example of natural selection
- **Antibiotics** – substance that **kills bacteria**




### Evolutionary trees and classification

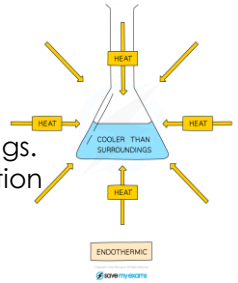
- **Classification** - Living organisms are classified into **groups depending** on their s**tructure and characteristics.**
- **5 Kingdoms** – Animals, Plants, Fungi, Protists, Prokaryotes
- **3 domain systems** – Bacteria, Archaea and Eukaryotes

# Combined Science

## Week 5 - Energy Changes and Rate of Reaction

### Endothermic and Exothermic Reactions

Energy is conserved in a reaction

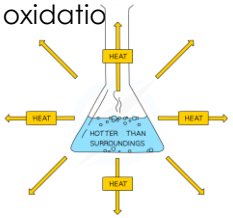



**Endothermic reactions:**

- Transfers energy **from the surroundings**.
- Causes a **decrease in the temperature** of the surroundings.
- Examples include thermal decomposition and the reaction between citric acid and sodium hydrogencarbonate.
- Uses include some sports injury packs.

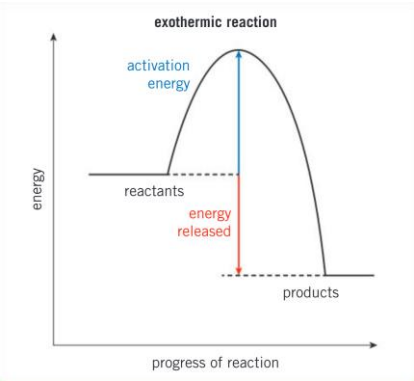
**Exothermic Reactions:**

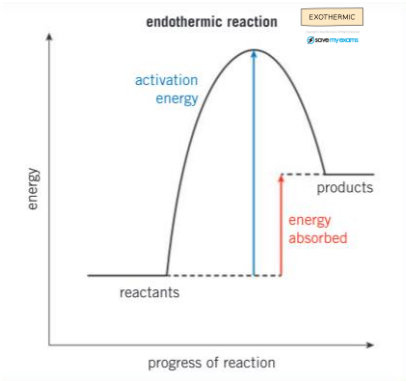
- Transfers energy **to the surroundings**.
- Causes an **increase in the temperature** of the surroundings.
- Examples include combustion, neutralisation, and most oxidation reactions.
- Uses include self-heating cans and hand-warmers.




### Reaction Profiles

Show whether a reaction is exothermic or endothermic.




### Keywords

**Activation energy:** the minimum amount of energy that reactants need to react when they collide.

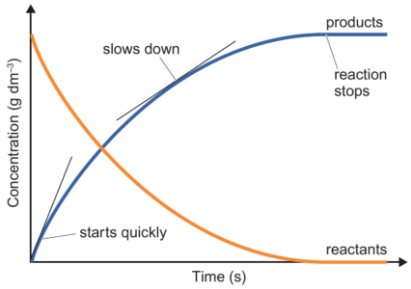
## Week 6 - Energy Changes and Rate of Reaction

### Rate and Collision Theory

For a chemical reaction to happen:

- Reactants must collide.
- Particle must have enough energy to react.

The greater the **frequency** of **successful collisions**, the greater the rate of reaction.




### Factors Affecting Rate of Reaction

Increasing temperature:

- Particles move faster increasing the frequency of collisions
- Particles have more energy, so a greater proportion of collisions are successful.

Increasing Concentration:

- More particles in the same volume therefore more frequent collisions.

Increasing pressure:

- Less volume therefore less space between particles causing more frequent collisions.

Increasing surface area:

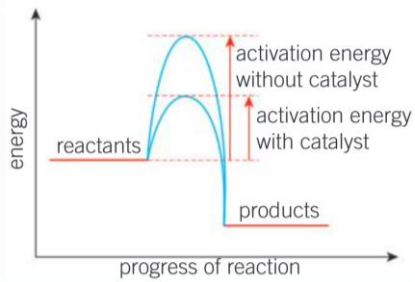
- Greater amount of reactant exposed leading to more frequent collisions.

### Catalysts

Provide a different reaction pathway that has a lower activation energy.

Catalysts:

- Are not used up in a reaction.
- Increase the rate of a reaction.




### Keywords

**Successful collision:** When reacting particles collide with enough energy to react.

# Combined Science

## Week 7

### Reversible Reactions

Reversible reactions are represented by the symbol ⇌.
e.g.

$$A + B \rightleftharpoons C + D$$

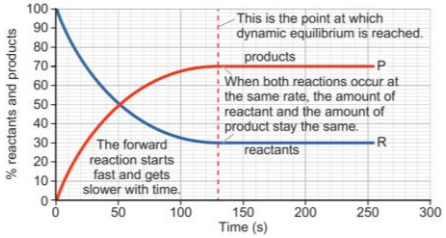
In a reversible reaction:

- In the **forward reaction**, A and B react to form C and D.
- In the **backward reaction**, C and D react to form A and B.
- If the forward reaction is **exothermic**, the backward reaction is **endothermic**.
- If the forward reaction is **endothermic**, the backward reaction is **exothermic**.

### Dynamic Equilibrium

In a closed system:

- The rate of the forward and backward reactions are the same.
- The concentration of the reactants and products remain constant.




### Le Chatelier's Principle

When a change in the conditions of a system at dynamic equilibrium changes, the system responds to counteract the changes.

| Condition change | | Equilibrium shift |
|---|---|---|
| Temperature | Increases | Favours the endothermic direction |
| | Decreases | Favours the exothermic direction |
| Pressure | Increases | Favours the side with fewest molecules |
| | Decreases | Favours the side with most molecules |
| Concentration of reactants | Increases | Favours the forward reaction |
| | Decreases | Favours the backward reaction |
| Concentration of products | Increases | Favours the backward reaction |
| | Decreases | Favours the forward reaction |

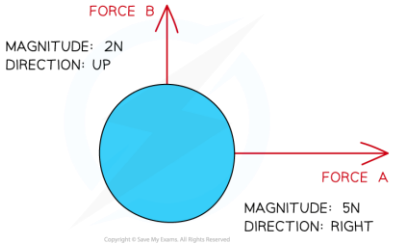
### Keywords

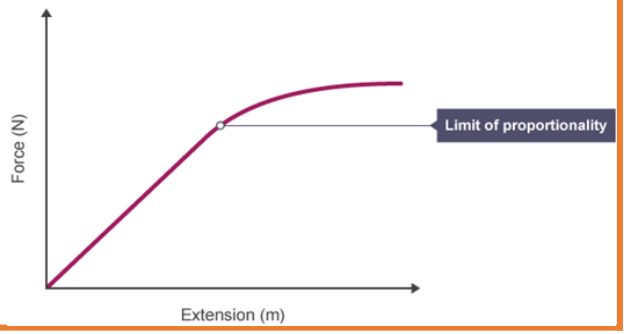
**Closed system:** A reaction in which none of the reactants or products can escape.

## Week 8

### Forces

- **Scalar** quantities have magnitude (size) but **not** direction.
- **Vector** quantities have magnitude **and** direction.
- **Contact forces** act when objects **touch** (for example friction), whereas **non-contact forces** act **over a distance** (for example magnetism).
- **Mass** is a measure of the amount of **matter** that makes up an object, measured in **Kg.**
- **Weight** is the **force** (measured in **Newtons, N**) produced when a gravitational field (**symbol g**) acts on matter. On Earth the **value of g is 9.8 N/Kg.**
- When the forces acting on an object are **balanced**, it is in **equilibrium**. The **resultant force** on the object is **zero**.
- **Work done** is the amount of **energy** (in **Joules**) transferred when a **force moves an object**.
- **Elastic** objects return to their original shape when any **force is removed**.
- **Inelasti**c objects can be **deformed**; they **do not** return to their original shape when force is removed.
- The **extension** of an elastic object (such as a spring) is **proportional to the force** applied to it. When it reaches its **limit of proportionality** it will **not** return to its original size.
- The **spring constant, k** can be found by calculating the **gradient of the linear part of a force-extension graph.**



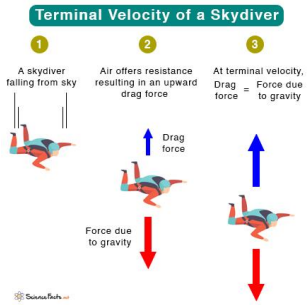



# Combined Science

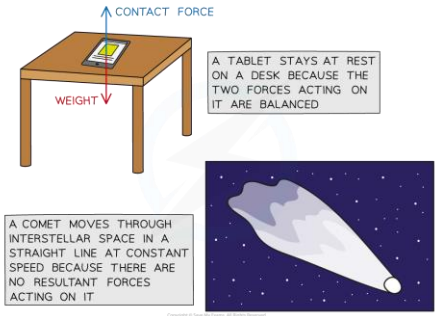
## Week 9

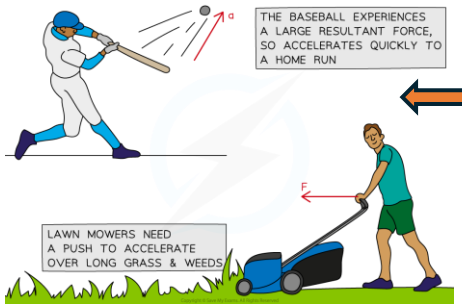
### Forces

At **terminal velocity** an object stops accelerating and travels at a **constant velocity.** This is because the **forces opposing** the direction of travel (friction and air resistance) balance the **accelerative force**.

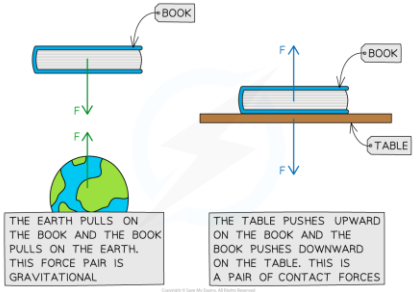



**Newton's First law** states that if the **resultant force on a stationary object** is **zero**, it will **remain stationary**. If the **resultant force on a moving object** is **zero**, it will **continue moving at constant velocity.**




**Newton's Second law** states that an object is proportional to the resultant force acting on it and inversely proportional to the objects mass

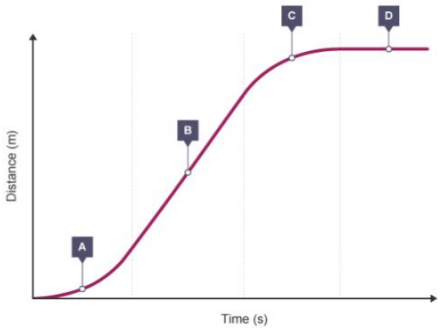


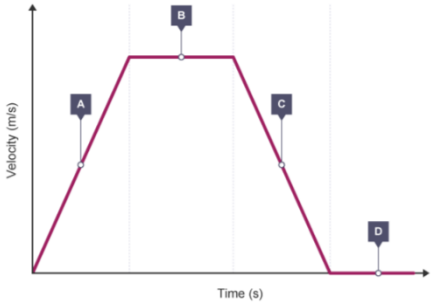

**Newton's Third law** states that when **two objects interact** they exert an **equal and opposite** force on one another.

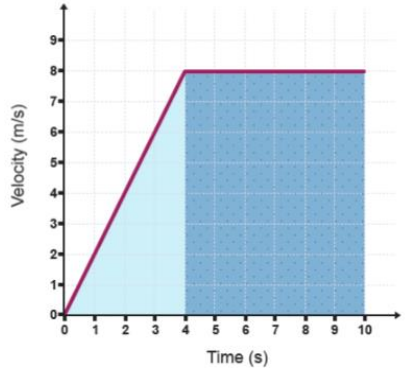
## Week 10

### Forces

- **Distance** is a **scalar** value, measured in m. **Displacement** is a **vector** value measured in m, since it also **has direction.**
- **Speed** is a **scalar** quantity, whilst **velocity** is a **vector** since it **has direction**. Both are measured in **metres per second, m/s.**
- The **gradient** of a **distance-time graph** gives the **speed** of an object.
- The **steeper the gradient the greater the speed** of the object.
- The **gradient** of a **velocity-time graph** gives the **acceleration** of an object.
- A **positive gradient** shows **positive acceleration.**
- A **horizontal line** shows a **constant velocity.**
- A **negative gradient** shows **negative acceleration, or deceleration.**
- The **area under a velocity-time graph** gives the **distance** travelled.
- Dividing the area into triangles and rectangles allows you to calculate the area.
- **Acceleration** is the **rate of change of the speed** (or velocity) of an object, measured in **metres per second per second, m/s$^2$.**
- **Acceleration** can be **uniform** (changing at a constant rate) **or non-uniform.**



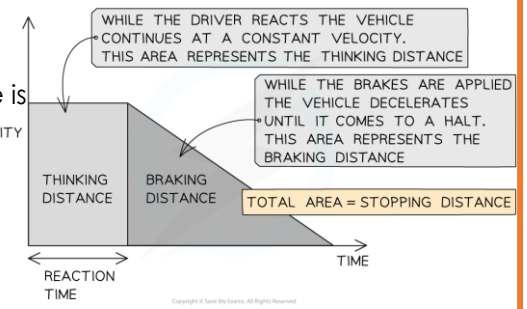



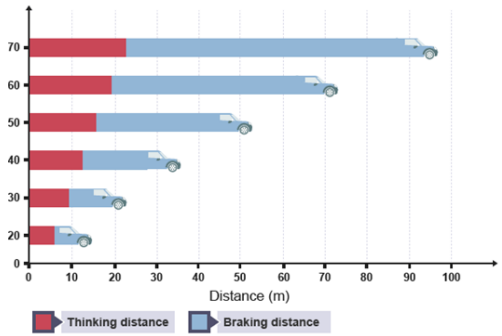
# Combined Science

## Week 11

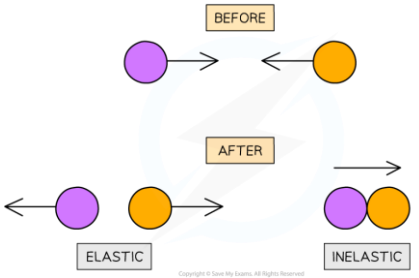
### Forces

- The **stopping distance** of a vehicle is the distance travelled from the moment a driver **sees a hazard** to the moment it stops.
- **Stopping distance** is made up of **thinking distance** (the distance travelled while the driver reacts to the hazard) and **braking distance** (the distance travelled after the brakes are applied).
- Car seatbelts and airbags **improve safety by slowing the change** in momentum during an accident. A faster change in momentum involved larger forces.

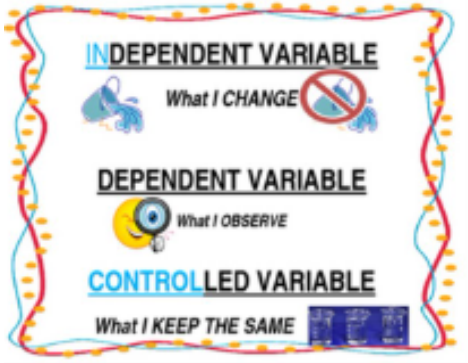



- **Momentum** is the tendency of a moving object to continue moving. **Inertial mass** measures the difficulty in changing the velocity of an object.
- **Momentum** is the product of the **mass and the velocity** of an object.
- In a **closed system**, where no external forces act, interacting objects maintain a **constant total momentum**. This is known as **conservation of momentum.**




## Week 12





**Steps to success:**

- Attempt all questions
- Write out calculations and give units
- Plot data with crosses
- 1 mark per minute
- Plan your 6 mark questions before you write
- Give, give, want when using mathematical formulae
- If it states tick one box, then only tick one box – Guess if unsure
- HUG the question
- Keep writing until you see "End of questions"

https://www.aqa.org.uk/find-past-papers-and-mark-schemes
Videos | freesciencelessons
AQA GCSE Biology Revision Notes 2018 | Save My Exams
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# Computer Science

## Week 1

**Count Controlled For and While Loops Iteration (while)**

The repetition of a block of statements within a program when the number of repeats is not known.

Python Example

```
player_turns = 5
while player_turns >0:
        print ("Player takes their turn")
        player_turns = player_turns – 1
```

```
active = True
while active == True:
        print ("Player is active")
```

**Iteration (for)-** The repetition of a block of statements within a program when the number of repeats is known

Python Example

```
for counter in range (0,10,1):
        print (counter)
```

## Week 2

**String Manipulation, Validation and Error Handling**

Length of String - The length of a string can usually be determined using the len statement. This gives the length as an integer.

Python Example

```
word = ("Computer")
word_length = (len(word))
```

Character Position - It is possible to determine which character features at a position within a string as each character is numbered. Computers start counting at 0 so the first character is always 0.

```
word = ("Computer")
print (word[2]) #would print the character "m" as c = 0 and o = 1.
```

**Upper and lower case**

It is possible to change all letters in a string to either lowercase or uppercase. This can be very useful, for example when checking possible inputs.

```
word = ("Computer")
word = word.upper() #would change the string to "COMPUTER"
word = ("Computer")
word = word.lower() #would change the string to "computer"
```

## Week 3

**Concatenation**

To concatenate strings means to join them to form another string – adding two strings together.

Python Example

```
word = ("Computer")

sentence = ( word + "Science") #would add the two strings together to form one string which is "Computer Science"
```

Data Structures and sub routines

Procedure - A section of computer code that performs a specific task.

Python Example

```
def greeting ():
        print ("Hello world")
#.....
greeting()
```

**Function** - A section of code that, when programming, can be called by another part of the program with the purpose of returning one single value

```
def addition(a,b):
        c = (a+b)
        return (c)
#.....
num1 = int(input("Enter first number:"))
num2 = int(input("Enter first number:"))
answer = (addition(num1,num2))
print (num1,"+",num2,"=",answer)
```

# Computer Science

## Week 4

**1D Array**
An array is a data structure that holds similar, related data. An array is like a collection of boxes, each of which is called an **element**. Each element has a position in the array and can hold a value. The data in an array must all be of the same **data type**.

| Pen | Pencil | Ruler | Eraser |
|---|---|---|---|

Python Example

```
stationery = [ "Pen" , "Pencil" , "Ruler" , "Eraser" ]
print (stationery) #would display whole array
print (stationery[0]) #would output the first element – "Pen"
print (stationery[0-2]) #would output the first 2 elements – "Pen,Pencil"
```

**2D Array**
A two-dimensional array can hold more than one set of data. This type of array is like a table, with data held in rows and columns.

| | 0 | 1 | 2 | 3 |
|---|---|---|---|---|
| 0 | Pen | Pencil | Ruler | Eraser |
| 1 | Red | Green | Blue | Yellow |

```
stationery = [ [ "Pen","Pencil","Ruler","Eraser" ] , ["Red,"Green","Blue","Yellow] ]
print (stationery) #would print the whole 2D array
print (stationery[0]) #would print the first row only (the original stationery)
print (stationery[1]) # would print the second row only (the coloured pens)
```

## Week 5

**File Handling**
**Open** - Once a file has been opened, the records are read from it one line at a time. The data held in this record can be read into a variable, or, more commonly, an array

Python Example

```
file = open("scores.txt" , "r") #would import the contents of score into the variable file in read only mode
file = open("scores.txt" , "a") #would import the contents of score into the variable file in append mode
file = open("scores.txt" , "w") #would import the contents of score into the variable file in write mode
```

**Read** - Once a file has been opened, the records are read from it one line at a time. The data held in this record can be read into a **variable**, or, more commonly, an **array**.

Python Example

```
score = file.read() #reads the entire file
score = file.readline() #reads a single line
```

Write - Data is written to a file one line at a time, using the write Line statement

Python Example
```
for x = 0 to 9
    file.write(scores[x])
```

Closing - A file must be closed by the program for it to be saved.

Python Example
```
file.close()
```

## Week 6

**Operating System (OS)** - Software, which manages the hardware and software resources of a computer system and provides an interface for the user.

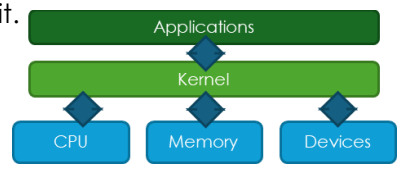
**Kernel** - The heart of the operating system, responsible for looking after "the most low-level hardware operations".

**Multi-Tasking** -The ability of an OS to supply the CPU with instructions from multiple programs in particular orders to create the illusion that a computer is processing multiple programs simultaneously.

**The Kernel**
The kernel is the heart of the operating system and is responsible for looking after "the most low-level hardware operations".

It is the kernel that applications make use of when they want to operate the computer's hardware.

So that the kernel understands how to communicate with the various computer components, each component/device will register its **driver file** with the kernel. The **driver** file holds code which allows the OS (kernel) to communicate with it.



# Computer Science

## Week 7

**Graphical User Interfaces**
Uses windows, icons, menus and pointers (WIMP) to control the computer. Only been around since the mid 80s. Windows and Apple Mac OSx are examples of this kind of interface.


**Menu Driven Interface**
Uses menus to control the computer. These were very popular on early mobile phones and are seen in all high streets on cash machines and also on many MP3 players. Only offer limited functions (i.e.. if it is not on the menu then you can't do it!)

**Command Line Interface**
Used to be the only way to interact with a computer (pre-80s) and is still used today by 'Linux users' and other professionals with technical knowledge. With this kind of interface 'written commands' control computers.

## Week 8

**Encryption**
The process of scrambling (encoding) data before transmission so that if intercepted, it would be unreadable.

**Utility Software**
Software, which maintains a computer system by keeping it secure, organising data and optimising the system.

**Formatting**
The act of preparing a disk for data storage.

**Data Compression Software**
Compression software reduces the size of files. There are various reasons why the size of a file might need to be reduced:
-Less storage space required
-Faster download times – improving online experience
-Faster streaming speeds of video/audio files
There are two ways in which compression software might reduce the size of a file:

**Lossy Compression**
This is when unrequired data is removed from a file. MP3s are an example of this where sound quality may reduce but not to a point which is noticeable by the listener.

**Lossless Compression**
This is when data is temporarily removed from the file, but added back (rebuilt) when the file is to be used again. Zip files are an example of this. They will need to be unzipped (extracted) to be useable again.

## Week 9

**Networks**
Lan - Local Area Network – One which covers a small geographical area and whose equipment is owned by the organisation/individual.

- A LAN is a Local Area Network.
- It is a connection of computers and devices.
- Each device on a network is known as a node (e.g. computer, printer, etc.)

**A LAN is confined to one site.**
- It's therefore relatively small
- All network infrastructure is the property of the organisation

**Different ways that LANs can be set up:**


The topology of a network affects:
cost, Performance, ease of set-up.

# Computer Science

## Week 10

**WAN - Wide Area Network**

**Wide Area Network** – A network that covers are large geographical area and whose equipment (phone lines / satellites) is usually owed by third party telecommunication companies often supply.

**Cloud Computing -** A term used to describe online services and applications.

**URL** - Uniform Resource Locator – a fancy name for the web address of a website.

**Virtual networks –** A virtual network is one which uses software to subdivide a physical network (LAN or WAN) into smaller ones.

## Week 11

**Data Packets**

- When files are sent over the internet they are split into millions of **data packets**.
    - Packets get sent by different routes according to availability.
    - When you send a file online, the parts of the file might travel one way around the world and the other parts may go in the opposite direction!
    - Packets are reassembled at receiving end.
- Typical packet structure:


**The Header** contains 3 pieces of information:

Sequence Number
Return Address
Destination Address.

## Week 12

**Destination Address** a data packet needs a destination address so that it can be routed to the correct location.

**Return Address** When data arrives, the computer which sent the data can be notified that it arrived safely. And if a packet arrives corrupted, the computer which sent the data can be asked to send it again.

**Error check** is an important aspect of a data packet.

This aspect of the packet is a '**checksum number**'. A checksum is made up of a calculation and its correct answer. Once the packet has been received by the destination computer, If the calculation is run and still produces the correct answer, then we know the data hasn't been corrupted on its journey.

**Sequence Number** - As data is split into packets, the sequence number allows the file to be rebuilt by putting the packets back together in the correct order.

**Data –** Is the data its transporting.

# Construction

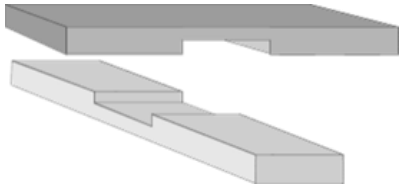
## Week 1

**Risk Rating Matrix:**
- Severity of risk
- Likelihood of risk
- Risk score: - initial risk score – final risk score

**People at risk:**
- Personal risk
- Risk to colleagues
- Risk to visitors
- Risks to the general public and wider population

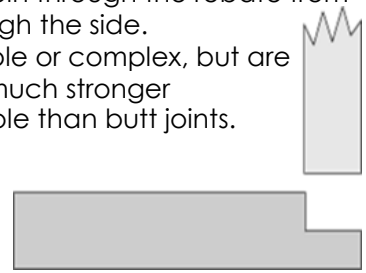
## Week 2

**Cross-halving joint:**
The cross-halving joint is another form of half-lap, but used where one piece of timber crosses another, in order to retain the same dimension. If accurately constructed, this is an extremely strong joint.
Cross-halving joints can also be used in trellis construction and making box compartment dividers.



## Week 3

**Housing or Rebate Joint:**
A rebate (or rabbet) cut in a piece of timber is also a joint. The purpose is to make assembly easier and to increase glue surface area. It is also possible to screw or pin through the rebate from underneath, or through the side.
Rebates can be simple or complex, but are effective joints and much stronger and easier to assemble than butt joints.



## Week 4

**Carpentry and joinery dimensional accuracy:**
- Length
- Height
- Width

**Square:**
- Diagonal 1
- Diagonal 2
- Differential between diagonal 1 and diagonal 2

## Week 5

**Structural forms in low-rise construction and their features:**
- traditional cavity wall construction
- a form of cellular form of construction with load-bearing elements
- brickwork and blockwork
- modular construction
- use of standardised modules for repetition
- timber-framed construction
- low-rise steel frame construction

## Week 6

**Fire-resistant materials:**
- plasterboard
- concrete
- blockwork
- brickwork
- intumescent paint
- mineral wool

**Fire compartments and fire barriers slow the spread of fires.**
- Fire alarm systems
- smoke detection
- sprinkler systems
- fire hoses
- fire extinguishers

# Construction

## Week 7

**Sound Resistance:**
The impact of internal and external noise can be reduced in buildings though restricting the passage of sound through the fabric of the building.

**Ways in which the passage of sound can be restricted:**
- triple glazing
- high-density blockwork sound insulation quilt
- plasterboard layers
- acoustic ceilings
- flooring mats

## Week 8

**Thermal Resistance:**
- Heat is retained in buildings by the use of insulation and draught proofing.
- To provide an acceptable U-value and to prevent the loss of heated air through gaps within a building or structure.
- It is also intended to prevent the entry of cold air into a building.

## Week 9

**Weather Resistance:**
Reasons for using water resistance methods:
- to provide a dry internal environment
- thermal comfort of occupants
- humidity levels
- prevention of damage to finishes
- prevention of water staining
- prevention of structural degradation

## Week 10

**Sustainability:**
The purpose of sustainable construction:
- preservation of resources for future generations
- minimising the impact of construction activities on the natural environment

## Week 11

**Functions and features of different walls used in the construction of superstructures in low-rise buildings:**
- resist heat transfer
- reduce sound transmission
- transfer loads to foundations
- provide shelter
- provide security

## Week 12

**Functions of floors used in the construction of low-rise buildings:**
- to provide a level surface
- to reduce sound transmission
- to support and transfer loads to walls
- to provide discreet distribution routes for services

**Materials used:**
- stress-graded timber joists
- beam and block
- eco-joists
- timber joists
- precast concrete planks
- concrete

# Dance

## Week 1

**Dance Anthology - 'Artificial Things' Scene 3**
**Lucy Bennett (for Stopgap Dance Company)**

**Stimulus (starting points):**
- A snow-covered urban landscape with an isolated figure perched on a collapsed wheelchair. This figure is being observed from afar as if through a snow globe.
- The mysterious paintings by the Serbian artist Goran Djurovic.
- The dancers' personal experiences.

**Choreographic Intentions**:
- Coming to terms with life's limitations
- Constricted within a snow globe
- The characters find a resolution by coming together, they surrender to the fact that we all have to live with individual regrets.

**Choreographic Approaches**:
- Collaboration (Stopgap's dancers are encouraged to contribute to the process)
- Much of the material has been driven by Laura's movement in her wheelchair and has been translated by the standing dancers David W and Amy.

**Features of Production:**
- Costume – a wash of blue and green
- Set/Staging – a crudely painted heavy backdrop in which paint looks as if it is running down the canvas.
- Dancers – 4 (2 male and 2 female)
- Lighting – focuses in on one or two spots. It opens out in the middle, with a blue wash and side lighting before closing down to another spot for the final solo.

## Week 2

**'Artificial Things' Features of Production:**
- Aural Setting –a futuristic atmosphere acknowledging that time had passed and that the old ways had broken down. The piano creates a cold, ambient sound. There are sounds of paper snow and other effects such as a distant rumble, wind and footsteps through snow. Elements of the song 'The Sunshine of Your Smile' were mixed into the atmosphere often sounding distorted or as if drifting in on the wind. The final section uses the full version of the song.
- Performance Environment - **Proscenium Arch** (The Arch or opening that creates the effect of a picture frame and separates the stage from the auditorium)

**Choreographic Approach Step 1:**
- **Stimulus** – Inspiration for an idea or movement.
- **Visual** – Relating to sight.
- **Auditory** – Relating to sound.
- **Kinaesthetic** – Sensory perception (or awareness) of movement and position.
- **Tactile** – Relating to the sense of touch.
- **Ideational** – Relating to ideas or concepts.

**Choreographic Approach Step 2 Research:**
a) Instructions on a leaflet or packet
b) A photograph or image of a face
c) An item or object you could sit or lie on
d) Frozen water
e) Sleep

## Week 3

**Choreographic Approach Step 3 Improvising:**
- **Improvisation –** Exploration or generation of movements without planning.

**Improvisation Examples:**
- Play, pause and rewind improvisation game.
- Partner Mirroring (Mirroring – performing the same movement but on the opposite side of the body).

**'Artificial Things' Technical Skills**:

- **Actions** – What a dancer does, e.g. travelling, turning, elevation, gesture, stillness, use of body parts, floor-work and the transference of weight.

- **Space** – The 'where' of movement such as levels, directions, pathways, shapes, designs and patterns.

- **Dynamics** – The qualities of movement based upon variations in speed, strength and flow.

- **Relationships** – The ways in which dancers interact; the connections between dancers.

# Dance

## Week 4

**Choreographic Approach Step 4 Generating:**

- **Motif** – A movement phrase encapsulating an idea that is repeated and developed throughout the dance.
- **Movement Material/Content** – The matter of dance; actions, space, dynamics and relationships.
- **Choreographic Content** - movement content, choreographic devices and structures/form.

**Choreographic Approach Step 5 Selecting:**

| Actions | Space |
|---|---|
| travel<br>turn<br>elevation<br>gesture<br>stillness<br>use of different body parts<br>floor work<br>transfer of weight | pathways<br>levels<br>directions<br>size of movement<br>patterns<br>spatial design |
| **Dynamics** | **Relationships** |
| fast/slow<br>sudden/sustained<br>acceleration/ deceleration<br>strong/light<br>direct/indirect<br>flowing/abrupt | lead and follow<br>mirroring<br>action and reaction<br>accumulation<br>complement<br>contrast<br>counterpoint<br>contact<br>formations |

## Week 5

**Choreographic Approach Step 6 Developing:**

**Choreographic Intention** – The aim of the dance; what the choreographer aims to communicate.

- Theme/s
- Mood/s
- Meaning/s
- Idea/s
- Style or style fusion

**Motif Development** – Ways in which a movement phrase can be varied such as;

- **Levels** – Distance from the ground; low, medium or high.
- **Directions** – The facing of a movement.
- **Dynamics** – Speed, strength and flow.
- **Rhythm** – Repeated patterns of sound or movement.
- **Size of movement** – Small or big.
- **Fragmentation** – Use of parts of a phrase or motif.
- **Instrumentation** – Use a different body part.
- **Ornamentation** – Embellish the motif.
- **Inversion** – Perform upside down.
- **Retrograde** – Reversing a movement phrase.
- **Repetition** - Performing the same action or phrase again.

## Week 6

**Choreographic Approach Step 7 Structuring:**

- **Structuring Devices** – The ways in which a dance is made, built, ordered or organised.

- **Binary** – A composition in two parts or sections (AB).
- **Ternary** – A composition in three parts (ABA).
- **Episodic** – A choreography with several sections, linked by a theme (ABCD).
- **Rondo** – A music or dance form with alternating and repeating sections e.g. verse and chorus (ABACAD).
- **Narrative** – Dance that tells a story.

**Aural Setting** – An audible accompaniment to the dance such as music, words, song and natural sound (or silence).

**Climax** – The most significant moment of the dance.

# Dance

## Week 7

**Dancer Relationships:**

- **Lead and follow** – Where one dancer leads, and another dancer or dancers follow.
- **Action and Reaction** – Where one dancer performs an action, and another dancer or dancers respond to it.
- **Mirroring** – Performing the same movement but on the opposite side of the body.
- **Contact** – When dancers touch, lean and support one another.
- **Formations** – Shapes or patterns created in space by dancers.
- **Counterpoint** – When dancers perform different phrases simultaneously.
- **Contrast** – Movements or shapes that have nothing in common.
- **Complement/Complementary** - Perform actions or shapes that are similar to but not exactly the same as another dancer/s.
- **Accumulation** – When a dancer performs a series of movements and others join in at different times until all perform in unison.

## Week 8

**Choreographic Devices:**

- **Motif and Development** - Ways in which a movement phrase can be varied.
- **Repetition** – Performing the same action or phrase again.
- **Contrast** - Movements or shapes that have nothing in common.
- **Manipulation of Number** – How the number of dancers in the group are used.
- **Highlights** – Important moments of a dance.
- **Climax** – The most significant moment of the dance.
- **Unison** – Two or more dancers performing the same movement at the same time.
- **Canon** – When the same movements overlap in time.

**Form** – The overall shape and structure of a dance.

- **Logical Sequencing** – The flow of phrases or sections of a dance.
- **Unity** – A sense of 'wholeness' or harmony.
- **Transitions** – Links between dance phrases or sections.
- **Beginning, Middle and an End**

## Week 9

**Choreographic Approach Step 8 Refining and Synthesising:**

**Physical Skills** – posture, alignment, balance, coordination, control, flexibility, mobility, strength, stamina, extension and isolation.

**Expressive Skills** – projection, focus, spatial awareness, facial expression and phrasing.

**Metal Skills (Process)** - systematic repetition, mental rehearsal, rehearsal discipline, planning of rehearsal, response to feedback and capacity to improve.

**Metal Skills (Performance)** - movement memory, commitment, concentration and confidence.

**Technical Skills** – actions, space, dynamics, relationships, timing, rhythm and moving in a stylistically accurate way.

**Time Requirements for Component 1 Choreography Task:**

- Solo - a minimum of two minutes and a maximum of two and a half minutes
- Group dance - a minimum of three minutes and a maximum of three and a half minutes for two to five dancers.

# Dance

## Week 10

**Component 1 Marking Grid – Top Band:**

**You are assessed on:**

- Selection and use of appropriate action and dynamic content to realise choreographic intent
- Selection and use of appropriate spatial content (and relationship content where appropriate) to realise choreographic intent
- Selection and use of appropriate structuring devices and form to realise choreographic intent
- Selection and use of appropriate choreographic devices to realise choreographic intent
- Selection and use of appropriate use of appropriate aural setting (and performance environment where appropriate) to realise choreographic intent

**For top marks [8 – CLEAR and 7 – JUST]** your choreography must:

1. Be **exceptionally creative** and **effective**
2. Demonstrate a **sophisticated** understanding of choreography

## Week 11

**Methods of improving a performance:**

- Film and Watch Back
- Use of mirrors
- Peer feedback
- Peripheral Vision
- **Mental Rehearsal** – Thinking through or visualising the dance.
- **Systematic Repetition** – Repeating something in an arranged or ordered way.

## Week 12

**Component 2 Written Exam Question 1:**

- **1st mark** – Clear and concise theme linked to the given stimulus
- **2nd mark** – state the stimulus in your answer to show you have read the question (easiest mark)
- **3rd mark** – How would you use the number of dancers

**Example:**

You are choreographing a solo (a dance for one dancer) using a prop: an umbrella as a stimulus.

Q1) Outline a choreographic intent for your solo, which refers to the stimulus and the use of one dancer. 3 marks.

I would have **my dancer** [1st mark – number of dancers] use an open **umbrella** [2nd mark – stating the stimulus] as a symbol of **their life in the present and close the umbrella to show a memory from their past** [3rd mark – clear choreographic intention].

# Digital Information Technology

## Week 1

### Practice PSA Task 1a Project Proposal

**Project proposal** - Used within organisations to allow managers to consider all aspects of a project.
**Audience** - It is important in project planning to clearly identify the people who will use the system.
**Purpose** - Identify the reasons for the project.
**User requirements** - Tasks that the user needs to be able to carry out.
**Output requirements –** This could be visual, audio or haptic e.g. vibration. **Input requirements** – How is data input? E.g. touch.
**Accessibility requirements** – To help users e.g. text to speech option. **Constraints** – Restrictions such as time, budget and human resources.

**Figure 1 Project proposal template**

Type your answers in the boxes, the boxes will expand when you type. Use the Project proposal brief to help you.

Purpose and audience of the project

Project requirements

User accessibility requirements

Constraints

## Week 2

### Practice PSA Task 1b Planning Timescales

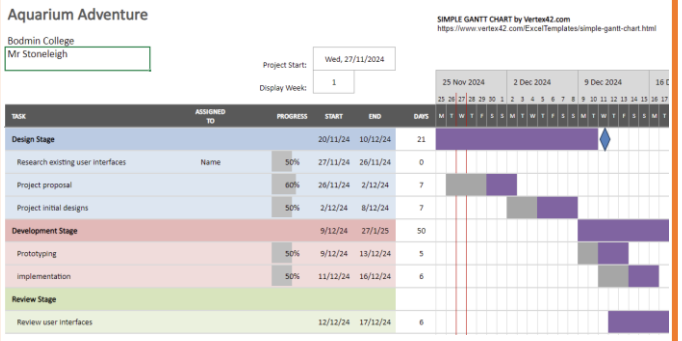
**Project plan** – All tasks and sub-tasks to be completed will be ordered.

**Timescales –** Length of overall project in time, completion date and dates when tasks/sub-tasks are completed.

**Gantt chart –** A visual bar chart used to plan and track a project's progress.

**Key milestones –** Key points in a project e.g. completion of design phase of the project. A diamond symbol represents a milestone on a Gannt chart below.

**Figure 2 Gantt Chart**

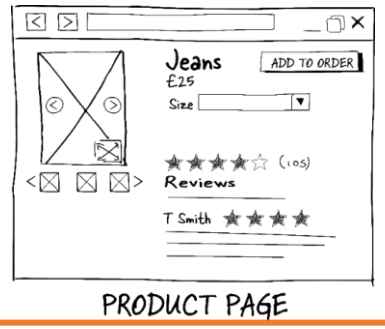



## Week 3

### Practice PSA Task 2 Interface Designs

**Sketch** - Allow a screen design to be made quickly. A sketch can be shown to a client. Often called a **wireframe**.
**Features of a sketch** – buttons, colour, text size and style, an X in a box shows an image, a triangle to show a drop-down menu, thumbnails, search bar.
**Storyboard** – Show the sequence of screens in an app, website or program. They are useful when discussing the design and functionality with the client.
**Features of a storyboard** – Layout of assets, proportions of assets, colours are used, show links between screens, annotation show actions and processing.
**Visualisation** – Using storyboard and sketches to visualise the interface.
**Good design** – increases confidence of users, reduces amount of time to learn features, reduces time to complete tasks, increases user attention, reduces specialised knowledge.

**Figure 3 Sketch**



# Digital Information Technology

## Week 4

### Practice PSA Task 3 Prototype User Interface

Use your design to produce a user interface prototype using the following **design principles**:

- **Colours** e.g. organisational house style
- **Font style/size** e.g. san serif fonts
- **Language** e.g. age and skill level appropriate
- **Amount of information** e.g. use of white space
- **Layout** e.g. consistency, input controls
- **User perception** e.g. red colour for errors
- **Retaining user attention** e.g. labelling
- **Intuitive design** e.g. graphics to denote button actions.

**Figure 4 Design**

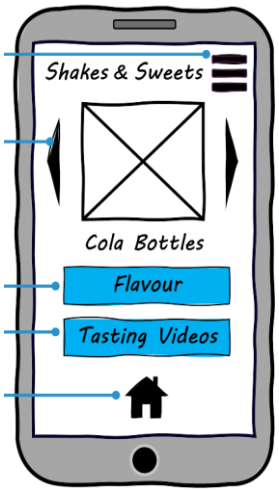



**Figure 5 Prototype**


## Week 5

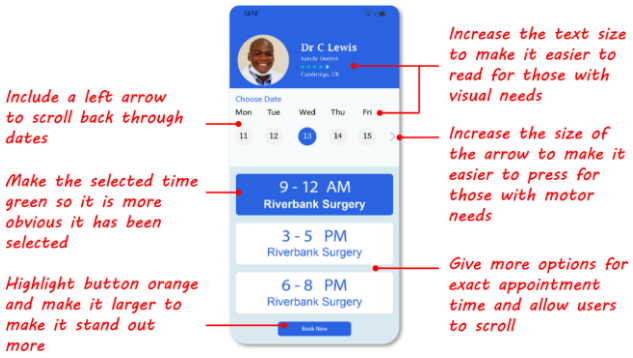
### Practice PSA Task 4 User Interface Review

Reviewing the success of the user interface should include the strengths and weaknesses in:

- How well the **user requirements** have been met e.g. input and output,
- **Suitability** for audience and purpose e.g. age, accessibility
- **Ease of use** e.g. completing forms
- **Accessibility** features
- How effectively the **design principles** have been met e.g. ensuring colours don't clash
- Project **planning techniques** used

Suggest **improvements** that could be made to the user interface to better meet the audience needs.

**Figure 6 Improvements**




## Week 6

### PSA Task 1a Project Proposal

You have about 45 minutes to complete the project proposal template including:

- **Purpose** and **audience** of the project
- Project **requirements**
- User requirements
- **Constraints**

Revisit week 1 project proposal and read through the information. Make some notes which you can take into the assessment, but you must leave them behind with the teacher.

**Figure 7 Project Proposal Template**

**Project proposal template**

Type your answers in the boxes, the boxes will expand when you type. Use the Project proposal brief to help you.

Purpose and audience of the project

Project requirements

User accessibility requirements

Constraints

# Digital Information Technology

## Week 7

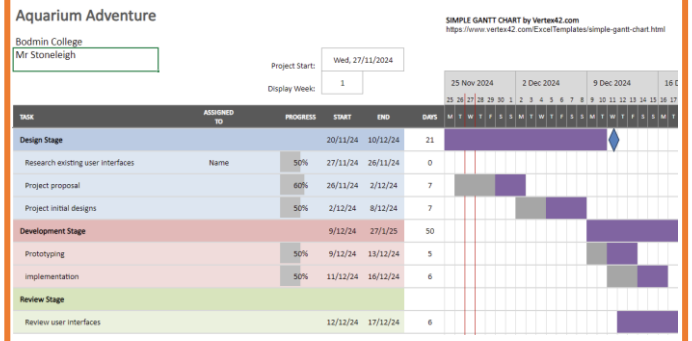
### PSA Task 1b Planning Timescales

During the assessment you have about 45 minutes to create a **Gantt chart** to show:

- **Timescales**, including **tasks** and **sub-tasks**
- Key **milestones**
- Task **dependencies**
- Use today's date as the start of the project.

Revisit **week 2** planning timescales and read through the information. Make some notes which you can take into the assessment, but you must leave them behind with your teacher.

**Figure 8 Gantt Chart**




## Week 8

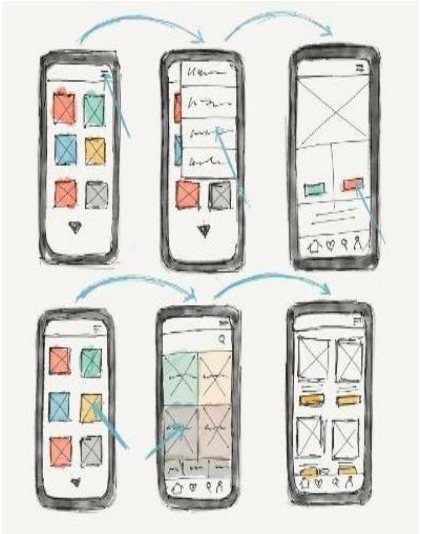
### PSA Task 2 Interface Designs

During the assessment you have about 90 minutes to produce user interface designs which should:

- Be **easy** to use
- Use appropriate **design principles**, see week 4 & 12
- Include different **accessibility** features

Revisit **week 3** interface designs and read through the information. Make some notes which you can take into the assessment, but you must leave them behind with your teacher.

**Figure 9 Storyboards**



## Week 9

### PSA Task 3 Prototype User Interface

During the assessment you have about 2 hours to create a **prototype** of the user interface using the images and information provided. You can create the prototype using **PowerPoint** or the software that is suggested.

Revisit **week 4** interface designs and read through the information. Make some notes which you can take into the assessment, but you must leave them behind with your teacher.

**Figure 10 Prototype**

# Digital Information Technology

## Week 10

**PSA Task 4 User Interface Review**

During the assessment you have about 1 hour to review the user interface against user needs. Consider the **strengths** and **weaknesses** of the interface against:

- User **requirements**
- **Suitability** for audience and purpose
- **Ease** of use
- **Design principles** used
- **Accessibility** features

Suggest **improvements** that could be made to the user interface to better meet the audience needs.

Revisit **week 5** user interface review and read through the information. Make some notes which you can take into the assessment, but you must leave them behind with your teacher.

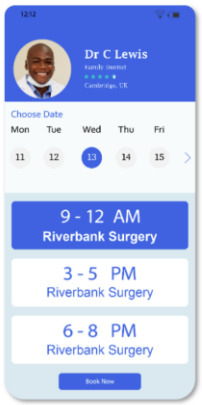
**Figure 11 Strengths and Weaknesses**

Strengths

- Time buttons are large and easy to press
- The days of the week are easy to read as they are black text on a white background
- The image of the doctor makes it easy to identify

Weaknesses

- There is no left button for the days
- The right button is small making it hard for those with motor needs to press
- The 'Book Now' button has no highlight




## Week 11

**Contingency**

This week is set aside for any event or circumstance where you have not completed your PSA tasks e.g. due to illness.

During this week, your teacher may be marking your assessment. If you did not achieve your expected potential, you may be given time to improve evidence. This is called resubmission of evidence.

You may need to revisit **week 1, 2, 3, 4 or 5** to read through the information. Make some notes which you can take into the assessment, but you must leave them behind with your teacher.

Learn the following **keywords** and their meanings.

| | |
|---|---|
| Embedded systems | Traffic lights, vending machines, smartwatches |
| Types of user input | Touchscreen, traditional displays |
| Hardware resources | Processing power, memory |
| Emerging technologies | New innovations e.g. Artificial intelligence |
| GUI | Graphical user interface |
| WIMP | Windows, icons, menus, pointer |

## Week 12

**Contingency**

Learn the following **design principles**.

| | |
|---|---|
| Colours | Use a limited range of colours, use of organisational house style |
| Font style/size | Ensure text style/size is readable, avoid decorative fonts |
| Language | Use language appropriate for user skill level, age-appropriate language |
| Amount of information | Make appropriate use of white space, provide appropriate amount of information for the task |
| Layout | Consistency throughout the whole interface |
| User perception of | Visuals, to include photos, symbols, graphics |
| Retaining user attention | Clearly labelled items/features |
| Intuitive design | Helpful pop-up messages |

# Drama

## Week 1

**Stage Types**
- Thrust
- Proscenium
- Traverse
- End on
- In the round

**Playwright** – Someone who writes the play

**Genre**: Musical Theatre

**Character** – a person in a play, novel or film

**Blood Brothers – Mrs Johnstone/Mrs Lyons**

**Social and Historical context** – what was happening in the world when the play was written and set

**Themes**
- **Nature/Nurture** – Nature refers to genetics, nurture is environmental factors
- **Social Class** – a division of society based on social and economic status
- **Superstition** – a widely held but irrational belief in supernatural influences

12-mark exam question – **Performance Space** and **Interaction**

## Week 2

- **Proxemics** – the space between characters on stage
- **Thought-track** – the audience hear the character's thoughts out loud
- **Hot-seat** – asking a character questions
- **Sub-text** – hidden meaning beneath the
- text

**Theatrical Skills**
**Vocal Skills**:
- Tone – the emotional sound of the voice
- Pitch – high or low
- Pace - speed
- Accent – manner of speaking relating to where the character is from
- Emphasis – the stress on certain words to make them stand out
- Intonation – the rise and fall of the voice
- Volume – Loud or quiet

**Physical skills**:
- Facial expression – movement of the face to express emotion
- Gesture – A movement of the head, hand or other body part to express meaning
- Gait – manner of walking
- Posture – position of body when standing or sitting.

## Week 3

**Social, Historical Context – 1980's, Margaret Thatcher, Recession**

**Plot** - storyline

**Duologue** – a dialogue between two people

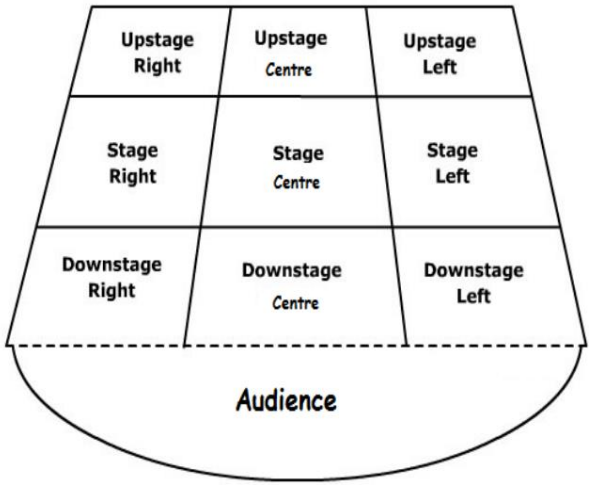
**Comedy** – a humorous genre

**Interaction** – reciprocal action or influence

**Performance Space** – the space on stage

**Cross-Cutting** – Action plays from one side of the stage and then the other and back again

**Stage Positions**: Upstage, Downstage, Stage right, Stage left



# Drama

## Week 4

**Monologue –** A speech by one character

**Design Question**: Set (4 marks)
Command words in exam questions:
- **Describe** – to give detail
- **Analysis** – to analyse, to interpret
- **Justify** – to give reason

**Set** – the scenery and furniture on stage

**Levels** – creating different heights on stage through ramp, steps etc

**Truck** – a board with wheels used to carry set pieces onto stage

**Backdrop/Cyclorama** – a white panel upstage which can be painted upon or projected onto

**Projection** – presentation of an image on a surface

**Flats** – a flat piece of theatrical scenery

**Gauze** – A see through material which can be placed downstage

## Week 5

**20 Mark question –** Understanding the character's journey through the whole play

**Performance Skills**
- **Vocal Skills** – tone, pitch, pace, accent, emphasis, intonation, volume
- **Physical skills** – facial expression, gesture, gait, posture, movement
- **Interaction** – the way a character acts and responds to others
- **Performance Space** – the space on stage
- **Climax** – the tension builds to its highest point
- **Tension** – a growing sense of expectation within the drama

## Week 6

**Devising**

**Collaboration**

**Practitioners** –
- UPG
- The Paper Birds
- Frantic Assembly

**Verbatim** – a form of documentary theatre where the script is created from the exact words spoken by real people.

**Physical theatre** – a genre of performance that emphasizes the use of the body as the primary means of expression.

**Dance**

**Movement**

**Mime**

# Drama

## Weeks 7, 8, 9

**Developing Devising Skills**
There are a wide range of *stimuli* to choose from, from which a *devised* work can be created. These include:

- pictures
- poems
- music
- articles
- artefacts
- paintings

It is important to allow a limited time frame to discuss responses to the *starting point* or stimulus.

- Who are the *target audience*?
- What should be **said** to them?
- What should be **shown** to them?
- How should they **feel** by the end of the drama?

From the very start of the process, ideas should be tried out practically. For example:

- create six *tableaux* immediately - this could lead to other ideas
- write spontaneously for two minutes in response to the starting point
- share ideas
- *improvise* a two-minute scene without thinking or planning - this could generate new ideas
- set tasks
- research the topic - get images, facts, statistics, interviews, etc
- explore real-life events and use spoken or written stories from people - this may lift practical work to a higher standard.

## Weeks 10 & 11

**Vocal Skills:**

- Pitch
- Tone
- Pace
- Projection
- Pause
- Silence
- Intonation

**Physical Skills:**

- Body language
- Gestures
- Gait
- Facial expressions
- Proxemics
- Interaction

## Week 12

**Evaluation/Reflection**

**Evaluating work and setting targets:**

- **Analyse** - to look at the information provided and break it down to identify and interpret the main points being raised
- **Evaluate** – to make a personal judgement about the performance
- **Target** – setting a goal for improvement

**Specific** – clearly defined
**Measurable** – capable of being measured
**Attainable** – able to be achieved
**Relevant** - appropriate
**Timely** – set to a time limit

# English

## Week 1

**Non-fiction:** A form of writing that is based on real events. English Language Paper 2 focuses only on writing that is based on real life events and real people.
**Perspective:** an attitude or point of view on something. Because English Language Paper 2 is based on non-fiction, writers tend to express their perspectives on real life events.
**Question 1:**
- Find four true statements out of eight.
- Statements A-H run in chronological order.
- 4 marks – do this question first.

**Question 3:**
- The language question.
- Analysis of writer's use of language to describe a particular thing
- Use a clear thesis statement and explore.
- 12 marks – do this question second.

**The Magic Three:**
- **Semantic field:** a group of words that all relate to one particular meaning or idea
- **Juxtaposition:** a contrast between two things
- **Deliberate verb choice:** a writer's deliberate use of words that show action

**Writer's methods:** the ways in which writers create effect and meaning e.g. simile. This is relevant when you are answering question 3 and question 4 on Paper 2, where you need to identify and explore the methods the writers use to create effects and express their perspectives towards something.
**Challenge yourself with the following language techniques:**
- Simile, Metaphor, Personification, Zoomorphism, Oxymoron, Paradox, Adverb, Adjective, Determiners.

## Week 2

***Charge of The Light Brigade* by Lord Alfred Tennyson.**
- Miscommunication from the generals of the British saw the Light Brigade charge in headfirst into the Russian cannons.
- Hundreds of British soldiers died in the catastrophe.
- **Glorification:** describing something as admirable, especially something that isn't. This is clear in the poem because the men have been wrongfully sent to their deaths.
- Lord Alfred Tennyson criticised how people blindly, bravely and catastrophically follow orders from powerful people.

**Key themes:**
- War
- Life and death (loss)
- Sacrifice
- Conflict
- Memory
- Religion

**Key Quotations:**
- Someone had blundered
- Into the valley of death
- Jaws of death
- Mouth of hell
- Honour the charge they made!

**Key Structure:**
- Ballad
- Refrain
- Dimeter
- Allusion

## Week 3

**Summarising:** giving a brief statement on the main points of something.
**Comparing:** evaluating the similarities and differences of something. This is relevant for English Language Paper 2 (Q2 and Q4) and Power and Conflict Poetry.
**Inference:** a conclusion reached through evidence and reasoning. This is the skill assessed on English Language Paper 2 Question 2 and is used to explore what something might suggest. For example, we can infer that something described as "shiny" might be new, expensive and valuable.
**Question 2:**
- You need to refer to **both sources**
- Read both sources carefully
- Comparison (similarities or differences)
- You must use quotations
- You must explore inferences on the quotations
- You are only comparing the quotations and what you can infer from them

**Question 4:**
- You need to refer to **both sources**
- Read both sources carefully
- Comparison (similarities or differences)
- You are comparing the similarity/differences in the writer's perspectives and ideas
- Perspective = someone's view on something
- You must use quotations
- You compare **how** these perspectives are made through writer's methods
- You will need to **analyse** these methods

# English

## Week 4

***Bayonet Charge* by Ted Hughes**

- About a nameless soldier going over the top in the trenches. Soldiers would have bayonets attached to the end of their rifles and would use them to stab enemy soldiers.
- The nameless soldier in the poem seems to become more a weapon than a man, rushing toward the enemy. It is not clear at the end whether he dies but there is definitely a change in him.
- Ted Hughes was a former RAF serviceman and includes a great amount of natural and historical ideas in his poems.
- **Dehumanisation:** the act of being stripped of what makes you human. The soldiers on the frontline in this poem are dehumanised.
- **Agency:** the ability to affect something. The soldiers lack this.

**Key Themes:**

- **Vulnerability –** the state of being exposed to attack or harm. The soldier are vulnerable.
- **Transformation** – the quality of changing from one thing to another. The soldier is transformed from human to animal.

**Key Quotations:**

- Patriotic tear had brimmed/sweating like molten iron from the centre of his chest
- Listening between his footfalls for the reason
- King, honour, human dignity etc
- Then the shot-slashed furrows/Threw up a yellow hare that rolled like a flame

**Key Structure:**

- Disorganised and chaotic
- Three stanzas and blank verse with no set structure.

## Week 5

**Opinionated writing:** a type of writing in which the author expresses their thoughts, feelings, point of view and attitude towards a particular topic. This is what you write for English Language Paper 2 Question 5.
**Purpose:** the reason for writing something e.g. persuade, inform, entertain.
**Audience:** the person/people a piece of writing is aimed towards e.g. a politician.
**Form:** the type of writing e.g. letter, article, speech, leaflet, essay.
**Writing structure:**

1. Anecdotal – set the scene
2. Define the steer – be hyperbolic
3. Historical paragraph
4. Scientific paragraph
5. And so, finally… - be cyclical, return to the start line but juxtapose it.

**Poetry: *Exposure* by Wilfred Owen**

- About the weather and conditions of living in the trenches rather than any fighting.
- Nature can still do more harm than anything else.

**Key Quotations:**

- The iced east winds that knive us
- With sidelong flakes that flock, pause and renew
- On us the doors are closed
- For God's invincible Spring our love is made afraid

**Key Structure:**

- Refrain
- Rhetorical questions
- Half rhyme
- Chaotic, uncertain

## Week 6

***Kamikaze* by Beatrice Garland**

- About a kamikaze pilot who does not go through with his job of flying his plane into the enemy.
- It was considered a great honour in Japan to die for your country.
- The pilot returns home and is rejected by his family forever after, his own wife refusing to speak to him.
- The poem is written both from a narrator and the daughter of the pilot.

**Honour:** high respect.
**Futility:** pointlessness or uselessness. The poem explores the futility of avoiding fate.
**Key Themes:**

- The power of memory
- The importance of home
- The question of loyalty

**Key Quotations:**

- A shaven head full of powerful incantations
- Little fishing boats/Green blue translucent sea/Flashing silver
- Enough fuel for a one-way journey/Halfway there
- He must have wondered which had been the better way to die

**Key Structure:**

- Recount/narrative
- Hypothetical
- Composed of only three sentences
- No rhyme
- The use of asides and calm rural language juxtaposes the setting of war, giving the poem a much more personal scope on a major event.

# English

## Week 7

**English Language Paper 2 "Big Ideas"**

- Nature
- Economics
- Technology
- Society
- Culture
- Psychology
- Religion
- Society
- Politics
- Identity
- Morality and Ethics
- Gender
- Race
- Health and wellbeing
- Environment
- Science
- History
- Geography

**Big ideas:** When answering Question 2, you can boost your answer by linking your inference to these big ideas and explaining it effectively.

**English Language Paper 2 Question Order:**

1. Question 1
2. Question 3
3. Question 2
4. Question 4

**Judicious quotation:**

- A quotation that proves your idea
- A quotation that allows you to say something detailed in your analysis
- A quotation that allows you to pick out single word quotations to layer analysis
- A quotation that allows you to identify sophisticated subject terminology
- A quotation that compliments and reinforces other quotations/interpretations

## Week 8

***Remains* by Simon Armitage**

- Written from the perspective of a soldier stationed in Iraq or Afghanistan.
- The solider cannot leave the memory behind and carries this dead man with him in his mind.

**Disassociation:** the act of separating one thing and another. Soldiers at war are disassociated from the normality of life.

**Guilt:** the fact of having committed a crime. The soldier in the poem believes he has murdered the man while on patrol.

**Colloquial:** writing that is informal and sounds conversational.

**Volta:** when there is a clear change in the tone of something.

**Monologue:** a long speech made by one person. This poem is an example of a dramatic monologue as it is told through the soldier.

**Key Quotations:**

- Probably armed possibly not
- I see every round as it rips through his life
- His blood shadow stays on the street
- His bloody life in my bloody hands

**Key Structure:**

- Colloquial
- Volta at "but"
- En medias res
- Enjambed
- Free verse
- There is a loose set of rhymes in the poem and used to give an almost childish aspect to the horror of the warzone. It perhaps suggests how numb this soldier is to what is happening.

## Week 9

***War Photographer* by Carol Ann Duffy**

- About a war photographer who has returned home and is developing his photos.
- The poem is also looking at the contrast between the war zones and safety of being back home and the way people just do not understand the truth, after all a single photo cannot show everything.
- War photographers do a very dangerous job, many are killed and injured as they must get in harm's way to get the photos they are after.
- The **moral challenge** faced by the war photographer.
- The **fragility** of human life.
- **Fragility:** the quality of being easily broken or damaged.

**Key Themes:**

- Conflict
- Internal conflict

**Key Quotations:**

- Spools of suffering…ordered rows
- Running children in a nightmare heat
- A hundred agonies

**Key Structure:**

- Rigid structure and rhyme scheme – orderly
- Rhyming couplets
- The regular structure can represent the order he is giving to the chaos in his photos, perhaps also the almost mechanical process he is going through and putting that distance between himself and the context.

# English

## Week 10

**English Language Paper 2 Question Order and Timings (Extra Time)**

1. Question 1 – 5 minutes (6 minutes)
2. Question 3 – 15 minutes (18 minutes)
3. Question 2 – 12 minutes (15 minutes)
4. Question 4 – 23 minutes (28 minutes)
5. Question 5 – 53 minutes (1 hour and 3 minutes)

**Question 3 Answer Structure (At least two analytical paragraphs)**

**Clear thesis statement:**

- *The writer presents <u>the steer</u> as…; it is almost as if…*

**New Paragraph – explore language**

- *For example the writer…*
- *Which is clear when the writer describes <u>the steer</u> as…"_____"*
- *The writer has done this to emphasise/promulgate the idea that/illustrate/illuminate…*

**Question 3 Success Criteria**

- Clear and ambitious thesis statement
- Embedded, judicious quotations
- Subject terminology
- Analysis using "the writer"
- Layered analysis
  - Analyse single words
  - Multiple interpretations using connectives

**Question 2 Answer Structure:**

- Whilst the thing in source A is …the thing in source B is…It is almost as if…
- For example, in source A we learn that "quote" infer. Also "quote" infer and develop inference.
- Whereas in source B we learn that "quote" infer. Also "quote" infer and develop inference.

## Week 11

**Question 2 Success Criteria:**

- Opening comparative thesis statement
- First person plural pronoun: we
- Source A exploration
  - Judicious quotations
  - Explore and develop inference
- Comparative connective: similarly; whereas
- Source B exploration
  - Judicious quotations
  - Explore and develop inference

**Question 4 Answer Structure:**

- Whilst the writer of source A feels….the writer of source B feels……
- For example, in source A, the writer is…and feels…… This is shown when we learn that "quote". The metaphor depicts the idea that……,
- Whereas in source B the writer is…and feels…This is shown when we learn that "quote". The metaphor depicts the idea that…..

**<u>Question 4 success criteria:</u>**

- Opening comparative thesis statement referring to feelings and perspectives
- First person plural pronoun: we
- Source A exploration
  - Subject terminology
  - Effect
  - Writer purpose – link this to their feelings and perspective
- Comparative connective: similarly; whereas
- Source B exploration
  - Subject terminology
  - Effect

## Week 12

***Poppies* by Jane Weir**

- The poem looks at a mother of a son who has grown up and gone to war.
- The poem is based very heavily around the idea of Poppies as memorials and **Armistice**, and therefore the idea of memory.
- It is an **ambiguous** poem because it is unclear whether the son died at war or has at least not yet returned home and is now missed by the mother who fears the worst.

**Armistice:** An agreement between two countries at war to stop fighting.

**Ambiguous:** something that is unclear.

**Key Themes:**

- **Conflict**
- **Memory**

**Enjambment:** when one line continues onto the next in poetry.

**Key Quotations:**

- Spasms of paper red
- Gelled blackthorns
- Released a songbird
- Like a wishbone

**Key Structure:**

- Dramatic monologue
- Extended metaphors of stitching and sewing
- Free verse
- The poem uses a lot of enjambment and familiar nouns to enhance the idea of natural tone and the mother's voice.

# Food

## Week 1

**PGI** – protection geographical indication.
**PDO** – protection designation of origin.
**TSG** – Traditional specialty guaranteed.
**Food provenance** - knowing where food was grown, caught or raised. Knowing how food was produced and how food was transported.
**Origin** – the place from which something is derived
**Traceability** – the ability to trace any food through all of the stages – production, processing and distribution
**Food chain** – a series of processes by which food is grown, produced and eventually consumed

**Practical** – Chilli Con Carne
**Simmering** - Cooking the mixture gently over low heat for an extended period to allow flavours to meld.
**Browning -** Cooking meat until it develops a brown colour, enhancing flavour.
**Cross-Contamination** - Preventing the transfer of harmful microorganisms between ingredients.
**Sautéing** - Cooking ingredients quickly in a small amount of oil over medium-high heat.
**Origins of chilli con carne -** Whilst it certainly maintains a Mexican influence, chilli con carne most likely originated in America, specifically San Antonio in southern Texas

**Reactivate -**

- Simmer Slowly to help develop flavours

## Week 2

**Carbon footprint** - A carbon footprint is the total amount of greenhouse gases (including carbon dioxide and methane) that are generated by our actions.
**Transport –** the process of moving food to desired destinations from the food producer to its consumers
**Seasonality** – Seasonal food is fresh food that is ready to eat during its preferred season. For example, Scottish raspberries are juicy and delicious in the summer
**Farmers markets –** a regular event in a town or city when farmers come to sell their fruit, vegetables, eggs, meat, etc.
**Local produce –** Local means existing in or belonging to the area where you live

**Practical** – Choclate Mousse
**Fold -** Gently combining two mixtures of different thicknesses without deflating the air incorporated.
**Whipping Cream -** Cream that contains a higher fat content, whipped to incorporate air and increase volume.
**Egg Whites -**The clear part of the egg, separated from the yolk, used to add volume and lightness to the mousse.

**Reactivate -**

- Use clean, dry bowls and utensils, especially for whipping egg whites.
- Chill the mousse for at least a couple of hours before serving. This allows it to set and develop flavour.

## Week 3

**Modified Atmosphere Packaging (MAP) -** Packaging that alters the atmosphere around the product to extend shelf life.
**Vacuum Sealing** - Packaging where air is removed before sealing to extend shelf life.
**Biodegradable** - Materials that can be broken down by microorganisms over time.
**"Best Before" Date** - The date until the product is expected to be at its best quality.
**Different types of packaging used in food –** paper bags, cling film, paperboard, plastic, metal and glass.

**Practical** - Pizza Marinara
**Mozzarella Cheese** - A mild and creamy cheese traditionally from the milk of the water buffalo
**Marinara** - A simple tomato-based sauce often used as a pizza topping.
**Shaping** - Forming the dough into a pizza base, usually by hand or with a rolling pin.
**Kneading** - The process of working the dough to develop gluten, giving it elasticity and strength

**Reactivate -**

- The water should be lukewarm to activate the yeast without killing it.
- Mix the ingredients gradually to ensure they are well combined before kneading.

# Food

## Week 4

**Factors which might affect/influence food poverty** – availability, accessibility, affordability and awareness
**Food banks** – Food banks are run by volunteer-based organisations, redistributing food donated by consumers, retailers and the food industry.
**Food security** – food security is a measure of the availability of food required to support people of a household, region, country or any specified area.
**Environmental issues** -The impact of human activities on the natural environment.
**Climate change** - A large-scale, long-term shift in the planet's weather patterns or average temperatures, which can lead to unusual weather conditions.

**Practical** – Rough Puff Pastry
**Puff Pastry** - A light, flaky pastry made from layers of dough and butter or margarine, resulting in a crisp and airy texture when baked.
**Resting** - Allowing the dough to sit in the refrigerator between turns to relax the gluten and keep the butter cold.
**Gluten** – this can be found in wheat flour
**Flour** - flour is usually made from grinding wheat

**Reactivate -**

- Handle the dough as little as possible to prevent the butter from melting from the heat of your hands. Overworking the dough can also make it tough.

## Week 5

**Signature dish –** made with locally produced ingredients.
**Cuisine** – a style of cooking
**Migrate** – when people or animals move from one geographical area to another.
**Staple food** - food or drink that provides nourishment to sustain the body and life.
**Fusion –** when two cuisines are mixed together.
**Authenticity** - dishes can vary significantly within a country or even a region, influenced by local ingredients, traditions, and individual preferences.

**Practical** - Sausage, sage and onion plait
**Preheat -** Heating the oven to the correct temperature before baking
**Plaiting** – crossing over pastry/dough to form a pattern
**Sausage Meat** - Ground meat, usually pork, mixed with seasonings
**Egg Wash** - A mixture of beaten eggs and sometimes milk or water, brushed over the pastry before baking to give it a golden, glossy finish.
**Preheat** - Heating the oven to the desired temperature before baking
**Rolling Out** - Flattening the dough with a rolling pin to the desired thickness.

**Reactivate -**

- Shape your sausage mixture into a log that fits well within the width of the pastry.
- Brush the pastry with an egg wash (a mixture of beaten egg and a little water or milk) for a golden and glossy finish.

## Week 6

**Experiment –** A stage of making meringue is made by beating the egg white proteins until they uncoil. Investigate different techniques of adding ingredients to create a perfect structured meringue.

**Denaturation** - the unfolding or breaking up of a protein
**Soft peak** – is the stage when you pull the whisk out of the mixture and the whites form peaks with the tips flopping over
**Stiff peak** – is the stage when the mixture holds its shape
**Hypothesis** – what you predict n is going to happen
**Meringue** – a crisp cooked mixture of sugar and white of eggs which are whisked together

**Commodity exam**
**Topic**: Where food comes from
**Commodity 3** – Meat, poultry, fish & eggs

# Food

## Week 7

**Microorganisms -** forms are bacteria, yeasts, moulds, and viruses
**Food spoilage** – refers to changes that make food unfit for human consumption.
**Bacteria -** Bacteria rapidly multiply under favourable conditions and can cause the food to spoil.
**Perishable foods** – foods that will decay or go bad quickly
**Ambient foods –** foods that can be stored at room temperature in sealed containers

**Practical** – Red Thai Curry
**Coconut Milk** - A creamy liquid made from the grated meat of a coconut, providing richness to the curry.
**Reduction** - The process of thickening and intensifying the flavour of a liquid by boiling
**Sautéing** - Cooking food quickly in a small amount of fat over medium-high heat.
**Saucepan** - A deep cooking pan used for simmering and boiling
**Aromatics** - Ingredients like garlic, onions, and herbs that add aroma to dishes.
**Reduction** - The process of thickening and intensifying the flavour of a liquid by boiling.

**Reactivate –**

- Cooking out the paste to release the flavours
- Once you add coconut milk, simmer gently to avoid boiling, as this can cause the coconut milk to separate.

## Week 8

**Pathogenic bacteria** – bacteria that can cause illness
**Four condition in which bacteria can reproduce** – food, warmth, time and moisture
**Main sources of food contamination** – physical, bacterial and chemical.
**Salmonella** – type of food poisoning found in the intestines of humans and animals, raw poultry, meat, eggs and milk
**E. Coli** – type of food poisoning found in sewage, water, raw meat and muddy vegetables
**Campylobacter** – type of food poisoning found in raw poultry, meat, milk and animals
**Staphylococcus A** – type of food poisoning found in humans – skin, hair, nose, mouth cuts and spots

**Practical** – Lemon Cheesecake
**Denaturation** - occurs when the protein's structure unravels.
**Zesting** - Removing the outer skin of the lemon without getting into the bitter white pith.
**Cream Cheese** - A soft, mild-tasting cheese used as the base for cheesecake.
**Denaturation** - occurs when the protein's structure unravels.
**Lemon** – a type of citrus fruit

**Reactivate -**

- Freshly squeezed lemon juice provides the best acidity, which helps the cheesecake set properly.
- Refrigerate before serving, this chilling time allows the cheesecake to set completely and enhances the flavours.

## Week 9

**Cross contamination –** The transfer of harmful substances or disease-causing microorganisms to food by hands
**Spores –** a bacterium that has formed a strong, protective outer coating
**Toxins –** bacterial poisons
**Personal hygiene** – involves keeping yourself clean to prevent cross contamination in food
**Pests** – refers to rodents like mice and rats and insects and birds

**Practical** - Carbonara
**Emulsify** - Combining fat with liquid to create a smooth, stable mixture. The egg yolks and cheese are emulsified with the fat and starchy pasta water.
**Starchy Pasta Water** - The water in which pasta is boiled, which contains starch released from the pasta. It is used to help emulsify and thicken the sauce.
**Parmigiano-Reggiano** - Also known as Parmesan, this is another hard cheese
**Tossing** - The method of combining pasta with the sauce ingredients by gently lifting and mixing, ensuring even coating and preventing the sauce from scrambling.
**Egg yolk** – the yellow internal part of an egg, which is surrounded by the white, which is rich in protein and fat

**Reactivate -**

- If the sauce is too thick, add more pasta water gradually until you achieve a creamy consistency.

# Food

## Week 10

**HACCP -** Hazard analysis and critical control points
**Hazard –** a biological, chemical or physical contaminate when could affect food items
**Preservation –** extended the shelf life of a food ingredient
**Irradiation** – food is exposed to low doses of radiation which kills all microorganisms
**Preservation methods –** heat, freezing, removing air, drying, chemicals – salt, sugar, smoke and vinegar and irradiation

**Assessment Week**

## Week 11

**Practical** – Cauliflower and broccoli bake
**Roux method** – flour is stirred into melted fat. Liquid is then carefully added.
**Gelatinisation** – When starches are heated with liquid, they swell and will thicken.
**Starch** – found mainly in flour and within the carbohydrate section of the eat well plate
**Cauliflower** – classified as a flower head vegetable
**Oven proof dish** – a dish which can be used to cook food items in the oven

**Reactivate -**

- Stir the mixture constantly with a whisk to prevent lumps and ensure even cooking.

**Practical** - Blackcurrant and apple flapjack with yogurt topping
**Yogurt** - A creamy dairy product made by fermenting milk with beneficial bacteria, used for the topping.
**Melt** - To heat a solid ingredient, like butter, until it becomes liquid.
**Spread** - To evenly distribute a substance over a surface.
**Spatula** - A flat, broad utensil used for mixing and spreading.

**Reactivate -**

- Allow the flapjacks to cool completely in the tin before cutting them into squares or bars.
- Use Greek yogurt for a thicker consistency and richer flavour.

## Week 12

**Experiment –** What type of milk would you use to make a traditional rice pudding? Compare flavours with fresh milks, processed milks & UHT milk.
**Rice pudding** – a sweet dish made by cooking rice in milk and sugar
**UHT milk** – has gone through a process where once packaged this can be stored at room temperature, once opened this must be treated a fresh milk
**Evaporated milk** – a type of processed milk
**Lactose** – the sugar found in dairy milk
**Caramelisation** - the process of heating sugar

**Nutritional Information -** Details on the nutrient content per serving
**The food Labelling regulations** – states what information has to be added to food labels by law
**Traffic light system –** The traffic light labelling system will tell you whether a food has high, medium or low amounts of fat, saturated fat, sugars and salt.
**Best Before Date** - Indicates the date by which the food should be consumed for best quality.
**Label** - The information on a food package that includes details about the product.

# French

## Week 1 – Local area

| Comment est ta zone locale ? | What's your local area like? |
|---|---|
| Se trouver | **To be situated** |
| Acheter | **To buy** |
| Continuer | To continue |
| Un endroit agréable | A pleasant place |
| Un ascenseur | A lift |
| Une boulangerie | A bakery |
| Une bibliothèque | A library |
| Une des plus grandes villes | One of the biggest cities |
| Des bâtiments | Some buildings |
| Des magasins | Shops |
| Une pièce | A room |
| Plus beau/belle | prettier |
| Cher | expensive |
| Sans pollution | Without pollution |
| Trop de bruit | Too noisy |
| J'aimerais habiter en ville | I would love to live in a town |
| Il n'y a pas assez de | There isn't enough of |
| C'est trop..... | It is too …. |
| Je ne peu pas acheter ça | I cannot buy this/that |

## Week 2 – Holidays revision

| Words you may have forgotten! | |
|---|---|
| **Vouloir** | To want |
| Se reposer | To rest |
| Louer | To rent/to hire |
| Goûter | To taste |
| Fonctionner | To work |
| Se plaindre | To complain |
| Prendre | To take |
| Royaume-Uni | United Kingdom |
| Pendant les grandes vacances | During the holiday |
| Fermé/e | Closed |
| En plus/de plus | Furthermore |

**Autumn term Knowledge Organiser**

Look back at your Autumn term Knowledge Organiser. You have much more detailed vocab lists in there.

To prepare for your reading and listening test, make flashcards if these words and any others from the Autumn term Knowledge Organiser that you have forgotten and test yourself regularly.

Get a friend to say the words to you and see if you can recognise them.

You can also practise the listening tasks on BBC Bitesize.

## Week 3 – School revision

| Describing a photo | |
|---|---|
| Sur la photo il ya | In the photo there is/are… |
| Un étudiant | a pupil |
| Une étudiante | a student |
| Il/elle porte | he/she is wearing |
| Une chemise | a shirt |
| Un t-shirt | a t-shirt |
| Un pantalon | trousers |
| Une cravate | a tie |
| Ils/elles sont | he is/ they are |
| Dans une classe | in a classroom |
| Au collège | at school |
| Dans une école primaire | in a primary school |
| Il/elle parle | He/she is talking |
| Il/elle écoute | He/she is listening |
| Il/elle étudie | He she is studying |
| Il/elle sourie | He/she is smiling |

| General conversation questions | |
|---|---|
| Comment est ton collège? | What is your school like? |
| Qu'est-ce que tu fais comme activités extra-scolaires | What extracurricular activities do you do? |
| Que penses-tu des matières que tu étudies? | What do you think of the subjects you study? |
| Qu'est-ce que tu as fait récemment au collège? | What did you do recently at your school?, |
| Quels sont tes projets d'études à l'avenir? | What plans do you have to study in the future? |

# French

## Week 4 – My personal world

| Describing a photo | |
|---|---|
| Ils/elles sont | They are |
| À la maison | At home |
| Dans le jardin | In a living room |
| Ils/elles sourient | They are smiling |
| Ils/elles sont en train de parler | They are talikng |
| **General conversation questions** | |
| Qu'est-ce que tu aimes faire avec ta famille? | What do you like doing with your family? |
| Qu'est-ce que tu as fait pour ton dernier anniversaire? | What did you do for your last birthday? |

## Week 5 – Relationships

| Words you may have forgotten! | |
|---|---|
| Choses | things |
| En colère | angry |
| Fidèle | Faithful |
| Fier/fière | Proud |
| Sympa | Nice |
| Travailleur/euse | Hardworking |
| Proche | Close |
| Séparés | Separated |
| En ligne | Online |
| Agaçant | Annoying |
| Triste | Sad |

## Week 6 – Global citizenship

| Words you may have forgotten! | |
|---|---|
| Utiliser | To use |
| Trier | To sort out |
| Se doucher | To have a shower |
| Déchets | Rubbish |
| Un bain | A bath |
| La viande | Meat |
| Le verre | Glass |
| Jamais | Never |
| Maintenant | Now |
| Au lieu de | Instead of |
| Quand | When |
| Avec | With |

## Week 7 – Our planet

| Our world is beautiful | |
|---|---|
| La forêt tropicale | The tropical forest |
| La plus grande | The biggest |
| La plus petite | The smallest |
| La plus haute montagne | The hifghest mounatin |
| La plus longue rivière | The longest river |
| Tu as raison | You are right |
| Tu as tort | You are wrong |
| C'est vrai | It is true |
| C'est faux | It is false |
| Il pleut | It rains/ is raining |
| Il y a du brouillard | It is foggy |

## Week 8 – Global problems

| Our planet in danger | |
|---|---|
| Le changement climatique | Climate change |
| Le réchauffement de la planète | Global warming |
| Le niveau de la mer | Sea level |
| Le taux de carbone | The carbon level |
| La circulation | Traffic |
| La destruction | The destruction |
| La faim | Hunger |
| La pollution | Pollution |
| Les fleurs | Flowers |
| Les inondations | Floods |
| Est/sont menacé(s) | Is/are threatened |
| Est/sont touchés par | Is/are affected by |
| Le monde naturel | The natural world |

## Week 9 – How we can help

| Small actions | |
|---|---|
| J'utilise du papier recyclé | I use recycled paper |
| Je trie mes déchets | I sort my rubbish |
| Je me douche au lieu de prendre un bain | I have a shower instead of taking a bath |
| Je ne mange jamais de viande | I never eat meat |
| Je fais des petits gestes | I take small actions |
| En achetant du papier recyclé | By buying recycled paper |
| En séparant le plastique et le verre | By separating plastic and glass |
| Quand j'étais plus jeune | When I was younger |
| Maintenant | Now |
| Je prenais | I used to take |
| J'allais | I would go |
| Je faisias | I used to do |

# French

## Week 10 – Question words

| Les mots interrogatifs | |
|---|---|
| Comment....? | How...? |
| Quel/quelle....? | Which...? |
| Qu'est-ce que.....? | What...? |
| Pourquoi...? | Why...? |
| Combien...? | How much/many...? |
| À quelle heure...? | What time...? |
| Quand...? | When...? |
| Qui...? | Who...? |
| Quand...? | When...? |
| Combien de temps...? | How long...? |

## Week 11 – Describing a photo

| Describing a photo | |
|---|---|
| Sur la photo il y a… | In the photo there is/are… |
| beaucoup de gens | lots of people |
| deux personnes | two people |
| il/elle porte… | he/she is wearing |
| des vêtements sportifs | sports clothing |
| Il/elle est \| ils/elles sont | (s)he is/ they are |
| à l'intéreur | inside |
| à l'extérieur | outside |
| en train de parler | talking |
| en train de sourire | smiling |
| en train de jouer | playing |

## Week 12 – Key words to revise

| Create your own list of words that you know that you need to revise for the speaking PPE | |
|---|---|
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## Preparing for the speaking assessment

**Before the assessment:**

Experiment with the following techniques to revise the vocabulary and structures in this knowledge Organiser and the one from the Autumn term

- Use the look-cover-write-check technique to test yourself
- Create flashcards with the English on one side and the Spanish on the other – test yourself and get a friend to test you
- Practise bringing the vocabulary together to create your own written and spoken answers
- Give the Knowledge Organiser to a friend and get them to test you

**During the test:**

1. We start with the read aloud. Read at a clear steady pace. There is no need to rush- focus on the Spanish phonics that differ from English (these are all in the front of your KO)
2. Next is the role-play. Remember you just need to give simple brief response, but they must be more than one word.
3. The third task is the photo-based task. Start by describing the photo, remember you must describe the people, location and activity
   When you have finished your description, your teacher will ask you two questions relating to your chosen picture. You are expected to say a few words or a short phrase/sentence in response to each question. One-word answers will not be sufficient to gain full marks.

4. You will then move on to a conversation on the broader thematic context of that topic. During the conversation, your teacher will ask you questions in the present, past and future tenses. Your responses should be as full and detailed as possible. Remember the rule of 3!

# Geography

## Week 1

**Mechanical weathering** – the break-up of rocks. Where this happens, piles of rock fragments called scree can be found at the foot of cliffs (Freeze-thaw and salt weathering)

**Chemical weathering** – caused by chemical changes. Rainwater, which is slightly acidic, very slowly dissolves certain types of rocks/minerals.

**Biological weathering** – due to the actions of flora and fauna. Plant roots grow in cracks in the rocks. Animals such as rabbits burrow into weak rocks such as sands.

**Hydraulic action/power -** the power of the waves crashing into the cliffs. This forces air between cracks in the rock, breaking it apart.

**Solution** - the process of chemicals in sea water, such as salt, dissolving minerals in the rock.

**Abrasion** - the weakening of the rock by sand, shingle and other particles carried in the sea. Also involves fragments of rock that are hurled at a cliff by the sea.

**Attrition** - where material carried by the waves bump into each other and so are smoothed and broken down into smaller particles

**Solution** – dissolved chemicals often derived from limestone or chalk.

**Suspension** – particles carried (suspended) within the water.

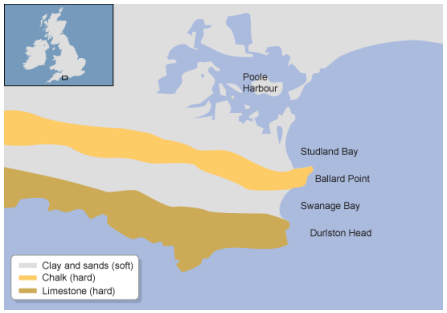
**Traction** – large pebbles rolled along the seabed.

**Saltation** – a 'hopping' or 'bouncing' motion of particles too heavy to be suspended.

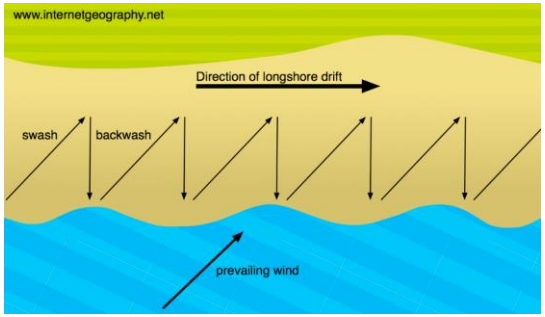
## Week 2

**Concordant coastline** – only one type of rock and forms a relatively straight section of coast.
**Discordant coastline** – alternating bands of hard and soft rock and appears indented.

**The Swanage coast, Dorset**




**Longshore drift** – the transport of sediment along a stretch of coastline caused by waves approaching the beach at an angle.




**Deposition** – takes place in areas where the flow of water slows down. Waves lose energy in sheltered bays. Sediment can no longer be carried or moved and is therefore deposited.

## Week 3

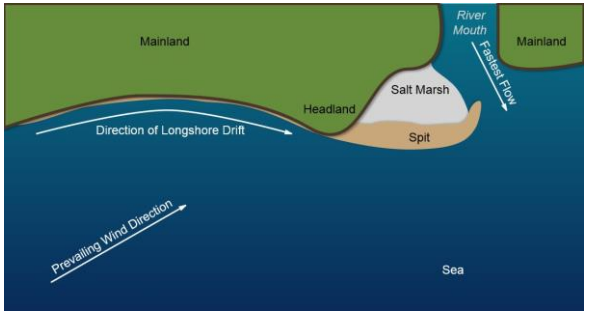
**Beaches** – deposits of sand and shingle (pebbles) at the coast. Sandy beaches are mainly found in sheltered bays. The waves entering the bay are constructive waves. They have a strong swash and build up the beach.

**Sand dunes** – sand deposited on the beach has been blown inland by onshore winds to form dunes (Sand dunes can be found in Studland, Swanage).

A sand dune will form when there is:

- A wide sandy beach.
- A plentiful supply of sand.
- Onshore winds.
- An obstacle to collect sand such as marram grass.

**Spit** – a spit is a long, narrow finger of sand or shingle jutting out into the sea.




**Bar** – longshore drift may cause a spit to grow right across a bay, trapping a freshwater lake (or lagoon) behind it.

# Geography

## Week 4

**Hard engineering** – using artificial structures such as sea walls to control natural processes.

**Sea wall** – a concrete wall that aims to prevent erosion of the coast by reflecting wave energy.

**Groyne** – a wooden barrier built out into the sea to stop longshore drift of sand and shingle and allow the beach to grow.

**Rock armour** – large boulders deliberately dumped on a beach.

**Gabions** – a steel wire mesh filled with boulders.

**Soft engineering** – less intrusive, more environmentally friendly methods that work with natural processes to protect the coast.

**Dune regeneration** – building up dunes and increasing vegetation to prevent excessive coastal retreat.

**Beach nourishment** – adding new material to a beach artificially, through the dumping of large amounts of sand or shingle.

**Beach reprofiling** – changing the profile or shape of the beach.

**Managed retreat** – this increasingly popular option enables the controlled retreat of the coastline, often involving allowing the sea to flood over low-lying land.

## Week 5

**Coastal management at Lyme Regis**

**Reasons for management.**
- The town has been built on unstable cliffs
- It is a rapidly eroding coastline.
- Properties have been destroyed or damaged.

**How has the coastline been managed?**
- Phase 1: Sea wall and promenade built.
- Stabilised the cliffs using large nails.

- Phase 2: £22 million spent.
- New sea walls and promenade.
- Sand/shingle beach to absorb wave energy.
- Extension of rock armour at The Cobb.

- Phase 3: Did not go ahead.

- Phase 4: £19.5 million spent.
- A new sea wall in front of the existing wall.
- Extensive nailing, piling and drainage to provide cliff stabilisation (protect 480 homes)

**Positive Outcomes.**
- New beaches increased visitor numbers.
- Sea front business is thriving
- The defences are working.

**Negative Outcomes.**
- Increased visitor numbers have led to conflicts.
- Traffic congestion and litter has increased.
- Stabilising the cliff will prevent future exposure of fossils.

## Week 6

**Urbanisation** – when an increasing percentage of a country's population comes to live in towns and cities.

**Migration** – when people move from one place to another; in many LICs people move from rural to urban areas (rural-urban migration).

**Natural increase** – the birth rate minus the death rate of a population.

**Rural-urban migration** – the movement of people from the countryside into towns and cities.

**Megacity** – an urban area with a total population of more than ten million people.

**High income country (HIC)** - a country with GNI per capita higher than $12696 (World Bank, 2018)

**Low income country (LIC)** - a country with GNI per capita lower than $1025 (World Bank, 2018)

**Newly emerging economy (NEE)** - a country that has begun to experience high rates of economic development, usually long with rapid industrialisation.

**Pull Factors** – people may want to leave the countryside.

**Push Factors** – people can be attracted to the city.

# Geography

## Week 7

**Rio de Janeiro:**
- Brazil's Atlantic coast
- Grown around Guanabara Bay.
- It was the capital until 1960 – now Brasilia.
- Cultural capital of Brazil.
- Famous for its annual carnival.
- It is a UNESCO World Heritage Site.
- Home to the 2014 soccer World Cup.
- Home to the 2016 Olympics.
- Rio is important within the global economy.
- An industrial and finance centre.
- Important international hub with 5 ports and 3 airports.

**Why has Rio grown?**
- Migration (International & internal migration)
- Natural increase

**Social opportunities:**
- Access to health services
- Access a better education.
- Access to a better water supply
- Access to a better energy supply.

**Economic Opportunities for growth:**
- Economic development has led to a better infrastructure and attracted investment.
- There is a large labour supply.
- Increased employment creates a disposable income.
- Industrial areas and port facilities have contributed to the city's development.
- Oil has been discovered, and this has stimulated oil-related industries.
- Rio is a popular tourist destination.

## Week 8

**Challenges**

**Providing clean water, sanitation systems and energy.**
- Around 12% of the city does not have access to clean running water.
- In Rio 35% of the city's sewage is transferred in open sewers and dumped into Guanabara Bay. Pipes and sewage treatment works cannot cope with the volume of waste.
- About 99% of all homes have access to electricity. But the infrastructure is overloaded, and this often leads to power cuts.

**Providing access to services such as health and education.**
- Healthcare has been improving, but there are only 6 hospitals within Rio and insufficient health clinics to serve local communities.
- Healthcare is difficult to provide within the favelas.
- In Rio about 90% of children aged ten can read and write.
- Despite education being compulsory in Brazil for children aged 16-14, about 25% of the poorest children do not attend regularly.

**Reducing unemployment and crime.**
- There are huge inequalities in unemployment rates. Female unemployment in Rio is higher than male unemployment.
- Youth unemployment is also high.
- Robbery and violent crime, including murder and armed assault, occur regularly in Rio.

## Week 9

**Challenges**

**Managing environmental issues such as waste disposal, air and water pollution and traffic congestion.**
- Every year Rio produces 3.5 million tonnes of waste, of which less than 2% is recycled.
- Waste collection varies hugely across the city and is particularly infrequent in the favelas.
- Guanabara Bay is highly polluted, causing a major threat to wildlife.
- Commercial fishing has declined by 90% in the last 20 years.
- Rio is the most congested city in S. America.
- Traffic congestion increases stress and levels of air pollution. Wastes time and costs money for businesses.

**Managing urban growth.**

**Favela** – self built housing on public or private land which lacks any proper infrastructure.

**Favela Bairro Project (1995-2009) - US$1 billion 'slum to neighbourhood' project.**

By 2005 around 100 favelas had been improved. Residents had been granted land ownership, roads had been paves and new childcare centres opened. Training was available in hygiene, computing and community development. The quality of life, mobility and employment prospects of the inhabitants improved considerably.

# Geography

## Week 10

**Social opportunities** – the chances available to improve quality of life, e.g. access to education and health care.

**Economic opportunities** – chances for people to improve their standard of living through employment.

**Urban regeneration** – reversing the urban decline by modernising or redeveloping, aiming to improve the local economy.

**Urban greening** – the process of increasing and preserving open spaces in urban areas, i.e. public parks and gardens.

**Traffic Congestion** – when there is too great a volume of traffic for roads to cope with, and traffic slows to a crawl.

**Integrated transport system (ITS)** - different forms of transport are linked together to make it easy to transfer from one to another.

**Brownfield site** - land that has been used, abandoned and now awaits reuse; often found in urban areas.

**Greenfield site** - a plot of land, often in a rural area or on the edge of an urban area that has not been built on before.

**Rural-urban fringe** – a zone of transition between a built-up area and the countryside where there is often competition for land use.

## Week 11

**Temple Quarter**

**Reasons why the area needed regeneration**

- Industrial development took place in the eighteenth century.
- The main industries included rope factories, timber yards, malt houses, glassworks and pottery works.
- Also included Bristol iron works and gas works.
- In 1840 Brunel's Temple Meads railway station opened, with connections to London and other parts of the UK.
- In the twentieth century terraced housing was demolished.
- Later the heavy industries were closing.
- The city centre docks decline which led to the closure of factories. But many of these buildings and streets were listed.

**The main features of the project**

- In 2012 a 72-ha area became an Enterprise Zone. This enabled new businesses to claim tax relief and low rents and established quicker and simpler planning procedures.
- Brunel's Engine Shed for high-tech and creative business (2013)
- Glass Wharf office development (2015)
- Brock's Bridge constructed – providing a link to Temple Island (2015)
- Temple Gate improvements completed (2019)
- Paintworks workplaces and residential area (2015)
- Temple Meads station to receive a £10.2million upgrade (due for completion in 2023)

## Week 12

**Command Words**

**Assess -** Make an informed judgement.

**Calculate -** Work out the value of something.

**Compare -** Identify similarities and differences.

**Complete/Draw/Label -** Finish the task by adding to given information.

**Describe -** Set out characteristics.

**Discuss -** Present key points about different ideas or strengths and weaknesses of an idea.

**Evaluate -** Judge from available evidence.

**Explain -** Set out purposes or reasons.

**Identify/Name/State/Give/Define -** Produce an answer from recall/Express in clear terms/Name or otherwise characterise.

**Justify -** Support a case with evidence.

**Outline -** Set out main characteristics.

**Suggest -** Present a possible case.

**To what extent -** Judge the importance or success of (strategy, scheme, project, etc).

# Graphic Design

## Week 1

**Key Concepts:**

Importance of understanding the client's needs

**Key Terms:**

**Brief:** A document outlining the project requirements.

**Client:** The person or organization requesting the design.

**Self-Reflection Questions:**

- How well do I understand the components of a graphic design brief?
- What specific needs of the client stand out to me, and how might they influence my design approach?

## Week 2

**Key Concepts:**

Overview of the Double Diamond model

**Key Terms:**

**Discover:** The first stage where you gather insights.

**Define:** The second stage where you articulate the problem.

**Self-Reflection Questions:**

- In which stage of the Double Diamond do I feel most comfortable, and why?
- How can I apply the Discover stage to gather more insights for my current project?

## Week 3

**Key Concepts:**

Methods of conducting research for design briefs

**Key Terms:**

**Qualitative Research:** Gathering non-numerical data.

**Quantitative Research:** Collecting numerical data.

**Self-Reflection Questions:**

- Which research method do I find most effective for my design projects, and how have I used it?
- How can I incorporate both qualitative and quantitative research to gain a comprehensive understanding of the design problem?

## Week 4

**Key Concepts:**

How to break down and analyse a design brief

**Key Terms:**

**Target Audience:** The intended users of the design.

**Objectives:** Goals that the design must achieve.

**Self-Reflection Questions:**

- How well have I identified the target audience for my design, and what insights does this provide?
- Are my design objectives clear and aligned with the client's needs? How can I refine them?

## Week 5

**Key Concepts:**

Brainstorming and ideation methods

**Key Terms:**

**Mind Mapping:** Visualising ideas and connections.

**Sketching:** Quickly drawing ideas for visual representation.

**Self-Reflection Questions:**

- What ideation techniques have I used, and how effective have they been for my current project?
- How can I expand my ideation process to generate a wider range of ideas?

## Week 6

**Key Concepts:**

Refining ideas into design concepts

**Key Terms:**

**Concept Development:** The process of taking an idea and fleshing it out.

**Iterations:** Different versions of a design.

**Self-Reflection Questions:**

- How have I approached concept development, and what feedback have I incorporated?
- How many iterations have I created, and what have I learned from each version?

# Graphic Design

## Week 7

**Key Concepts:**

Creating prototypes for design concepts

**Key Terms:**

**Prototype:** An early sample or model of the design.

**Mockup:** A realistic representation of the final product.

**Self-Reflection Questions:**

- What challenges did I face while creating prototypes, and how did I overcome them?
- How effectively does my prototype communicate my design ideas?

## Week 8

**Key Concepts:**

Importance of feedback in the design process

**Key Terms:**

**Feedback:** Critique or suggestions from others.

**Revisions:** Changes made based on feedback.

**Self-Reflection Questions:**

- How receptive have I been to feedback, and what specific changes have I made as a result?
- What are the most significant revisions I've implemented, and how have they improved my design?

## Week 9

**Key Concepts:**

Preparing designs for presentation

**Key Terms:**

**Final Presentation:** The complete and polished design ready for submission.

**Exporting:** Saving the design in the necessary format.

**Self-Reflection Questions:**

- How have I ensured that my final design meets the initial objectives of the brief?
- What formats am I considering for exporting, and why are they suitable for my project?

## Week 10

**Key Concepts:**

Effective presentation techniques for design work

**Key Terms:**

**Pitch:** Presenting your ideas and designs to others.

**Visual Storytelling:** Communicating ideas visually.

**Self-Reflection Questions:**

- What strategies will I use to communicate my design effectively during the pitch?
- How can I incorporate visual storytelling elements into my presentation?

## Week 11

**Key Concepts:**

Reflecting on the design process and outcomes

**Key Terms:**

**Evaluation:** Assessing the success of the design.

**Lessons Learned:** Insights gained from the project.

**Self-Reflection Questions:**

- How successful was I in achieving the goals of the design brief, and what metrics did I use to assess this?
- What are the key lessons I've learned from this project that I can apply to future design work?

## Week 12

**Key Concepts:**

Applying what has been learned to future design briefs

**Key Terms:**

**Continuous Improvement:** Ongoing efforts to enhance skills and processes.

**Portfolio:** A collection of work that showcases skills and projects.

**Self-Reflection Questions:**

- How can I apply the skills and knowledge gained from this project to future design briefs?
- What elements will I include in my portfolio to showcase my growth as a designer?

# Hair & Beauty

## Week 1

**Entrepreneurship and the associated benefits**

- **Define the term enterprise:** A project, a willingness to take on a new project, an undertaking or business venture.
- **What is meant by an entrepreneur:** Someone who organises, manages, and assu mes the risks of a business or enterprise.
- **Benefits to the economy and society:** new businesses, employment opportunities, increased customer choice, improved business performance and choice
- **What qualities does an entrepreneur need?**
  - Hardworking
  - Organised
  - Innovative
  - Willing to take a risk
- **Characteristics of an entrepreneur:** charismatic, driven, hard-working, motivated, dedicated, risk takers, enthusiastic, organised, innovative, good communicator, analytical ability, decision maker

## Week 2

**Characteristics and objectives of an entrepreneur: What does the term "objective" refer to regarding an entrepreneur?**

- An objective of an entrepreneur is either a short or long-term goal that an entrepreneur will set themselves to measure and achieve a successful business of personal outcome.
- **Objectives of an entrepreneur:** be their own boss, be in charge of their own destiny, take risks, work flexibly, pursue an interest, earn more money for personal profit, identify a gap in the market that could help expand a personal vision, job and personal satisfaction

**Advantages and drawbacks on an entrepreneur:**
**Advantages:**

- Be able to work flexibly
- Create your own success
- Have more control
- Develop new skills and confidence
- Have more job satisfaction
- Can choose your own team

**Disadvantages:**

- You may not have a consistent income
- You may have difficulties finding clients or new business
- You may have difficulties separating your personal life from your professional one
- You will not have any paid holiday
- You may have to pay more taxes
- Your stress levels may be higher

## Week 3

**Identifying a business opportunity**
Identifying gaps in the market, identifying consumer needs, initiating ideas, following an interest or a hobby, fulfilling a social or ethical goal, identifying supply and demand from competition in the area/industry, improving current products and services

- **Market research** – identify what competitors offer, identify supply and demand requirements, pricing, quality, availability, unique selling points (USP) – How to make goods, products and services stand out from the competition

# Hair & Beauty

## Week 4

**Business planning**
**What a business plan is**
A business plan is a formal written document con taining the goals or objectives of a business

**Reasons for creating a business plan**
- To prove that you're serious about your business
- To establish business milestones
- To better understand your competition
- To better understand your customer
- To assess the feasibility of your venture
- To determine your financial needs
- To reduce the risk of pursuing the wrong opportunity
- To force you to research and really know your market

**Benefits of creating a business plan**
- See the whole business
- Set priorities
- Strategic Focus
- Manage change
- Develop accountability
- Manage cash
- Strategic alignment
- Milestones
- Realistic regular reminders to keep on track

**Drawbacks of devising a business plan**
The biggest disadvantage of the business plan is that it involves time and expense, which small businesses do not have much of. This can in turn lead to a business suffering more than gaining from the business plan.

## Week 5

**The principles of marketing:**
**Definition of marketing**
The practice of marketing is to increase awareness, consideration, purchase/repurchase and preference for a product or service.

Why is customer retention and satisfaction so im portant?
- Repeat business is so important in today's competitive market
- Once a hair or beauty business has managed to attract a substantial clientele, they need to work twice as hard to keep them
- If the client is satisfied with the appointment, the hair or beauty business is more than likely going to retain the client

Market segmentation is a marketing tool that is used to select groups of consumers within a general target market. This is so that certain products or services can be presentation to them in a way that is more likely to appeal to their interests.

**Geographic Segmentation:** different groups of customers based. on location and geographic boundaries
**Demographic Segmentation:** different groups of customers based on age, gender, income.
**Psychographic Segmentation:** Different groups of customers based on behaviour, lifestyle, attitudes and interests.
**Behavioural Segmentation:** Different groups of customers based on specific reactions to purchasing processes.

## Week 6

**The Factors influencing marketing objectives:**
Internal and external factors influencing marketing objectives

**Internal factors:** financial, human resources, technology, company strategies

**External factors:** competitors, economy, market dynamics, legal factors, ethical factors, social demographics

# Hair & Beauty

## Week 7

**Marketing Mix:** a formula used by businesses to maximise its chances of their product or service being recognised and bought by customers. This formula is known as the 4Ps: Price, Product, Promotion and Place.

**Product:** the nature of the product of service – *product, tool, equipment, hair/beauty service, unique selling points [USPs], key features and benefits [convenience, comfort, added value, product differentiation]*

**Products – key features and benefits:** The difference between features and benefits of products and services is:

- A feature tells you something of interest about the product or service, while a benefit is the positive impact the product or service will have on the customer.

**Price:** pricing strategies *[discounted launch, competitor pricing/undercutting and seasonality]* Price is the amount a business will charge for a product/service.

Price is important to a consumer as well as the business:

- The business needs to sell at a profit
- The consumer will always look for value in the market

## Week 8

**Marketing mix continued:**

**Place:** location *[in-store, outlets, internet, exhibitions]*

How 'place' can impact on marketing:

- Place can be where a company sells its product/service
- Place is where customers experience a product/service
- Place can be where a company manufactures its product, this might also be where the company sells its product
- Place could be how customers/clients receive products/services

**Promotion:** methods *[direct and indirect marketing, advertising, public relations, sales promotions, joint activities]*, materials *[brochures, adverts, signs and displays, press releases]*, links with other industries

How 'promotion' can impact marketing:

- Promotion is how a company can make their target market aware of their products/service
- Promotion can enforce brand awareness
- A strong promotional campaign will convince a target market to buy a product/service
- The purchasing behaviour of consumers can b e heavily impacted by promotion

- *The consequences of false advertising- trades descriptions, myths, exaggerations, falsehoods*

## Week 9

**The purpose and approach to market research**

- Purpose of market research- used to identify competition in the market, business opportunities, gaps in the market, level of demand for products/services, clients' needs and preferences
- Approaches to researching current competition- qualitative and quantative data, primary research (observations, surveys, interviews, feedback cards), secondary research (statistics, websites, published information)
- Analysis of market research findings and results to inform future marketing and business activities

**What is marketing?**

- In simple terms marketing is all about bringing what you do in a business to the attention of the customer
- Whether you offer a product or a service you need to let customers know what you do with the aim of attracting customers to purchase and repurchase
- Common marketing examples include television commercials, billboards on the side of the road, social media and magazine advertisements

# Hair & Beauty

## Week 10

**The market types and their characteristics**

- Mass market- high number of sales, large number of competitors, wide customer base, low profit margins
- Niche market- sales volume low, small number of customers, specialised products, high profit margins

**Key elements of marketing**

**Advertising:** This is how a company or brand communicate with their customer. This is usually done through messages, images or short videos, with the ultimate aim of increasing turn over.

**Target market:** A group of people identified as either an existing consumer or a potential new customer.

**Product placement:** Companies will pay money to place their product or brand in a film or television programme.

**Promotions**: This practice involves discounting a product or service to increase consumer loyalty.

**What are the key components of marketing?**

**Brand awareness**

- Indicates how familiar the consumer is with a certain brand of goods or service. The consumer will understand either the qualities or image of a particular brand of goods or services Consumer-driven benefits
- A company will try and make the consumer feel valued whilst attempting to build an effective and loyal consumer relationship.

## Week 11

**Mass and niche markets summary**

**Why start with niche products/services?**

- Many businesses start with niche market products because they can focus on establishing a strong position in the market
- Niche markets are typically populated with small to medium sized businesses as they are too small to attract the interest of larger businesses
- Niche market businesses sell products which are aimed at a small and specific segment of the market; demand is generally high but the number of customers in the market is limited
- This included food products such as vegan or gluten-free options and specialist software such as Sage for accountants

Many companies more from first being a niche business to a mass business. Here are some examples of how this can be achieved:

- **Expand products:** increasing the number of products a company offers can help. This is a good way to get a mass audience.
- **Expand target audiences:** the bigger the target audience, the more revenue can be made.
- **Grow by expanding the niche audience:** the product/service can still be niche, but clever marketing can increase the target market. This results in growth.

## Week 12

**The development of a hair or beauty product from conception to launch**

**Product development process and legislation**

- Content Design brief/Conception:
- Formulation
- Main points of legislation and regulations:
- Sourcing
- Packaging Marketing
- Launch
- Outline the key processes in product development
- Outline key point of regulations and legislations

L2

The development of a hair or beauty product from conception to launch

**Product specialist and legislation**

- Outline the key roles of each specialist involved in the development process of hair and beauty products
- Product specialist and legislation:
- Cosmetic chemist and the job specification
- Toxicologist
- Microbiologist
- Regulatory specialist
- Legislation and regulations

# Health & Social Care

## Week 1

Sources of Support -**Informal Support** is usually the first support a person receives (family friends neighbours partners)

| Voluntary Organisations | Community Groups | Faith Based Organisations |
|---|---|---|
| Purpose of helping people – not making £<br>Run by volunteers<br>Donations<br>Eg family lives – confidential helpline/articles online / someone to talk to | Local area & organised by volunteers<br>Similar experienced life events<br>Support groups –eg bereavement / people can come together and feel understood and less alone | Groups formed with same religious beliefs<br>Support within their faith |

***Professionals*** – this is their job, trained : Doctors, nurses, counsellors, teachers and social workers
Professionals can work together
***Multi agency working*** – professionals from more than one service work together
**Social Services** – work with mental health trusts to support young adults and children
**Children's Services** – work with the justice system to keep children safe
***Multidisciplinary working*** – healthcare professionals with different roles work together to provide support
Health visitor works with GP's during the first five years of a child's life- assessing growth and development – sharing information & meeting

## Week 2

Types of Support
**Emotional** – by caring and reassuring other, listening to worries without judgement and offering encouragement ( Friends and family or professionals such as a counsellor)
**Informational Support** – when a person receives useful information and advice, can be informal from friends etc and from professionals. Use of Apps such as NHS – Couch to 5K to improve fitness / Headspace / guided meditation to relax
**Practical Help** – person gets assistance with something they are struggling with on their own, could be financial, domestic chores, childcare
An injury might make them unable to work – needing financial support with bills

| Emotional | Informational | Practical |
|---|---|---|
| Express feelings<br>Increase self-esteem<br>Feel more confident<br>Comfort and security<br>Accept the situation | Help people understand their situation<br>Options<br>Informed decision making<br>Further help | Help with specific needs<br>Reduce anxiety & stress<br>Reduce impact a life event has on a person |

Type of support needed after a life event depends on their situation. People can experience the same situation but need different types of support as we are all different
***This booklet can be an example of informational support !***



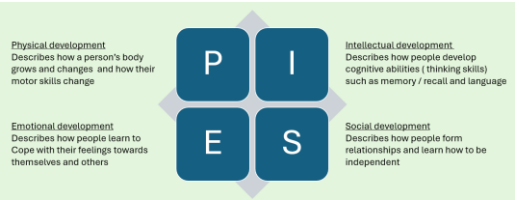
## Week 3

**Component 1 Recall / recap Assessment preparation** - Divided into two parts ( A&B) and four sections

| Task | part | marks |
|---|---|---|
| 1 | A | 12 |
| 2 | A | 12 |
| 3a | B | 12 |
| 3b | B | 24 |

A1 – Human Growth and Development
A2 – Factors affecting Growth and Development
B1 – Different Types of Life Event
B2 Coping with Change Caused by Life Events

**Main stages of life**
Infancy 0-2, Early Childhood 3-8, Adolescence 9-18 Early Adulthood 19-45, Middle Adulthood 46-65, Later Adulthood 65+
**Growth** – physical development / increase in body size/ increase in height etc
**Development** – gaining new skills & abilities / learning to read and write




**Factors** – Physical, Lifestyle, Social, Cultural, Emotional, Environmental, Economic
**Events** – relationship changes, Life Circumstances (moving house, school, job) Imprisonment, Redundancy, retirement.
**Character traits** - resilience, self-esteem, emotional intelligence, disposition

# Health & Social Care

## Week 4

Component 1 Assessment

The PSA for this component has a vocational scenario and is split into four tasks.

• Task 1 to **create a detailed account of PIES growth and development through specified life stages and how these change from one life stage to the next.** The task specifies the life stages to focus their response upon.
• Task 2 to **create a detailed account of how specified factors impact PIES growth and development in given life stages**, with well-developed reasons provided for why there is a difference in impact. The task specifies the factors and life stages to focus their response upon.
• Task 3a to **create a detailed account of how a specified life event has affected an individual's PIES growth and development**. This task is accompanied by a case study on specific individuals and life events to focus upon.
• Task 3b to **create a detailed account** that compares how a specified life event has affected t**wo individual's PIES growth and development**, referring to **sources and types of support available** to them, as well as their individual character traits. This task is ***accompanied by a case study on specific individuals and life events for learners to focus their response upon***

## Week 5

Component 1 Assessment

• Task 1 to **create a detailed account of PIES growth and development through specified life stages and how these change from one life stage to the next.** The task specifies the life stages to focus their response upon.
• Task 2 to **create a detailed account of how specified factors impact PIES growth and development in given life stages**, with well-developed reasons provided for why there is a difference in impact. The task specifies the factors and life stages to focus their response upon.
• Task 3a to **create a detailed account of how a specified life event has affected an individual's PIES growth and development**. This task is accompanied by a case study on specific individuals and life events to focus upon.
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## Week 6

Component 1 Assessment

• Task 1 to **create a detailed account of PIES growth and development through specified life stages and how these change from one life stage to the next.** The task specifies the life stages to focus their response upon.
• Task 2 to **create a detailed account of how specified factors impact PIES growth and development in given life stages**, with well-developed reasons provided for why there is a difference in impact. The task specifies the factors and life stages to focus their response upon.
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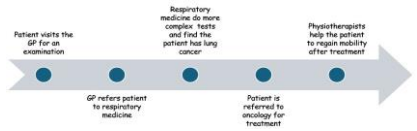
# Health & Social Care

## Week 7

**Component 2 A1- Different Types of Health care Services** can be divided into four groups.
**Primary** – first contact in the healthcare system, have a broad knowledge of different health problems, can provide advice & treatment themselves or may refer to specialists. Out of Hours, dental care, telephone services 999/111 A&E Departments
**Secondary Care** – provide specialist medical care, people are referred here, have in depth knowledge, specific medical areas, eg Rheumatology (bones & Joints), Respiratory medicine (lungs), Cardiology ( heart and blood vessels), Endocrinology ( hormones)
**Tertiary Care** – more specialised, provide more complex treatments Oncology ( diagnose and treat cancer) Transplant Services ( donors, patients through the process)
**Allied Health Professionals** – help people to recover from / adapt to injuries and health conditions. Physiotherapists – mobility and motor skills after an injury Speech & Language therapists – communication difficulties, eating or swallowing. Occupational therapists find ways to overcome difficulties in carrying out everyday tasks. Dieticians use knowledge of food and nutrition to improve health / treat health problems related to what a person eats and drinks.

## Week 8

**Different Types of Health care Services**
**Multidisciplinary team** (MDT) is a group of health and care staff who are members of different organisations and professions e.g., GPs, social workers, nurses, that work together to make decisions regarding the treatment of individual patients and service users.




MDTs are used in both health and care settings. A multidisciplinary meeting may take place prior to an older individual that has been treated in hospital for coronary heart disease is discharged back into the care of the residential care home where they live. Doctors, nurses, social workers and carers would come together to discuss the care that needs to be in place to ensure the individuals health, safety, wellbeing and comfort.
**Referral** - the action of referring someone for consultation, review or further action. Referrals take place throughout health and social care services. Primarily, GPs refer individuals to secondary or allied care professionals and services e.g., a GP may refer a diabetic individual may to a dietician (allied health profession).
**Social Care** provides support to individuals that require assistance with the activities of daily life due to illness, vulnerability or disability.
**Barriers** something unique to the health and social care system that prevents an individual to access the service

## Week 9

**Health conditions** can affect everyday life for a lot of people. Most of these conditions can be managed through individuals themselves and by healthcare services. Cardiovascular conditions affect the heart and blood vessels **Coronary heart disease** – when arteries that supply the heart get blocked by layers of fatty material building up causing narrowing / blood flow reduced and less oxygen gets to the heart. Can cause a heart attack.

| Managed by the individual | Managed by health care services |
|---|---|
| Eating a healthy diet<br>Exercising regularly<br>Maintaining a healthy weight<br>Giving up smoking<br>Reducing alcohol consumption<br>Reducing stress | **Primary Care** – GP's prescribe medicines such as statins<br>**Secondary Care** – a cardiologist may need to insert a stent<br>**Tertiary Care** – might need heart bypass surgery or heart transplant |

**Cerebral vascular accident** – also known as a stroke, this happens when blood supply to part of the brain is cut off.

| Managed by the individual | Managed by health care services |
|---|---|
| Lifestyle changes<br>Improve diet and exercise more<br>Rehabilitation process – do exercises and restore cognitive abilities and muscle strength | **Primary Care** – Doctors may prescribe medicine to prevent blood clots<br>**Tertiary Care** – a neurosurgeon may perform surgery to remove blood clots<br>**Allied Health Professionals** – physiotherapists, OT, speech and language therapists and dietitians may help with rehabilitation and regaining independence |

# Health & Social Care

## Week 10

**Health conditions** – **Type 2 diabetes** causes blood sugar levels to become too high. When the body's cells don't respond properly to insulin this can cause blood sugar levels to rise to dangerous levels

| Managed by the individual | Managed by healthcare services |
|---|---|
| Eating a carbohydrate-controlled diet<br>Maintaining a healthy weight<br>Exercising | **Primary Care** – GP's prescribe medicine or insulin injections<br>**Secondary Care** – a diabetes nurse will explain how to take the medicine and give advice on any lifestyle changes needed |


**Dementia** affects cognitive ability. A syndrome that causes gradual decrease in brain function. Can cause problems with thinking, memory, communication and mobility.

| Managed by the individual | Managed by health care services |
|---|---|
| Keeping active<br>Mentally stimulating activities, keeping a calendar, reminiscence therapy – talking about events from the past | Primary Care – GP may prescribe medicine to reduce symptoms<br>Allied health professionals – occupational therapists help overcoming difficulties with everyday activities to help independence, physiotherapists maintain strength and mobility |

## Week 11

**Health conditions – Obesity** when a person becomes very overweight with a lot of body fat. This can cause many other conditions such as type 2 diabetes, coronary heart disease and some cancers.

| Managed by the individual | Managed by healthcare services |
|---|---|
| Eating a balanced, calorie-controlled diet, exercising, joining a weight loss group | **Primary care** – GP may recommend medicine to reduce the amount of fat absorbed during digestion<br>**Secondary care** – psychologists can help a person understand why they overeat and to cope with cravings and overeating triggers |

*(Psychologists are care professionals that help treat mental, emotional and behavioural problems)*

**Asthma** – condition where the airways become narrow and swollen making it hard to breath/coughing, wheezing, chest tightness, breathlessness.

**Chronic Obstructive Pulmonary Disease** (COPD)- a group of conditions causing difficulty in breathing/ emphysema (damage to the air sacs in the lungs), chronic bronchitis (inflammation of the airways)

**Arthritis** – a disease that affects the joints to swell leading to joint pain and stiffness / usually worsens with age.

Some people have **additional needs**

| Sensory impairment | Problem with senses – most common visual and hearing |
|---|---|
| Physical impairment | Problem with ability to move could have been born with or developed through life |
| Learning disability | May find it difficult to understand new information, learn a new skill or cope independently |

## Week 12

**Social Care services** help people who are ill, vulnerable or disabled with day to day living. Services for young people- may need temporary support, ongoing throughout childhood and adolescence into adulthood.

Reasons may be needed (there may be others)

- A child needs protection
- A child is showing challenging behaviour
- Parents / carers are ill and unable to look after
- Family problems

**Three types** of social care services for children and young people are

**Foster Care** – provides a family environment, gives a safe and stable place, may be temporary, foster carers are responsible for supporting all aspects of growth and development of the child (they receive training and support)

**Residential Care** – similar to foster care but bigger homes with multiple children or young people. Teams of professional staff who work shifts rather than live there. Can cover complex needs with a structured environment with support from trained professionals.

**Youth Work** – service for young people aged 11-25. can be based in a variety of community settings including youth centres, schools, colleges, places of worship. Youth workers organise activities that support young people with their personal and social development. Building *confidence, self-esteem, communication skills & life skills*

# History


CANADA
U.S.A
Olympia
WASHINGTON
Salem
OREGON
Boise
IDAHO
MONTANA
Helena
NORTH DAKOTA
Bismarck
SOUTH DAKOTA
Pierre
MINNESOTA
St. Paul
WISCONSIN
Madison
MICHIGAN
Lansing
NEW YORK
Albany
Montpelier
VERMONT
MAINE
Augusta
NEW HAMPSHIRE
Concord
Boston
MASSACHUSETTS
Hartford
Providence
RHODE ISLAND
CONNECTICUT
NEW JERSEY
PENNSYLVANIA
Harrisburg
Trenton
Dover
DELAWARE
Annapolis
MARYLAND
WASHINGTON, D.C.
OHIO
Columbus
INDIANA
Indianapolis
ILLINOIS
Springfield
IOWA
Des Moines
WYOMING
Cheyenne
NEBRASKA
Lincoln
Sacramento
Carson City
NEVADA
Salt Lake City
UTAH
Denver
COLORADO
Topeka
KANSAS
Jefferson City
MISSOURI
CALIFORNIA
ARIZONA
Phoenix
Santa Fe
NEW MEXICO
OKLAHOMA
Oklahoma City
TEXAS
Austin
ARKANSAS
Little Rock
Frankfort
KENTUCKY
WEST VIRGINIA
Charleston
VIRGINIA
Richmond
Raleigh
NORTH CAROLINA
Nashville
TENNESSEE
Columbia
SOUTH CAROLINA
Atlanta
GEORGIA
MISSISSIPPI
Jackson
ALABAMA
Montgomery
LOUISIANA
Baton Rouge
Tallahassee
FLORIDA
N
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E
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RUSSIA
ALASKA
CANADA
Juneau
HAWAII
Honolulu
MEXICO

# History

## Week 1

**Topic One: What tensions arose as the USA grew, 1789-1838?**

**America was a group of different states that joined together to become one larger country.**

•They agreed on a **constitution** to set up a national (or 'federal') government.
**A constitution is a set of rules that guides how a country is run.**
•It said there was to be a **president** who was elected every four years to look after matters that affected all the states.
•It also set up a **Congress** of representatives from each state to **make laws that affected all states.**
•It set up a **Supreme Court** to check the president and congress did no break the rules of the **constitution.**
•Each **state** has to have **60,000** white Americans living in it to be able to apply to join the United States
•There were other areas called **territories** which were overseen by a Governor until they were ready to become states.

**The USA expanded quickly as they took land from Native Americans of the Plains and created new states.**

•When Britain lost the **War of Independence** they handed over 230 million acres of Native American lands to the USA.
•From 1791, Washington put 80% of his government budget into fighting the Indians.
•In 1794 the Indians were defeated at the **Battle of Fallen Timbers** and agreed to the **Treaty of Greenville**.
•Jefferson encouraged the rich to buy this land in 640 acre lumps, causing anger amongst the poor farmers.

## Week 2

**Topic One: What tensions arose as the USA grew, 1789-1838?**

**Slavery cause divisions in lots of different ways between North and South.**

**Economic- Linked to money**

•The North felt the South had an **unfair advantage** in trade as the South did not have to pay their slaves, but factories in the North also depended on slave-grown products.

**Political- Linked to power**

•Northerners didn't like that slave owners could vote on behalf of their slaves. A state's voting power depending on their population, so the North were angry when slaves were counted as **3/5** of a person as this gave the South a lot of **influence.**
•1829 – Southerner **Andrew Jackson** became the president and used his position to strengthen slavery which angered the North even more.

**Despite their attempts to adapt, the USA forced eastern Native American tribes out of their lands.**

•Creeks and Cherokees 'Americanised' by developing **alphabets**, newspapers and US-style governments.
•Andrew Jackson wanted this land for plantations, so used the **1830 Indian Removal Act** to move them west.
•The Seminole fought 3 **wars** against the USA but were finally defeated. Their population reduced to just 200.
•The Cherokee successfully took the state of Georgia to court, but the US government still forced them West, with 5000 dying on the **'Trail of Tears' in 1838.**

# History

## Week 3

**Topic Two: How did different groups see the American West, 1839-60?**

**The Lakota Sioux are one example of an indigenous people who had lived in North America for thousands of years.**

•Even though **tribes** were independent, they shared many common features, such as living a **nomadic lifestyle** in **tipis,** as they did not believe in owning land.
**Nomadic means moving with the seasons, following the buffalo.**
•This was because **Native Americans** relied on hunting buffalo for survival, which provided them with all the means for survival – food, clothing, shelter.
•The Lakota expanded rapidly onto the Plains using **guns and horses** to follow the buffalo herds.
•They believed in a **Great Spirit**, who gifted them the land on which they lived to look after, but not to own.
•**Warrior culture** was as the heart of Lakota life for men. Women prepared food and were skilled in craft.

Map showing the Great Plains

**Early migrants to the west brought Native Americans and white Americans into real contact for the first time.**

•White Americans from the **eastern states** were pushed away from this area by an economic decline in 1837.
•They were pulled to the **west** by the availability of rich farming land, the **1841 Pre-emption Act** which made it easier for people to buy land.
•The 2,000-mile journey was difficult for migrants, battling against extreme weather, geographical barriers like the **Mississippi River and Rocky Mountains**, Native Americans defending their lands and disease.

## Week 4

**Topic Two: How did different groups see the American West, 1839-60?**

**The Mormons were forced into the West by religious persecution, where they created their own settlement.**

•The **Mormons** were a religious group who were unpopular due to their beliefs – polygamy, shared ownership of land, opposition to slavery.
•Facing hostility they first moved to **Nauvoo, Illinois** before finally settling in **Salt Lake City, Utah**.
•The land here was isolated and undesirable due to it being incredibly dry.
•Through good leadership, digging of **irrigation ditches** and communal approach to resources, their community succeeded.

**The Gold Rushes of 1849 and 1859 brought even more white Americans onto the plains.**

•50,000 people flocked to **California** in 1849; rumours of men making $1,000/day (average wage $2-3/day).
•**Merchants** made lots of money by selling the required equipment to dig for gold.
•The **gold rush** led to permanent settlement in the west – California became a **state** in 1850.
•The **Pike's Peak gold rush of 1858-9** drew people across the plains and to settlement just east of the **Rocky Mountains** – 100,000 in total.
•Permanent settlement was the main consequence – **Kansas** became a state in 1861 and news cities such as **Denver** encroached in Native American hunting grounds.

# History

## Week 5

**Topic Three: What sense can be made of the Civil War and its aftermath, 1861-77?**

**Eventually, tension over slavery became the main cause of the American Civil War.**

- All slave owners depended on slavery continuing, as it supported a huge industry of trade and shipping.
- By 1850 the cotton produced was worth **$1.3 billion** ($578 billion today).
- The **Clay Compromise** was a victory for slave holders as it forced the North to return runaway slaves.
- The **Kansas-Nebraska Act** broke the **Missouri Compromise** and allowed both states to join the Union as Free states. There was violence in '**Bleeding Kansas'** following this, as both sides tried to take control of the state.

**The South claimed the North was restricting their 'state's rights' and split away to defend those rights.**

- Southern states argued it was their duty to protect the rights of individual states to control their own affairs.
- A small group of southerners suggested the southern states cut away (**secede**) from the union and form their own country where slavery was encouraged and supported.
- **Lincoln's** victory brought the issue of states' rights to a head and southerners saw this as a sign that the north would end slavery and their whole way of life.

**Key Person:**
**Abraham Lincoln:**
Abraham Lincoln became President in 1861, issuing the Emancipation Proclamation that declared the end of slavery.

## Week 6

**Topic Three: What sense can be made of the Civil War and its aftermath, 1861-77?**

**President Johnsons Reconstruction was more focused on reuniting the states than helping African-Americans.**

- **President Johnson** gave southern states control over their state governments in return for loyalty to the Union. He cared more for a united America than improving the lives of black Americans.

- Southern states passed laws called '**black codes'** which limited the rights of black people.

**Radical Reconstruction greatly improved African American lives, as the Republican-led Congress took control**

- A **Freedman's Bureau** was set up to give ex-slave holders land to ex-slaves.
- Congress passed a law to stop any states from taking away civil rights of their people.
- The **14th Amendment 1866** said that anyone was a full citizen of the USA if they were born there.
- By the 1870s 2000 African Americans were elected to political posts.
- The withdrawal of the Northern army in 1877 left black Americans in the south very vulnerable.
- Violent racist groups increased such as the KKK and the White League.
- The **Supreme Court** ruled that the constitution says nothing about state governments having to treat people equally. States began separating parks, schools and restaurants.
- It also ruled that the US government had no power to protect black voters in the southern states.

# History

## Week 7

**Topic Four: How and why did life on the Plains change between 1861 and 1877?**

**Railroads had the most destructive impact on Native American lifestyles.**

•President Lincoln approved plans for a **transcontinental railroad** to link the east and west coasts of the USA.
•Two companies were encouraged to build the railroad as quickly as possible with a **land incentive** – 6,400 acres of land was given for every mile of track that they built.
•Opened in 1869, the railroad marked a permanent path through Native American lands and severely disrupted their buffalo hunting.
• Railroads encouraged further **permanent** white settlement on the plains.


**Homesteads brought permanent white settlement to the plains, in direct conflict with tribes living there.**

•The **Homestead Act** in 1862 encouraged settlement on the Plains by making land cheap and accessible.
•They faced many challenges, such as lack of water, isolation, lack of timber, natural hazards and Native American attack.
•Their solutions to these problems made it much more difficult for Plains tribes to live.
•Homesteaders **fenced off the land** which restricted Native American access to water and grazing land.
•They farmed the land with suitable crops but the farms meant **buffalo** herds were disturbed.

## Week 8

**Topic Four: How and why did life on the Plains change between 1861 and 1877?**

**The cattle business encroached on traditional Native hunting grounds and led to starvation.**

•1850s: beef became popular. **Ranchers** profited from free-roaming cattle that grazed on the **'open range'**.

•**Cowboys** would round them up and walk them to markets

•**Cattle trails** were developed that took the cattle north to the railroad, and then on to northern cities.

**The Plains Wars were a series of Native American attempts to prevent the destruction of their way of life.**

•**Little Crow's War** (1861-62) started as the Sioux tribe faced starvation. They killed 500 settlers before US soldiers intervened and killed their leader, with 300 Sioux later being sentenced to death.

•The **Sand Creek Massacre** (1864) was caused by Indians being pushed off their land due to the **gold rushes.** 130 men but mostly women and children were murdered and their bodies mutilated.

•**Red Cloud's War** (1865-8) was fuelled by white settlers trespassing. The Sioux tribe were victorious and the government was forced to sign over the **Black Hills of Dakota.**

•**The Battle of Little Bighorn** in 1876 was the Indians final success. The government clamped down harshly on Native Americans and they were never able to resist the **reservation policy** again.

# History

## Week 9

**Topic Five: How did the lives of Americans change, 1877-1900?**

**Ultimately, Native Americans were unable to resist the destructive force of the white American government.**

•The destruction of the buffalo destroyed the way of life of **nomadic** Plains Indians.

•**Reservations** were used to split up tribes and prevent them from practicing their culture.
•They settled down into permanent homes and became farmers.

•Children were sent away to boarding schools to teach them English and convert them to Christianity.

•The **Dawes Act** (1887) offered Native Americans 160 acres of land, turning them into landowners, and gave them **US citizenship.**

**After 1877 African Americans continued to experience significant barriers to improving their lives.**

•African Americans seeking jobs in the north faced discrimination as jobs went to less skilled white workers.

•The **Jim Crow Laws** in the south separated black and white Americans. This **segregation** led to different schools, restaurants and public facilities. White Americans always received more funding.

•Living conditions for African Americans was poor and racist landlords would not let then move to better quality housing.

•The **Ku Klux Klan** was used to scare and murder African Americans. As a result black Americans rarely complained openly and gave-up government jobs.

## Week 10

**Topic Five: How did the lives of Americans change, 1877-1900?**

**However, there were some areas of improvement for African Americans after 1877.**

•The '**Exodusters'** were ex-slaves who moved west to Kansas away from white violence and claimed government land promised in the **Homestead Act 1862.**

•**Booker T Washington** set up schools for black children which helped lift some out of poverty.
•By 1900 America had 23,866 black teachers, 417 black doctors and 300 lawyers.

•After the civil war black churches were set up which helped establish a sense of community.

•Ownership of land by African Americans tripled between 1877 and 1900.

**Meanwhile, Northern white Americans saw a huge growth in population, business and cities after 1877.**

•Workers were endlessly exploited due to low pay, poor conditions and long hours. **Strikes** often resulted in violence and virtually never led to an improvement in the workers' situation.

•There were many **immigrants** from Europe and Asia who accepted low pay, or started farms in the West.

•Cotton and tobacco factories, fossil fuel mining and **bonanza farms** on the Plains meant that workers were further exploited, ecological damage was done and the economy of America was changed forever.
•Cities like **Chicago** boomed, driven by industrialisation and the invention of **skyscrapers.**

# History

## Week 11

**Exam Skills for the Making of America Paper**

**Clear and organised summary that analyses…**
**9 Marks 10 Minutes**

- Stay focussed on the question
- At least 2 paragraphs
- Different topic for each paragraph
- Precise knowledge
- **No need** for a conclusion.

**Important Second Order Concepts**

**Cause and consequence** reasons, factor, why, causes, this led to, was due to.

**Similarity and difference** Similarly, likewise, the same as, compares with , conversely, however, in contrast, experiences, compared to, different to, more/less than, bigger/smaller than.

**Significance** Most significant, affected lots of people, remembered, resulted in change, least significant, resonates, more/less, important, unimportant, central, crucial, decisive, key, greater/smaller.

**Continuity and change**
Gradual/fast, big change, affected a lot of people, small change, affected few people, increasing, decreasing, major, minor, progression, regression, reversal, rapid/slow, accelerating, small scale/large scale.

## Week 12

**Exam Skills for the Making of America Paper**

**Explanation Question**

**10 marks 12 minutes**
- Each significant part of the explanation could form a separate paragraph.
- A clear structure and precise knowledge are needed.
- At least 2 paragraphs
- No need for a conclusion but if you're aiming for top marks then making your most important/significant factor clear is key.

**Judgment Question**

**18 Marks 25 minutes**

- Introduction setting out your argument
- Reasons to agree with the statement using evidence
- Reasons to disagree with the statement using evidence
- A conclusion which reaches a judgment on the statement

**Emphasising and downplaying: words and phrases**

significant important critical primary main

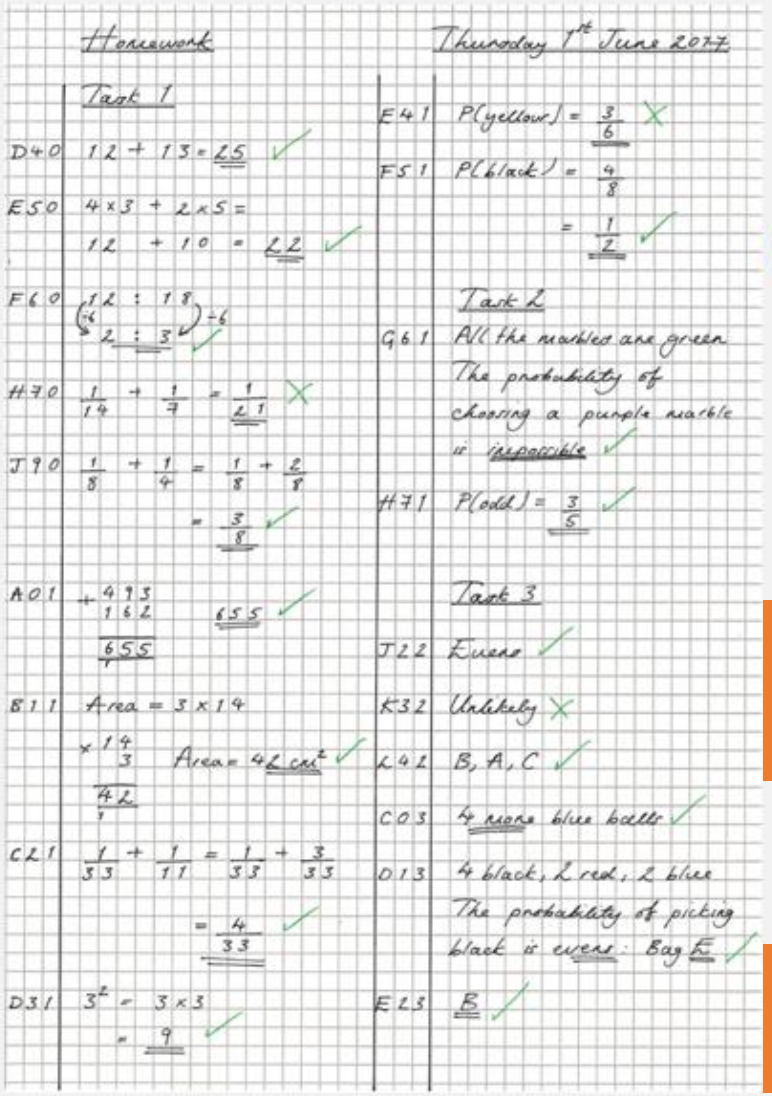
minor unimportant secondary lesser

# Maths

1) Go to sparxmaths.uk
2) Login using your username and password
3) Complete your compulsory homework as follows:

- Write the bookwork code
- Write the question and then your workings and your answer
- Mark your answer in a different colour
- If you are struggling, **watch the video**
- Your homework is complete when you have answered **every** question correctly.
- If you are really struggling with one question, complete the other questions and ask your Maths teacher for help the next day or attend the Sparx Clinic.

| X | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| 3 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| 5 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| 7 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | 77 | 84 |
| 8 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 |
| 9 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 | 99 | 108 |
| 10 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 |
| 11 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | 132 |
| 12 | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 |



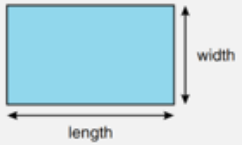

TUE

Sparx Maths is set at 9am on a Tuesday and is due in by 7am on a Tuesday.

You can get help with Sparx every Break 1 in BL07.

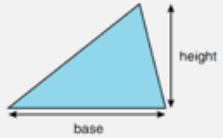
# Maths – Points of reference

### Area of a Rectangle



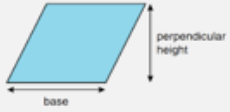

$$length \times width = l \times w$$

### Area of a Triangle



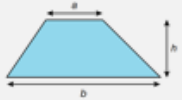

$$\frac{1}{2} \times base \times perpendicular\ height$$
$$= \frac{bh}{2}$$

### Area of Parallelogram



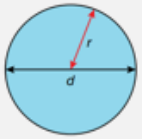

$$base \times perpendicular\ height$$

### Area of Trapezium



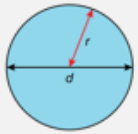

$$\frac{1}{2}(a+b)h$$

### Circumference of a circle



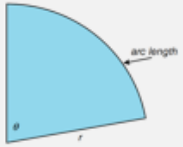

$$C = \pi \times d$$

### Area of a circle




$$A = \pi \times r^2$$

### Arc Length



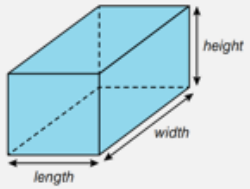

$$\frac{angle}{360} \times \pi \times d$$

### Area of a Sector


$$\frac{angle}{360} \times \pi \times r^2$$

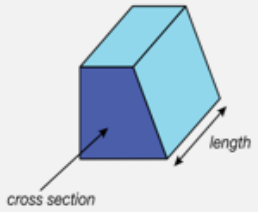
### Parts of a circle


### Volume of a Cuboid




$$Length \times width \times height$$
$$V = l \times w \times h$$

### Volume of a Prism




$$Area\ of\ cross\ section \times length$$

### Square Numbers

$1^2 = 1$
$2^2 = 4$
$3^2 = 9$
$4^2 = 16$
$5^2 = 25$
$6^2 = 36$
$7^2 = 49$
$8^2 = 64$
$9^2 = 81$
$10^2 = 100$
$11^2 = 121$
$12^2 = 144$
$13^2 = 169$
$14^2 = 196$
$15^2 = 225$

### Cube Numbers

$1^3 = 1$
$2^3 = 8$
$3^3 = 27$
$4^3 = 64$
$5^3 = 125$
$6^3 = 216$
$7^3 = 343$
$8^3 = 512$
$9^3 = 729$
$10^3 = 1000$

### Prime Numbers

2,3,5,7,11,13,17,
19, 23, 29, 31,
37,...

HCF: Highest Common Factor
LCM: Lowest Common Multiple

### Index Rules

$x^a \times x^b = x^{a+b}$

$\frac{x^a}{x^b} = x^{a-b}$

$(x^a)^b = x^{a \times b}$

$x^0 = 1$

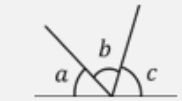
$x^{-a} = \frac{1}{x^a}$

$x^{\frac{1}{a}} = \sqrt[a]{x}$

# Maths – Points of reference

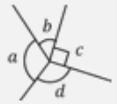
## Angle Rules

Angles of straight line add up to 180°




$a + b + c = 180$

Angles at a point add up to 360°

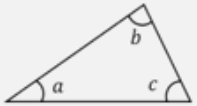



$a + b + c + d = 360°$

Vertically opposite angles are equal


$a = c, \quad b = d$

Angles in a triangle add up to 180°




$a + b + c = 180°$

Angles in a quadrilateral add up to 360°

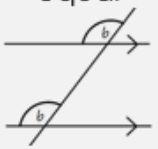

$a + b + c + d = 360°$

## Angle Rules

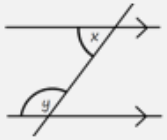
All exterior angles in a polygon sum to 360°

One exterior angle + one interior angle = 180°

Corresponding angles are equal

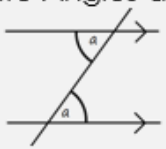



Co-interior angles add to 180°

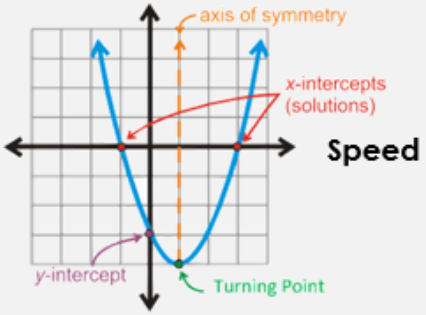



$x + y = 180°$

Alternate Angles are equal




## Quadratic Graphs





$$speed = \frac{distance}{time}$$

### Density


$$density = \frac{mass}{volume}$$

### Pressure


$$pressure = \frac{force}{area}$$

## Gradient

$$= \frac{change\ in\ y}{change\ in\ x}$$

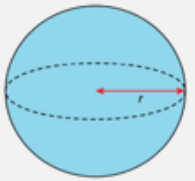
### Compound Interest

$P$ = principal amount
$r$ = Interest rate
$n$ = number of years/months/day

$$Total\ Accrued = P\left(1 + \frac{r}{100}\right)^n$$

### HIGHER TIER ONLY

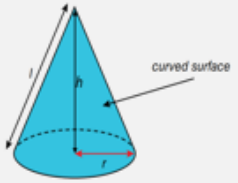
### Sphere




$$S.A. = 4\pi r^2$$

$$V = \frac{4}{3}\pi r^3$$

### Cone




$$Curved\ S.A. = \pi rl$$

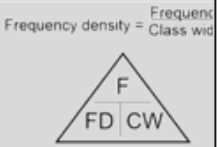
$$V = \frac{1}{3}\pi r^2 h$$

## HIGHER TIER ONLY

### General linear line equation

$y = mx + c$
Where $m$ is the gradient and $c$ is the y-intercept.

### Frequency Density



# Media: Magazines & Advertising

## Week 1

### Representation

**Representation: the description or portrayal of someone or something in a particular way.**
Representation is how media producers want you to see the world! Representation is the process of how reality is constructed for an audience. (This is called **Mediation**)

**EVENT** → **MEDIATION** → **REPRESENTATION**

### Stereotypes

Representation often includes stereotypes.
**Stereotypes are a widely held, often negative and over simplified image or idea of a particular type of person or thing.**
E.g. *Teenagers are often represented as unruly, rude, lazy, disrespectful & defiant.*

## Week 2

### Analysing Representations

When analysing representation, we can look to see whether texts are **supporting** (using) or **subverting** (challenging) stereotypes.

We can look at the following areas:
**GENDER, AGE, SEXUALITY, ETHNICITY & SOCIAL GROUP.**

**Denotation**: what you can see/hear
**Connotation**: what this suggests – the deeper meaning the audience understands. **E.g.**

**Denotation:** Black rimmed glasses
**Connotation**: Clever, nerd, geek, intelligent, educated

## Week 3

### Component 1 Section A Question 2

**(25marks)**

**Introduction:** overall sentence **comparing** the representation in the two covers
**Paragraph 1**: a similarity, with examples and explanations for both covers
**Paragraph 2**: a similarity, with examples and explanations for both covers
**Paragraph 3**: a difference, with examples and explanations for both covers
**Paragraph 4**: a difference, with examples and explanations for both covers
**Conclusion**: make a **judgement** about **HOW FAR** they are similar/different representations

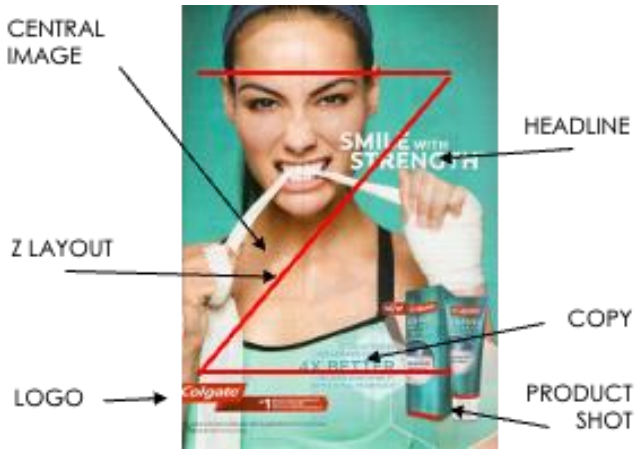
## Week 4

### Advertising Terminology

**Commercial**: selling goods or services primarily to make money.
**Non-commercial**: aim to educate, inform, and inspire the audience to take action towards social causes.
**Mode of address**: refers to the tone and style a media text uses to communicate with the audience
**Intertextuality**: when one text references another
**Hard sell**: A hard sell is an attempt to get the buyer to take action now.
**Soft sell:** A soft sell is a gradual approach .

## Week 5

### Advertising Layout & Design Terminology




## Week 6

### Quality Street Context


Quality Street sweets were made by Mackintosh in 1936. In the 1930s, only the wealthy could afford chocolate boxes, but the creator Harold Mackintosh aimed to sell them at a more reasonable cost to appeal to working families.

# Media: Radio Industry

## Week 1

**Radio Industry Terminology**

**PSB:** A Public Service Broadcaster aims to serve the public rather than make a profit.
**Commercial:** Stations funded by advertising.
**Remit:** the task or area of activity officially assigned to an individual or organization.
**Ofcom:** The organisation that regulates UK TV & Radio.
**Convergence:** when two or more things come together to form a new whole.
**License Fee:** the charge for anyone in the UK who watches terrestrial TV or accesses iPlayer.
**RAJAR:** the organisation that measures radio audiences in the UK.

## Week 2

**The BBC & Radio 4**

- In the UK, BBC radio is funded by the licence fee. The BBC has a public service remit: **to educate, inform and entertain**.
- It has 8 UK-wide TV channels
- It has 10 national radio stations, BBC World Service & about 40 local radio stations
- Catch up services such as iPlayer & the Sounds app
- **Radio 4** – mostly speech-based station (news, current affairs, factual, drama & comedy series)
- **Radio 4** "should appeal to listeners seeking intelligent programmes in many genres which inform, educate & entertain.

## Week 3

**The Archers Context**

The Archers is aired on Radio Four, the BBC's main spoken-word channel, and so is funded by the licence fee.
The Archers was originally established in 1951 to educate farmers. The show soon became a major source of entertainment for people from all walks of life, not just the rural community.
However, the show still prides itself on the quality of its research and its ability to portray real rural life.
Radio Four has a high cultural status and so the audience for The Archers consists mainly of well-educated middle-class professionals, most of whom are middle aged and above, white women.

## Week 4

**Convergence**

There are a number of ways for fans to engage with the show:

- Regular Radio 4 slot
- Sunday omnibus
- BBC Radio 4 Extra repeats
- Podcast
- iPlayer
- BBC Sounds App
- BBC Website The Archers' page
- Twitter
- Facebook

## Week 5

**Episode Terminology**

**Controversy:** a lot of discussion and argument about something, often involving strong feelings of anger or disapproval.
**Narratives:** storylines.
**Melodrama:** a sensational dramatic piece with exaggerated characters and exciting events intended to appeal to the emotions.
**Omnibus:** a broadcast of a programme that normally includes all episodes from a particular week, allowing audiences to catch up in one go.

## Week 6

**Uses & Gratifications Theory**

Blumler & Katz's theory suggests that there are certain reasons why an audience responds to different media texts. We can use PIES to help us to remember them:

**P**ersonal identity: relating to a character or situation
**I**nformation: finding out information
**E**ntertainment: escaping from daily lives
**S**ocial Interaction: discussing with others

# Media: Film Industry

## Week 7

**Production**

**Pre-Production:** is the process where you create a plan for production and secure all the resources (humans, space, and equipment) you will need.

**Production:** when all the actual shooting and recording happens — with cameras, actors, and location licenses.

**Post-Production:** involves various post-production techniques including editing, colour grading, and visual effects to turn your raw footage into a finished film.

## Week 8

**Distribution & Marketing**

**Distribution** is the process of making copies of the film for cinema, VOD (video on demand), DVD and SDV (streaming and digital video) release and marketing & promotion.

**Marketing** is the advertising of a film, also known as film promotion, and the people who are responsible for this are the distribution company. This can include print, video, online and products.

## Week 9

**Circulation**

**Circulation** is the process of exhibiting (showing) the film across a range of different media platforms.

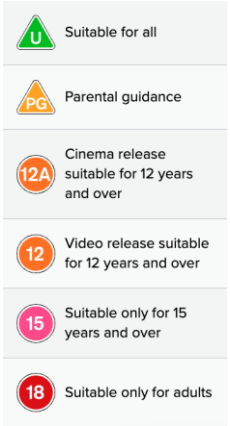
It traditionally takes place in the following order:
1. Cinema release
2. DVD release, Pay per view (PPV)/ video on demand (VOD)
3. 'Free to air' television (available on standard TV channels for free to the viewer)

## Week 10

**Regulation**
Film releases in the UK are regulated by the BBFC.

When classifying films the BBFC consider:
- Context
- Themes
- Tone and impact
- Depiction of discrimination
- Depiction of drug use
- Depiction of sex & nudity
- Use of language
- Depiction of threat & violence
- Depiction of imitable Behaviour

bbfc




## Week 11

**SET TEXT: James Bond: No Time To Die**
You will need to be able to talk about the following areas:

- Production Information
- Distributor
- Marketing strategies
- Circulation information
- Rating and reasons for it
- Target Audience
- Audience appeals (film and marketing)
- Website
- Trailers
- Posters
- Release challenges and information
- Box office


## Week 12

**Answering a 12 marker**

- Aim for 3-4 paragraphs.
- Support your ideas with examples from the set text (NTTD)
- Try using **DEL** to help structure your ideas:

**DESCRIBE** - the technique used/ representation constructed

**EXPLAIN** - support with specific evidence - how has media language been used

**LINK** - to the overall context or meaning or the question

# GCSE PE

## Weeks 1 & 2

**Sedentary Lifestyle**

- Sedentary lifestyle is a lifestyle type, in which one is physically inactive and does little or no physical movement and/or exercise.

- Some examples of sedentary behaviour include television viewing, playing video games, using a computer, sitting at school or work, and sitting while commuting

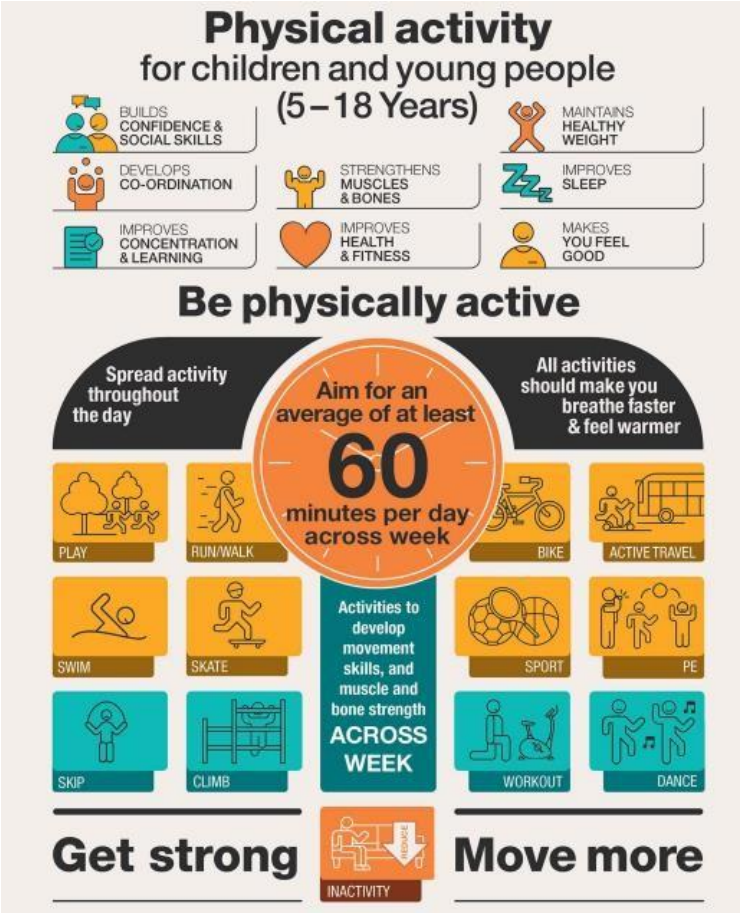
- Being sedentary is another way to describe an inactive lifestyle. When you sit around and watch television all day, or play video games for hours instead of getting up and doing something productive, you are being sedentary. There are even sedentary jobs that keep people from being active.

## Week 3 & 4

**Benefits of an active Lifestyle**

Being active is good for your mind and body. It can reduce your risk of chronic (long-term) conditions, such as heart disease, type 2 diabetes, high blood pressure, dementia, stroke, cancer, and lower the risk of early death by up to 50%.

| | |
|---|---|
| **Improve your sleep** | Improve your mental health and mood |
| **Reduce the risk of falls** | Increase your chances of living longer |
| **Boost energy levels** | Improve body composition |
| **Aid self-esteem** | Help keep your thinking and learning skills sharp as you age |
| **Strengthen your bones and muscles** | Help to maintain physical function and independence as you age |



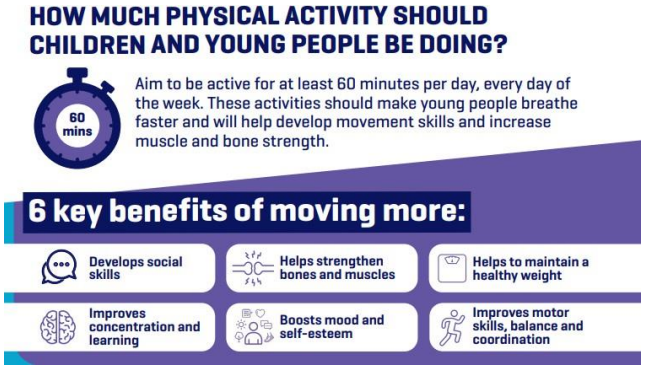
# GCSE PE

## Week 5 & 6

### Side Effects of a Sedentary Lifestyle


## Weeks 7, 8, & 9

### Move More – Sit Less



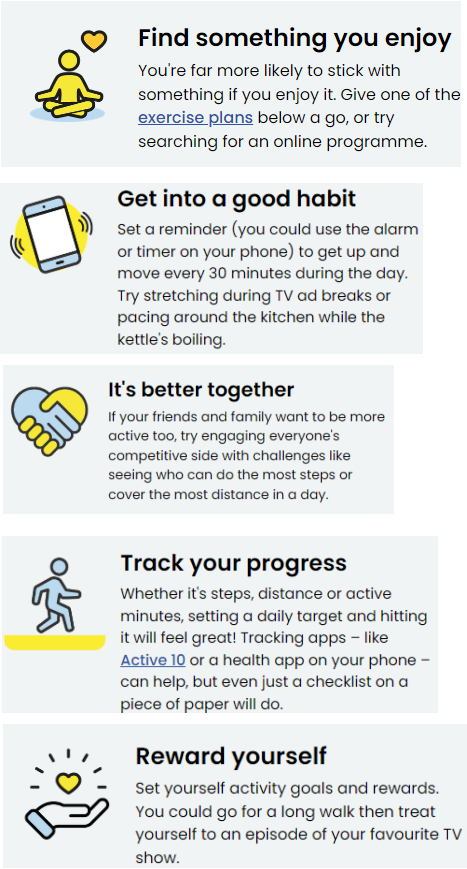

Children and young people should do a range of different activities across the week.

Examples include:

- walking to school or walking the dog
- playground activities, including jumping, running and catching
- physical education
- sports, like football or tennis
- swimming
- skipping
- dancing
- skateboarding or rollerblading
- cycling

## Weeks 10, 11 & 12

### Tips to staying active

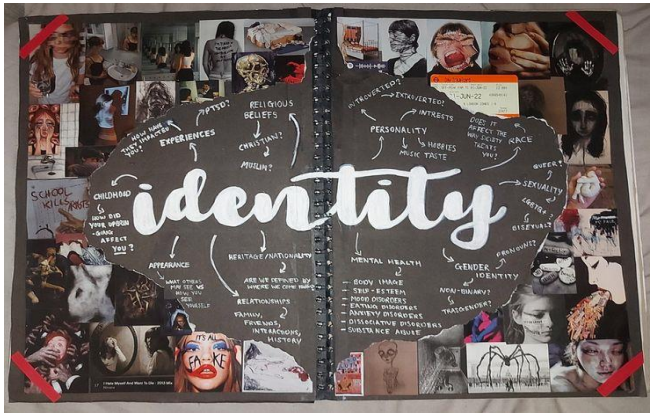


# Photography

## Week 1

**Key Words**

- **Develop ideas**: Use mind-mapping, Mood boards, and artists websites to develop your ideas.
- **Analyse contextual sources**: Understand the sources you use and relate what you learn to your own ideas and experiences.
- **Moodboard/inspiration page**: A visual collage of images, colours, and other materials that capture a specific feeling or mood for a creative project. It can also be called an inspiration board.
- **Exposure Triangle**: aperture, shutter speed, and ISO—key for controlling light. All three cause and affect one another.
- **Auto focus and Manual focus** using Shutter button and Manual focus ring on lens.




## Week 2

**Key Words**

- **Record ideas:** Record your ideas, observations, and insights visually, through writing, or using other media
- **Annotate:** Write about your idea by adding annotations to your work explaining or commenting on images and analysing why an artist has created their work.
- **Research:** Study an artist's life, education, and artwork, and analyse their work. You can also consider what inspired their work and how you respond to it.
- **Depth of Field:** Aperture (f-stop) controls light and depth. **LOW** F Number = **LESS** in Focus, **LOTS** of **l**ight **Higher** Numbers (e.g., f/22) = **More** in focus. **Much less** light


## Week 3

**Key Words**

- **Response:** a response is not simply a copy of the work; it should be your own image but completed in a similar style to your chosen artist. You should always use one of your own photographs as the basis for the image you will create.
- **Photoshoot:** A photo shoot is a series of images that are taken, with the goal of obtaining images that can then be placed into post-production, or editing. 30-60 images minimum. These images are then used for print/digital advertising, business collateral, or just for personal use.
- **Shutter Speed:** cause/stop motion blur. **Fast** speeds (1/1000) F**reeze** action; **Slow** speeds (1/30) B**lur** movement. No lower than 1/60 use a tripod for slower speeds to avoid camera shake. Slow Shutter = MORE light + MORE movement

# Photography

## Week 4

**Key Words**

- **Studio Lighting:** is artificial light source to either add to the light that's already there, or to completely light their photograph. Setups can range from using a single flash that you mount onto your camera, to multiple off-camera lights.
- **Location:** a type of photography where a photographer takes pictures outside of a studio in a remote or outdoor location.
- **Contact sheet:** a page with thumbnail images from a photoshoot. A contact sheet provides an overview of all the frames and their exposure. It's the photographer's first look at what they've captured on camera.
- **ISO** – Effects the Sensitivity of the Camera to light AND the graininess. ISO 100 = Less Light/Less Grain. ISO 8000 = Lighter/Lots of Grain


## Week 5

**Key Words**

- **Experiment:** It means stepping outside traditional photographic techniques and pushing the boundaries of what is possible. Experimental photographers use unconventional methods and materials to create unique and captivating images that convey emotion, tell a story, and challenge the viewer's perceptions
- **Edit:** Photo editing is the process of altering a photograph, such as by adjusting its colour, light, tone, composition, or focus. It's also known as post-processing or postproduction and can be done on software like Photoshop and Lightroom


## Week 6

**Key Words**

- **Layering:** Combining multiple images or effects in separate layers to create depth and complexity in a manipulated Image.
- **Masking**: A technique used to hide or reveal parts of a layer, allowing for selective adjustments and complex compositions.
- **Colour Grading**: The process of adjusting the colours in an image for mood or style, often used to create a cohesive look across a series of photos.

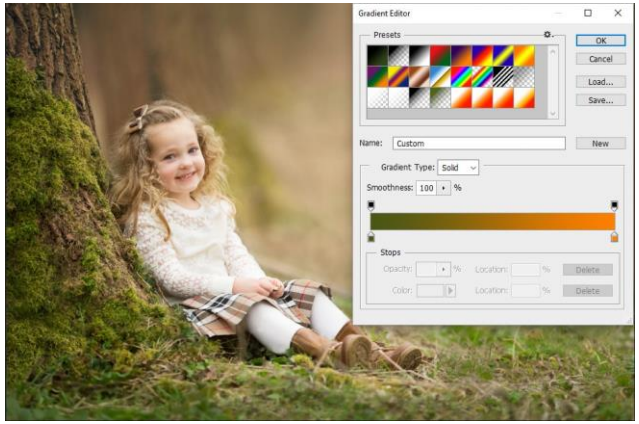
# Photography

## Week 7

**Key Words**

- **Gradient Maps:** You can use gradient maps to add colour to an image, or to change the colour of the highlights, midtones, or shadows. For example, you can colour the lightest areas of an image a warm orange to create a sun-kissed effect, enhancing mood and colour harmony.

- **HDR (High Dynamic Range)**: A technique that combines multiple exposures to capture a greater range of light and detail than a single photo can achieve.




## Week 8

**Key Words**

- **Double exposure:** Combining 2 or more images to create an alternative image. Using either opacity or the layers and blends palette examples like overlay, lighten, darken and multiply.

- **Scanography:** Also known as scanner photography, is a photographic technique that uses a flatbed scanner to create art. Some artists arrange multiple objects on the scanner's flatbed, while others scan individual objects and arrange them later

## Week 9

**Key Words**

- **Texture Overlays:** Applying patterns or textures to images to add visual interest or a tactile quality.

- **Digital Collage**: Merging various images and elements into a single composition, often exploring themes or narratives in a unique way.

- **Duotone**: A technique that uses two colors to create a stylized look, often applied to black-and-white images for a dramatic effect.

# Photography

## Week 10

**Key Words**

- **Narrative:** A visual narrative in photography is a story told through a series of images or a single image. The goal is to create a photo story that engages the viewer, evokes emotions, and conveys a narrative. Challenging traditional perspectives can provide a fresh take on a familiar scene or concept.

- **Final piece:** A series of images that demonstrate a photographer's best work and understanding of visual language. Final pieces can be presented in many forms, including, Album covers, Book covers, Magazine covers and layouts, Movie, event, or festival posters, Branding and T-shirt designs, Zines etc

- **Context:** the information that surrounds a photograph, and it's what gives the photograph its meaning. Who is the image for and how will it be used i.e Mental Health Campaign

## Week 11

**Key Words**

- **Mock up:** a small-scale, annotated model of the final piece that a photographer is planning to create. It's a way to ensure that the final piece will look as intended and to identify any potential problems that might arise

- **Composition:** the ways in which meanings, ideas and intentions can be communicated through visual language, using formal elements, including: colour, line, form, tone, texture and how the elements of an image are arranged.



## Week 12

**Key Words**

- **The final piece presentation:** is a series of edited photographs that demonstrate your ideas and skills.

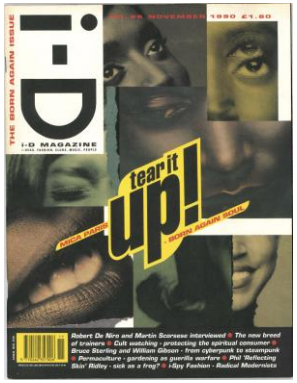
- **Link to preparatory work**: Ensure your final piece connects to your research and artist or designer work.

- **Refine ideas**: make small improvements to your ideas and techniques to create a professional-looking final piece

- **Experimentation**: Does your final piece show a variety of experimental processes?

- **Purpose**: Who is your final piece for and is this really well considered, developed and evidenced in your sketchbook?

- **Evaluation:** The process of explaining: your research about other artists' work and the ideas you have had, your experiments and the way you have refined them. the decisions you made along the way and how you have recorded your learning.

# PSHE

## Week 1-2

**Where to get help about... Alcohol and Drugs**

**FRANK**
talktofrank.com
03001236600
Information, help and advice about drugs

**NHS Smokefree**
nhs.uk/smokefree
NHS smoking cessation support service

**Nacoa**
nacoa.org.uk 08003583456
Information and support for anyone affected by a parent's drinking

## Week 3-4

**Where to get help about... Mental Health**

**Shout:** the UK's free, confidential and 24/7 mental health text service for crisis support Text 85258

www.youngminds.org.uk A charity designed to support young people with their mental health

www.childline.org.uk A charity designed to help young people with all sorts of issues, including mental health. You can phone for free on 0800 1111

If you need help with your mental health, you can also speak to our safeguarding team

## Week 5-6

**Where to get help about... Peer Pressure**

- **Know Your Values**: Be clear about what matters to you and what you believe in. This helps you stay firm in your decisions, even when others try to influence you.
- **Practice Saying No**: It can be helpful to have a simple, assertive response ready, like "No, thanks" or "I'm not interested."
- **Find Supportive Friends**: Surround yourself with people who respect your choices and share similar values.
- **Avoid Tempting Situations**: If you know something is likely to lead to pressure, try to avoid it or leave before you feel uncomfortable.
- **Be Confident**: Trust your own judgment and remember that it's okay to say no, even if it's difficult.

## Week 7-8

**Where to get help about... Relationships**

www.actonitnow.org.uk A website to support young people in their relationships

www.brook.org.uk Sexual Health and wellbeing website

www.youngminds.org.uk Has a really good section on developing relationships you could read

If you need help with any of your relationships, you can also speak to our safeguarding team

## Week 9-10

**Where to get help about... Stress**

- **Take Deep Breaths**: Slow, deep breathing helps calm your nervous system and reduce immediate stress.
- **Take Breaks**: Step away from stressful situations for a few minutes.
- **Exercise**: Physical activity, even a short walk, can help release built-up tension and improve your mood.
- **Stay Organized**: Break tasks into smaller steps, and prioritize what needs to be done to avoid feeling overwhelmed.
- **Talk to Someone**: Sharing your thoughts with a friend or family member can help you feel supported and understood.

## Week 11-12

**Where to get help about... Bullying**

www.youngminds.org.uk/young-person/coping-with-life/bullying

www.childline.org.uk A charity designed to help young people with all sorts of issues, including mental health. You can phone for free on 0800 1111

Remember you can report bullying on the Bodmin College website under the tab "Parents and Students".

You can also speak to any member of staff.

# RE

## Week 1-2

### Lesson 1 - Waheguru and Guru Nanak

**Waheguru:**
The Sikh word for God, it translates as 'wonderful lord'.

**Guru:** A human teacher sent by God to bring His word to the world.

**Guru Nanak:** The first Guru, chosen by God to bring his message to the people. Having met with God in heaven, Guru Nanak undertook 4 great journeys to spread the new word of God.

**Sewa:** Sikh principle of selfless service to others

## Week 3-4

### Lesson 2 - The Living Gurus

The 10 living Gurus who established Sikhism and Sikh traditions.

**Guru Nanak:** The first Guru and founder of the religion.

**Guru Gobhind Singh:** The final living Guru who established the Khalsa community.

**Singh:** Surname all Sikh men are given, it means Lion.

**Kara:** The name all Sikh women are given, it means Princess.

## Week 5-6

### Lesson 3 - The Khalsa and Vaisakhi

The establishment of the community of inducted Sikhs by Guru Gobhind Singh

**The Panj Pyare:** The 5 beloved ones who showed their faith in God by offering to die for the Guru.

**Khalsa:** The community of Sikhs who wear the 5Ks
- Kirpan - sword
- Kalra - steel bangle
- Kesh - uncut hair
- Kanga - wooden comb
- Kachera - loose fitting underwear

**Vaisakhi:** The Sikh festival celebrating the formation of the Khalsa.

## Week 7-8

### Lesson 4 - Guru Granth Sahib and the Gurdwaras

**Guru Granth Sahib:** The Sikh Holy book containing the combined wisdom of the 10 living Gurus.

**Gurdwaras:** Sikh place of worship, it has 4 doors facing North, South, East and West so everyone is welcome.

**Granthi:** Person who runs the Gurdwara

**Langar:** The community kitchen in the Gurdwaras

## Week 9-10

### Lesson 5 - Living as a Sikh

**Naming Ritual:** Sikhs use the Guru Granth Sahib to help choose the name of their child

**Dastar Bandi:** The Sikh turban-tying ceremony

**Amrit:** The Sikh initiation ceremony used to join the Khalsa. It involves stirring a mix of sugar and water with a kirpan

**Funeral Rites:** Sikhs believe in rebirth and the reunion of the soul with God

## Week 11-12

### Lesson 6 – Sikh Worship

**Gutka:** A small book containing key prayers and teachings from the Guru Granth Sahib

**Mool Mantar:** Sikh poem summarising their central beliefs in God

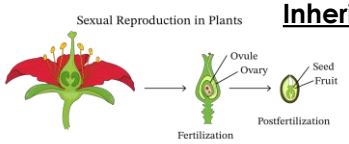
**Meditation:** The act of mindfullly focusing on the meaning of God

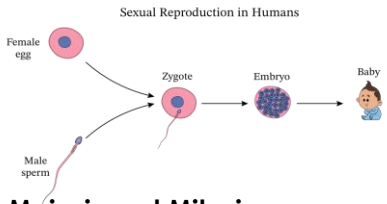
**Mala beads:** Prayer beads used to help Sikhs with their worship

**Nam Japna:** The act of repeating the name of God

# Separate Science

## Week 1



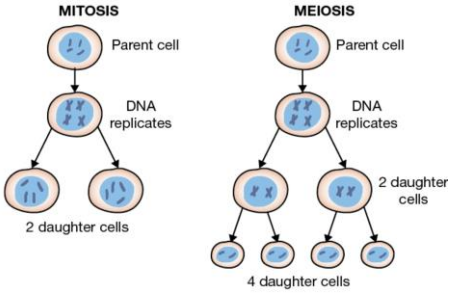

### Inheritance and evolution

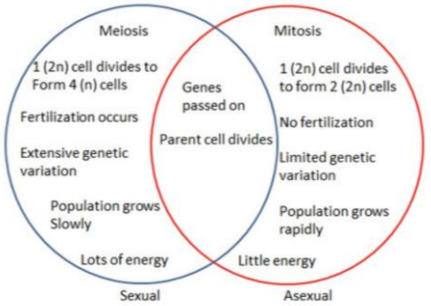
### Sexual and asexual reproduction

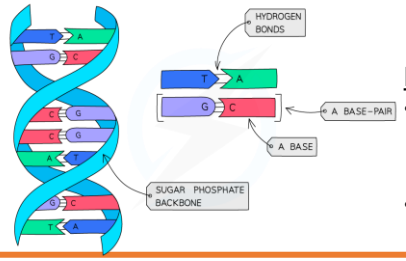
- **Sexual** - The formation of a new organism by **combining the genetic material** of **two** organisms, **using meiosis**
- **Asexual** – reproduction with only **one parent**, **using mitosis**

### Meiosis and Mitosis

- **Meiosis –** A type of cell division that produces 4 non identical haploid gametes
- **Mitosis –** A type of cell division that produces two identical diploid cells
- **Haploid** - A **sex cell** (gamete) that contains **one set of chromosomes**
- **Diploid** - Cells that contain **two sets of chromosomes**
- **Gametes** – **sex cells**, e.g. **egg or sperm**
- **Fertilisation** - fusion of the **nucleus** of a **male gamete** with the **nucleus of a female gamete**




### DNA and the genome

- **DNA** - **Deoxyribonucleic acid.** The genetic material inside the nucleus of cells
- **Genome -** complete set of DNA found in an organism.

## Week 2

| | | Mother | |
|---|---|---|---|
| | | X | X |
| Father | X | XX | XX |
| | Y | XY | XY |

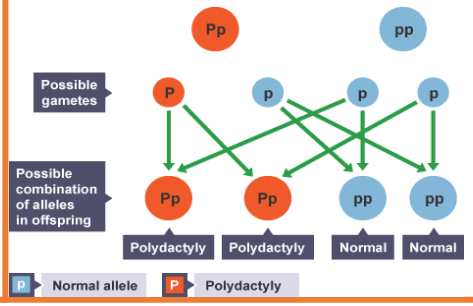
XY = Male 50% chance
XX = Female 50% chance

### Genetic disorders

- **Cystic fibrosis** – a **recessive genetic disorder** of the **cell membranes**.
- **Polydactyly** – a **dominant genetic disorder** where a baby's born with **extra fingers or toes**
- **Gene therapy** - **inserting** a **normal allele into the chromosomes** of an individual who carries a **faulty allele.**

### Variation and mutations

- **Variation** – **differences in characteristics** of organisms
- **Mutations** - a **permanent change** in the nucleotide sequence of **DNA**




### Gender and inheritance

- **Alleles** – **different versions of a gene**
- **Dominant** - An **allele** that **always expresses itself** whether it is partnered by a recessive allele or by another like itself.
- **Recessive** - **masked or suppressed** in the **presence of the dominant variant.**
- **Heterozygous** – a **genotype** where **two alleles** for a particular characteristic are **different.**
- **Homozygous** - a **genotype** in which the **two alleles** for the characteristic are **identical.**
- **Genotype** – An organism's **combination of alleles**
- **Phenotype** – The **characteristics** an organism has

| | E | e |
|---|---|---|
| **E** | EE | Ee |
| **e** | Ee | ee |

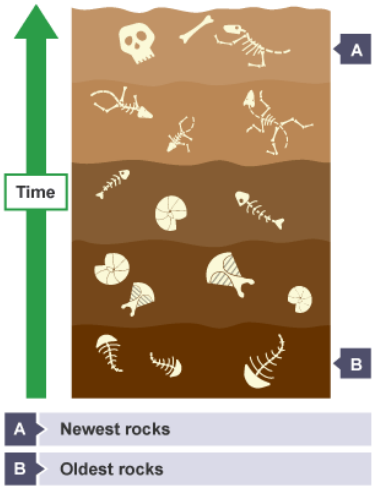
Outcome: One is EE (homozygous dominant), two are Ee (heterozygous) and one is ee (homozygous recessive).

# Separate Science

## Week 3

### Natural selection

- **Evolution** - process of **change in the inherited traits** of a population of organisms **from one generation to the next.**
- **Natural selection** - the **best-adapted** individuals **survive** longer, have **more offspring** and **pass on** their **advantageous alleles**
- **Species** - Individuals capable of **interbreeding successfully** to produce **fertile offspring**.

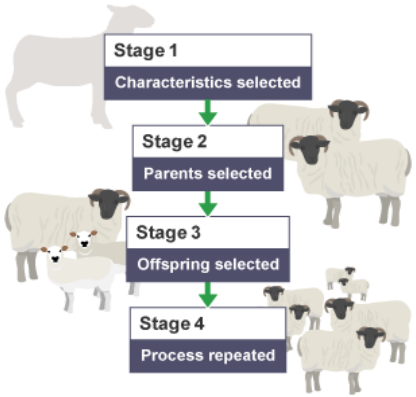



### Extinction and endangered species

- **Extinction** – when **no individuals** of a species **remain**
- **Endangered** - if they are not helped, they are **likely to become extinct**
- **Biodiversity** - The **range of animals and plants in a given area**

### Selective breeding

- **Selective breeding -** when humans breed plants and animals for particular genetic characteristics

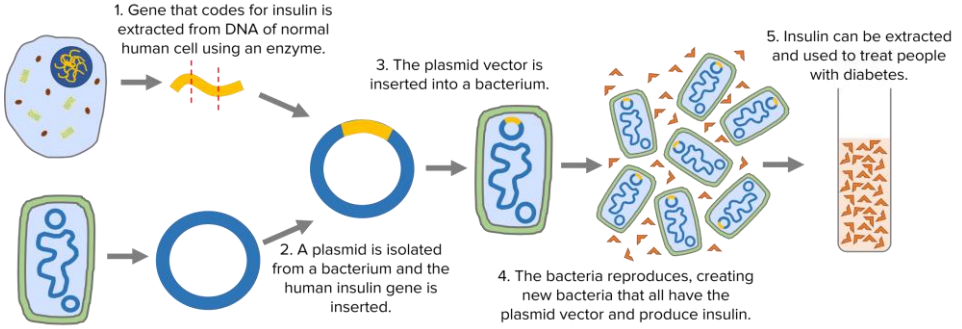



**•Desired characteristics in animals**:
•animals that produce **lots of milk or meat**
•**chickens** that lay **large eggs**
•**domestic dogs** that have a **gentle nature**

## Week 4

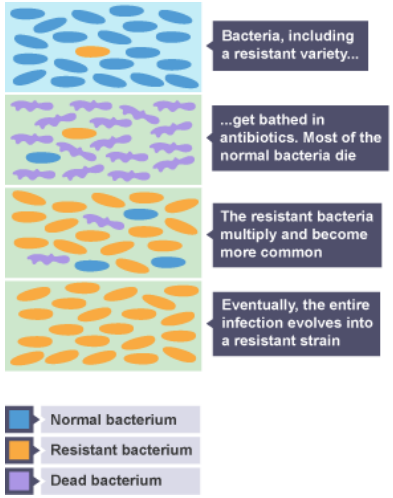
### Genetic engineering

- **GE or GM (genetic modification) -** involves **modifying the genome** of an organism by **introducing a gene from another organism** to result in a desired characteristic
- **Examples**: **Human insulin** from bacteria, **Golden rice** with vitamin A




### Antibiotic resistance

- **Antibiotic resistance** – where **bacteria cannot** be **destroyed** by the antibiotic – this is an example of natural selection
- **Antibiotics** – substance that **kills bacteria**




### Evolutionary trees and classification

- **Classification** - Living organisms are classified into **groups depending** on their s**tructure and characteristics.**
- **5 Kingdoms** – Animals, Plants, Fungi, Protists, Prokaryotes
- **3 domain systems** – Bacteria, Archaea and Eukaryotes

# Separate Science

## Week 1 Separate Content

**Protein synthesis**

- **Protein - Organic compound** made up of **amino acid** molecules
- **Synthesis** – **combining two** or more **components**

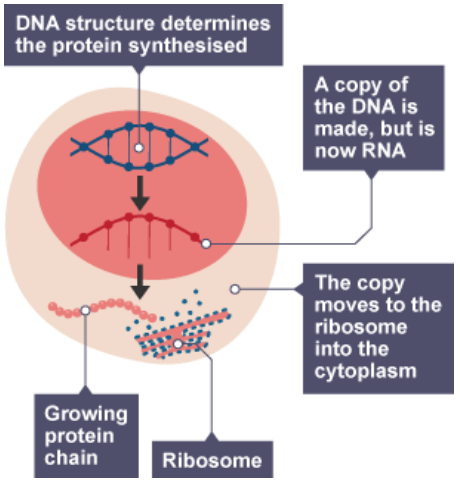
**Order of bases on DNA**

↓

**Order of amino acids**

↓

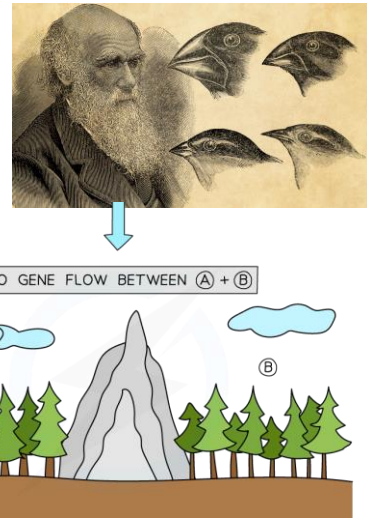
**Specific proteins**




## Week 2 Separate Content

**Theory of evolution and speciation**

- **Darwin** – best known for the **theory of evolution by natural selection**
- **Wallace** – best known for work on warning colouration in animals and his **theory of speciation**
- **Lamarck –**best known for his alternative theory of evolution before Charles Darwin
- **Speciation** - The formation of **new species** by **natural selection**



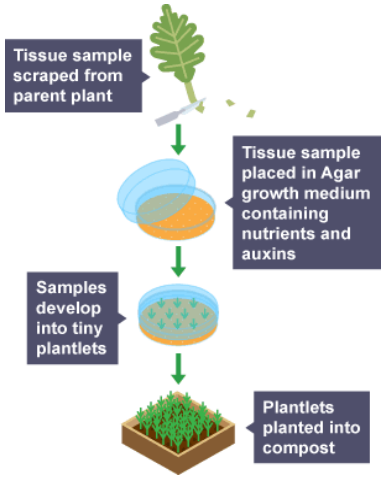

## Week 3 Separate Content

**Cloning**

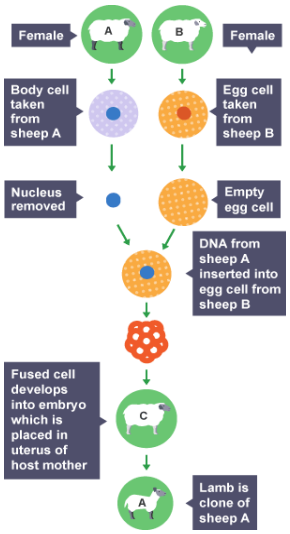
**Clones - genetically identical** individuals

**Cuttings** - Part of a plant stem, leaf, or root cut off and used for producing a **new plant.**

**Tissue culture** - the **growth of tissues or cells separate** from an **animal or plant**.




## Week 4 Separate Content




The method for adult cell cloning is:

1. The nucleus is removed from an unfertilised egg cell.
2. The nucleus from an adult body cell, such as a skin cell, is inserted into the egg cell.
3. An electric shock stimulates the egg cell to divide to form an embryo.
4. These embryo cells contain the same genetic information as the adult skin cell.
5. When the embryo has developed into a ball of cells, it is inserted into the womb of an adult female to continue its development.

# Separate Science

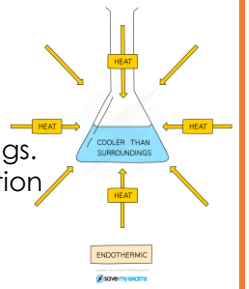
## Week 5 - Energy Changes and Rate of Reaction

### Endothermic and Exothermic Reactions

Energy is conserved in a reaction

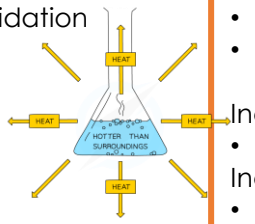
**Endothermic reactions:**

- Transfers energy **from the surroundings**.
- Causes a **decrease in the temperature** of the surroundings.
- Examples include thermal decomposition and the reaction between citric acid and sodium hydrogencarbonate.
- Uses include some sports injury packs.



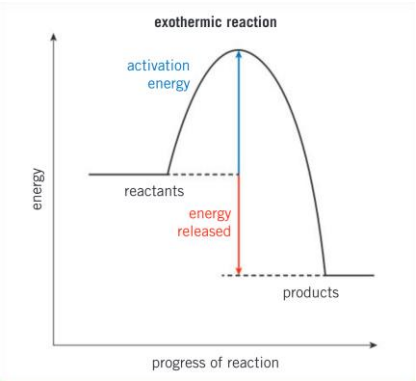

**Exothermic Reactions:**

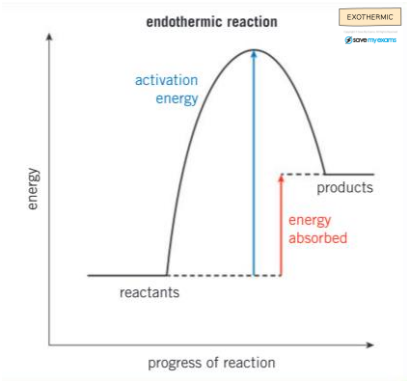
- Transfers energy **to the surroundings**.
- Causes an **increase in the temperature** of the surroundings.
- Examples include combustion, neutralisation, and most oxidation reactions.
- Uses include self-heating cans and hand-warmers.




### Reaction Profiles

Show whether a reaction is exothermic or endothermic.




### Keywords

**Activation energy:** the minimum amount of energy that reactants need to react when they collide.

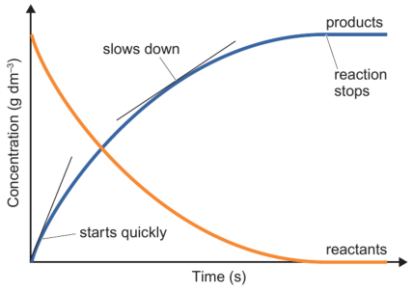
## Week 6 - Energy Changes and Rate of Reaction

### Rate and Collision Theory

For a chemical reaction to happen:

- Reactants must collide.
- Particle must have enough energy to react.

The greater the **frequency** of **successful collisions**, the greater the rate of reaction.




### Factors Affecting Rate of Reaction

Increasing temperature:

- Particles move faster increasing the frequency of collisions
- Particles have more energy, so a greater proportion of collisions are successful.

Increasing Concentration:

- More particles in the same volume therefore more frequent collisions.

Increasing pressure:

- Less volume therefore less space between particles causing more frequent collisions.

Increasing surface area:

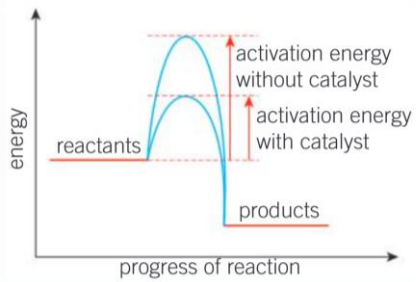
- Greater amount of reactant exposed leading to more frequent collisions.

### Catalysts

Provide a different reaction pathway that has a lower activation energy.

Catalysts:

- Are not used up in a reaction.
- Increase the rate of a reaction.




### Keywords

**Successful collision:** When reacting particles collide with enough energy to react.

# Separate Science

## Week 7 - Equilibria

### Reversible Reactions

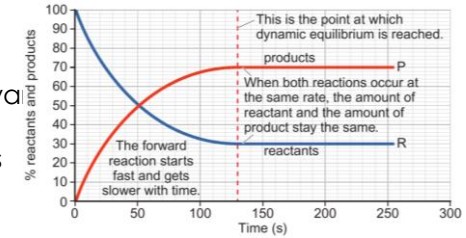

In a reversible reaction:

- In the **forward reaction**, A and B react to form C and D.
- In the **backward reaction**, C and D react to form A and B.
- If the forward reaction is **exothermic**, the backward reaction is **endothermic**.
- If the forward reaction is **endothermic**, the backward reaction is **exothermic**.

### Dynamic Equilibrium

In a closed system:

- The rate of the forward and backward reactions are the same.
- The concentration of the reactants and products remain constant.




### Le Chatelier's Principle

When a change in the conditions of a system at dynamic equilibrium changes, the system responds to counteract the changes.

| Condition change | | Equilibrium shift |
|---|---|---|
| Temperature | Increases | Favours the endothermic direction |
| | Decreases | Favours the exothermic direction |
| Pressure | Increases | Favours the side with fewest molecules |
| | Decreases | Favours the side with most molecules |
| Concentration of reactants | Increases | Favours the forward reaction |
| | Decreases | Favours the backward reaction |
| Concentration of products | Increases | Favours the backward reaction |
| | Decreases | Favours the forward reaction |

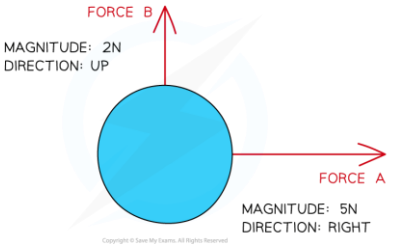
### Keywords

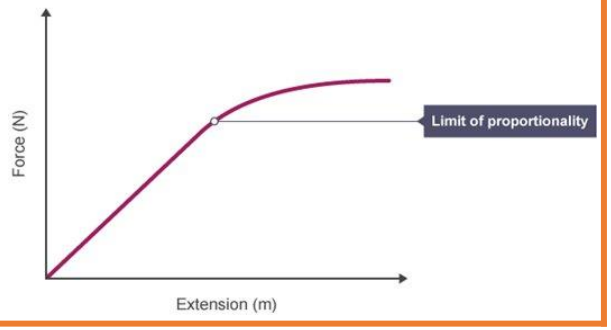
**Closed system:** A reaction in which none of the reactants or products can escape.

## Week 8

### Forces

- **Scalar** quantities have magnitude (size) but **not** direction.
- **Vector** quantities have magnitude **and** direction.
- **Contact forces** act when objects **touch** (for example friction), whereas **non-contact forces** act **over a distance** (for example magnetism).
- **Mass** is a measure of the amount of **matter** that makes up an object, measured in **Kg.**
- **Weight** is the **force** (measured in **Newtons, N**) produced when a gravitational field (**symbol g**) acts on matter. On **Earth** the **value of g is 9.8 N/Kg.**
- When the forces acting on an object are **balanced**, it is in **equilibrium**. The **resultant force** on the object is **zero**.
- **Work done** is the amount of **energy** (in **Joules**) transferred when a **force moves an object**.
- **Elastic** objects return to their **original shape** when any **force is removed**.
- **Inelastic** objects can be **deformed**; they **do not** return to their original shape when force is removed.
- The **extension** of an elastic object (such as a spring) is **proportional to the force** applied to it. When it reaches its **limit of proportionality** it will **not** return to its original size.
- The **spring constant, k** can be found by calculating the **gradient of the linear part of a force-extension graph.**



# Separate Science

## Week 5 Separate Content

**Cells, Batteries and Fuel Cells**

Chemical cells (Batteries):

- Use chemical reactions to transfer energy by electricity.
- Non-rechargeable cells stop transferring energy when the reactants are used up.
- Rechargeable cells are reversible reactions.
- The greater the difference in reactivity of the electrodes, the greater the voltage produced.

Fuel Cells:

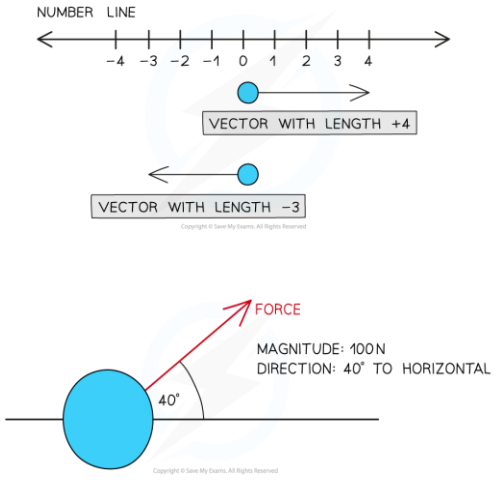
- Use a fuel and oxygen from air to produce a potential difference.
- Produce a continuous potential difference provided there is a constant supply of fuel.
- At the negative electrode: $2H_2 + 4OH^- \rightarrow 4H_2O + 4e^-$
- At the positive electrode: $O_2 + 2H_2O + 4e^- \rightarrow 4OH^-$

## Week 6 Separate Content

**Comparing Cells**

| Cell | Advantages | Disadvantages |
|---|---|---|
| Alkaline cell | Cheaper to manufacture | May end up in landfill; expensive to recycle |
| Rechargeable cell | Cen be recharged many times; reduces resource demand | Costlier to manufacture |
| Hydrogen fuel cell | Only by-product is water; do not need to be recharged electrically; easy to maintain as no moving parts; small size | Expensive to make; need a constant supply of $H_2$ which is flammable & difficult to store and produced from non-renewable resources |

## Week 7 Separate Content

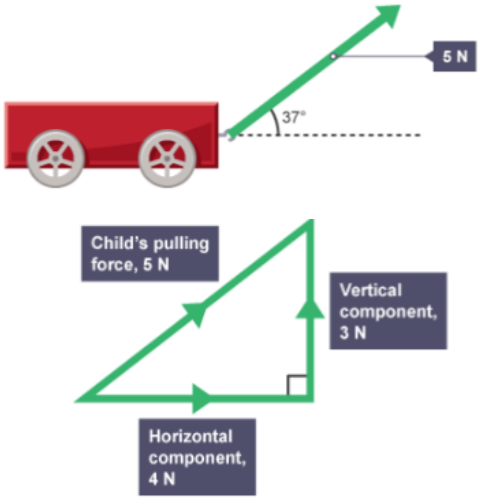



- Not all forces are directed perfectly horizontally or vertically and thus need to have an angle described
- It is useful to describe an angle with respect to the vertical or the horizontal

## Week 8 Separate Content

**Forces**

- When forces act **at an angle** to an object they can be **resolved.**
- The force is divided into **two components at right angles** to each other.
- Using a **scale drawing** the lines representing the forces can be measured.
- The **angle** at which the force acts can be **measured.**
- If the forces acting form a **closed loop on a scale drawing** (as right) they are in **equilibrium.**

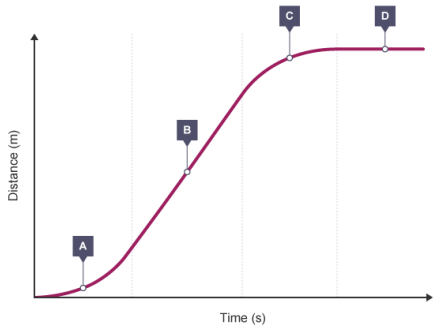


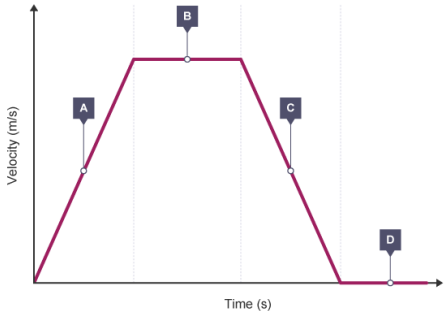
# Separate Science

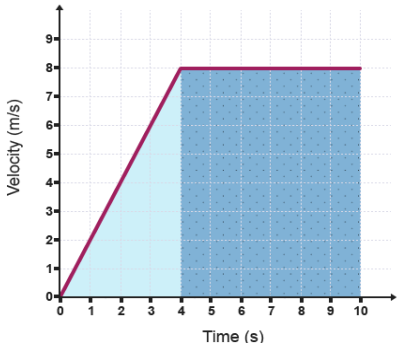
## Week 9

Forces

- **Distance** is a **scalar** value, measured in m. **Displacement** is a **vector** value measured in m, since it also **has direction.**
- **Speed** is a **scalar** quantity, whilst **velocity** is a **vector** since it **has direction**. Both are measured in **metres per second, m/s.**
- The **gradient** of a **distance-time graph** gives the **speed** of an object.
- The **steeper the gradient the greater the speed** of the object.
- The **gradient** of a **velocity-time graph** gives the **acceleration** of an object.
- A **positive gradient** shows **positive acceleration.**
- A **horizontal line** shows a **constant velocity.**
- A **negative gradient** shows **negative acceleration, or deceleration.**
- The **area under a velocity-time graph** gives the **distance** travelled.
- Dividing the area into triangles and rectangles allows you to calculate the area.
- **Acceleration** is the **rate of change of the speed** (or velocity) of an object, measured in **metres per second per second, m/s$^2$.**
- **Acceleration** can be **uniform** (changing at a constant rate) **or non-uniform.**



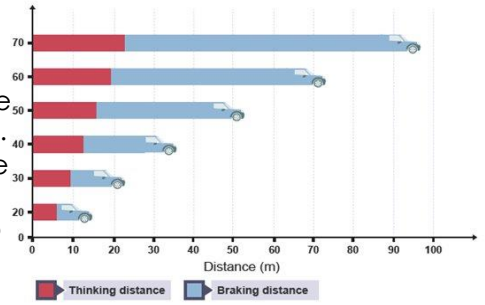




## Week 10

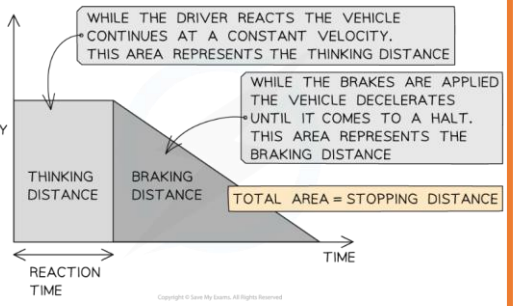
Forces

- **Newton's Second law** states that the **larger the resultant force** acting on an object the **greater its acceleration**. This acceleration is **directly proportional** to the force.
- Acceleration is **inversely proportional** to mass. If the same force is applied to two masses, the smaller mass will accelerate more.


- Acceleration is **inversely proportional** to mass. If the same force is applied to two masses, the smaller mass will accelerate more.


- The **stopping distance** of a vehicle is the distance travelled from the moment a driver **sees a hazard** to the moment it stops.
- **Stopping distance** is made up of **thinking distance** (the distance travelled while the driver reacts to the hazard) and **braking distance** (the distance travelled after the brakes are applied).
- Car seatbelts and airbags **improve safety by slowing the change** in momentum during an accident. A faster change in momentum involved larger forces.



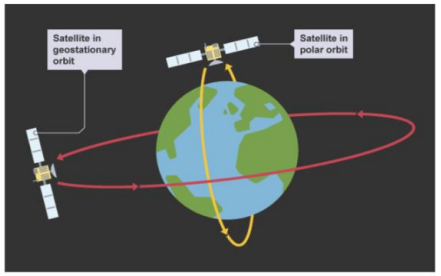

- **Momentum** is the tendency of a moving object to continue moving. **Inertial mass** measures the difficulty in changing the velocity of an object.
- **Momentum** is the product of the **mass and the velocity** of an object.
- In a **closed system**, where no external forces act, interacting objects maintain a **constant total momentum**. This is known as **conservation of momentum.**

# Separate Science

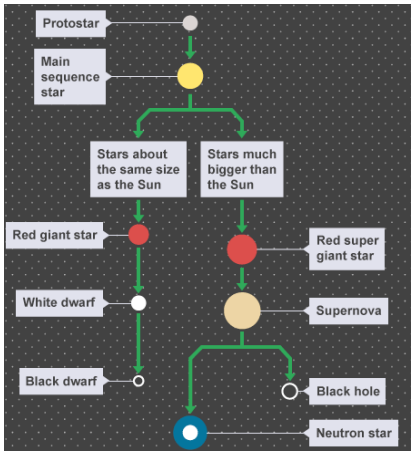
## Week 11

Space

- The solar system formed around **4.6 billion** years ago and is made up of eight planets orbiting a **main sequence star.**
- Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune are **increasingly distant from the sun.**
- The **asteroid belt** lies **between Mars and Jupiter.**
- The **closer** an object is to the object it orbits, the **faster** its **orbital speed**, so Mercury has the greatest and Neptune the smallest orbital speed of the planets.

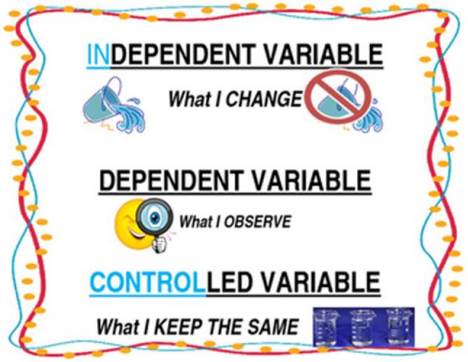



- Moons are **natural satellites. Artificial satellites** are placed in **geostationary or polar orbits.**
- A satellite in a **geostationary** orbit takes **24 hours** to orbit the Earth and remains above a **fixed point.**
- A **polar** orbit requires satellites to orbit at much **lower heights** and therefore much **higher speeds.**




- Stars form from **nebulae** (clouds of dust and gas) when they get **dense and hot enough for nuclear fusion** to begin. **Hydrogen nuclei fuse** to form **Helium nuclei**, releasing lots of **energy.**
- Stars follow a predictable **life cycle**, dependant on their **mass**.

## Week 12






**Steps to success:**

- Attempt all questions
- Write out calculations and give units
- Plot data with crosses
- 1 mark per minute
- Plan your 6-mark questions before you write
- Give, give, want when using mathematical formulae
- If it states tick one box, then only tick one box – Guess if unsure
- HUG the question
- Keep writing until you see "End of questions"

https://www.aqa.org.uk/find-past-papers-and-mark-schemes
Videos | freesciencelessons
AQA GCSE Biology Revision Notes 2018 | Save My Exams
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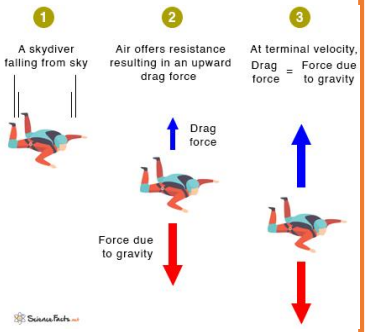
# Separate Science

## Week 9 Separate Content

### Forces

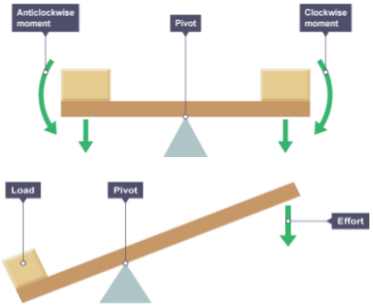
- At **terminal velocity** an object stops accelerating and travels at a **constant velocity.** This is because the **forces opposing** the direction of travel (friction and air resistance) balance the **accelerative force**.
- **Newton's First law** states that if the **resultant force on a stationary object** is **zero**, it will **remain stationary**. If the **resultant force on a moving object** is **zero**, it will **continue moving at constant velocity.**
- **Newton's Third law** states that when **two objects interact** they exert an **equal and opposite** force on one another.

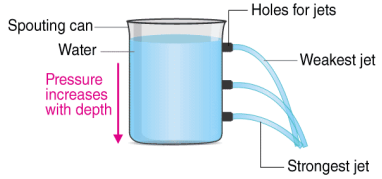



## Week 10 Separate Content

### Forces

- A **moment** is a **turning effect of a force.**
- The force acts at a **distance** from a **pivot or fulcrum.**
- The **further** the force is from the **fulcrum** the **greater the moment.**
- An object is in **equilibrium** if the **moments acting either side of the fulcrum are equal.**
- **Levers and gears** use the principles of moments to **multiply a force.**
- Atmospheric pressure **decreases with increasing altitude** as **density decreases.**
- Pressure in a liquid **increases with increasing depth** as the **weight of a column of water increases.**




## Week 11 Separate Content

### Space

- All stars emit **different wavelengths** of light, creating a unique **emission spectrum**.
- **Red shift,** the unexpected shift in **emitted wavelengths** from most **galaxies** provides evidence for an e**xpanding universe.**
- **Cosmic Microwave Background Radiation** (CMBR), along with red shift, provide evidence supporting the **big bang theory.**

## Week 12 Separate Content

### Evidence from CMBR

Astronomers have also discovered a cosmic microwave background radiation (CMBR). This comes from all directions in space and has a temperature of about -270 °C. The CMBR is the remains of the thermal energy from the Big Bang, spread thinly across the whole **Universe**.

| Prediction from Big Bang theory | Evidence observed | Does evidence support the Big Bang theory? |
|---|---|---|
| More distant galaxies should move away faster | More distant galaxies have greater red-shift | Yes |
| Initial Big Bang heat should now be thinly spread across the whole Universe | CMBR is everywhere at a temperature of about -270°C | Yes |

The discovery of red-shift in light from distant galaxies led to the development of the Big Bang theory. The discovery of the CMBR, after it had been predicted by the theory, provided very strong support for the Big Bang theory.

# Spanish

## Week 1 – School subjects

| ¿Qué estudias? | What do you study? |
|---|---|
| estudiar | to study |
| aprender | to learn |
| el teatro | drama |
| las ciencias | science |
| el comercio | business studies |
| el dibujo | art |
| los idiomas | languages |
| la educación física | PE |
| la religion | RE |
| la tecnología | DT |
| activo | active |
| animado | lively / animated |
| práctico | practial |
| inútil | useless / pointless |
| útil | useful |
| duro | hard / difficult |
| fácil | easy |
| emocionante | exciting |
| alegre | happy |
| estricto | strict |
| trabajador | hard working |
| me da igual | I don't mind |
| la clase | class |
| el curso | course |
| los estudios | studies |

## Week 2 – School description

| ¿Qué hay? | What is there? |
|---|---|
| en mi instituto hay.. | In my school there is |
| mi colegio tiene.. | My school has |
| un patio | a playground |
| un gimnasio | a gym |
| una piscina | a pool |
| una biblioteca | a library |
| un campo de fútbol | a football field |
| una oficina | an office |
| el edificio | a building |
| público / privado | state/private |
| nuevo | new |
| antiguo | old |
| moderno | modern |
| amplio | spacious |
| pequeño | small |
| no es / son ni…ni.. | it is neither…nor |
| tampoco | neither |
| un alumno | a pupil |
| un estudiante | a student |
| un/a profesor/a | a teacher |
| un/a director/a | a headteacher |
| un bolígrafo | a pen |
| un cuaderno | an exercise book |
| los deberes | homework |
| una silla | a chair |
| una mesa | a table |

## Week 3 – School Uniform

| ¿Qué llevas? | What do you wear? |
|---|---|
| llevar | to wear |
| poner | to put on |
| una camisa | a shirt |
| una corbata | a tie |
| una chaqueta | a jacket / blazer |
| una falda | a skirt |
| una camiseta | a t-shirt |
| un sombrero | a hat |
| un vestido | a dress |
| unos pantalones | trousers |
| unos zapatos | shoes |
| cómodo | comfortable |
| práctico | practical |
| caro | expensive |
| necesario | necessary |

**Useful acronyms**

ESO (Educación Secundaria Obligatoria) secondary education

| | |
|---|---|
| año siete / primero de E.S.O | Y7 |
| año ocho / segundo de E.S.O | Y8 |
| año nueve / tercero de E.S.O | Y9 |
| año diez / cuarto de E.S.O | Y10 |
| año once / quinto* de E.S.O | Y11 |

# Spanish

## Week 4 – School Rules

| Las normas | The rules |
|---|---|
| las reglas | the rules |
| no se permite | it is not permitted |
| tenemos que | we have to |
| está prohibido | it is forbidden |
| (no) se debe | one must (not) |
| (no) se debería | one should (not) |
| usar el móvil | use a mobile phone |
| amenazar | threaten |
| grabar | record |
| mandar mensajes | send messages |
| llevar joyas | wear jewellery |
| ser puntual | to be on time |
| el comportamiento | behaviour |

## Week 5 – Ideal School

| En mi insti ideal | In my ideal school |
|---|---|
| si fuera posible | if it were possible |
| me gustaría | I would like |
| habría | there would be |
| tendría | it would have |
| podría | I could / it could |
| **The conditional tense – no chop just add** | |
| I | Ía |
| You | Ías |
| He / she / it | Ía |
| We | Íamos |
| You (plural) | Íais |
| They | Ían |

## Week 6 – Future Study

| Tus planes | Your plans |
|---|---|
| el bachillerato | A Levels |
| la opción | choice |
| el éxito | success |
| el intercambio | exchange |
| la libertad | freedom |
| el trabajo | work |
| la nota | grade / mark |
| las prácticas laborales | work experience |
| la prueba | test |
| el exámen | exam |

## Week 7 – On my phone

| Topic specific language | |
|---|---|
| mandar / enviar | to send |
| subir | to upload |
| compartir | to share |
| grabar | to record |
| las noticias | the news |
| correos electrónicos | emails |
| redes sociales | social media |
| ordenador | computer |
| compras | shopping |
| una pérdida de tiempo | a waste of time |
| lento | slow |
| en directo | live |

## Week 8 – Sports

| Words you may have forgotten! | |
|---|---|
| jugar + ballsport | to play |
| hacer + non-ballsport | to do (go+sport) |
| correr | to run |
| ganar | to win |
| pasear / caminar | to go for a walk |
| luchar | to fight |
| bañar | to swim/ bathe |
| el baloncesto | basketball |
| el baile | dance |
| el voleibol | volleyball |
| la natación | swimming |
| un equipo | a team |
| un jugador | a player |
| un Partido | a match |
| el estadio | the stadium |

## Week 9 – TV, film, music

| Words you may have forgotten! | |
|---|---|
| las películas | films |
| un anuncio | an advert |
| un documental | a documentary |
| la pantalla | the screen |
| un espectaculo | a show |
| el escenario | the stage |
| el público | the crowd/ audience |
| un concierto | a concert |
| un cantante | a singer |
| una canción | a song |
| tocar un instrumento | to play an instrument |
| disfrutar | to enjoy |
| divertirse | to have fun |
| grabar | to record |
| bajar | to download |

# Spanish

## Week 10 – Healthy routines

| Words you may have forgotten! | |
|---|---|
| levantarse | to get up |
| me levanto | I get up |
| vestirse | to get dressed |
| me visto | I get dressed |
| tomar el desayuno | to have breakfast |
| tomar el almuerzo | to have lunch |
| tomar la merienda | to have a snack |
| tomar la cena | to have dinner/tea |
| volver | to return |
| vuelvo | I return |
| tomar un descanso | to have a break |
| hacer ejercicio | to do exercise |
| hacer deporte | to do sport |
| acostarse | to go to bed |
| me acuesto | I go to bed |
| dormir | to sleep |
| duermo | I sleep |

## Week 11 – Health problems

| Las partes del cuerpo | Body parts |
|---|---|
| el brazo | arm |
| el estómago | stomach |
| el pie | foot |
| la boca | mouth |
| la mano | hand |
| la cabeza | head |
| la espalda | back |
| la garganta | throat |
| la nariz | nose |
| la rodilla | knee |
| la pierna | leg |
| los oídos | inner ear |
| los dedos | fingers |
| los dientes | teeth |
| **Injury or illness** | |
| romper | to break |
| cortar | to cut |
| quemar | to burn |
| estar enfermo | to be ill |
| tener fiebre | to have a fever |
| dolor de … | a … pain /ache |
| una herida | an injury |

## Week 12 – Young people in action

| Jóvenes en acción | |
|---|---|
| modelo de conducta | role model |
| seguir | to follow |
| sigo | I follow |
| tener éxito | to have success |
| se debería | one should |
| trabajar | to work |
| recoger | to pick up |
| ayudar | to help |
| apoyar | tp support |
| defender | to defend |
| luchar | to fight |
| conseguir | to achieve |
| compartir | to share |
| los derechos | the rights |
| el dinero | money |
| cariño | care |
| suerte | luck |
| hogar | home |
| proyecto | project |
| sin | without |

## Preparing for the speaking assessment

Before the assessment:
Experiment with the following techniques to revise the vocabulary and structures in this knowledge Organiser

- Use the look-cover-write-check technique to test yourself
- Create flashcards with the English on one side and the Spanish on the other – test yourself and get a friend to test you
- Practise bringing the vocabulary together to create your own written and spoken answers
- Give the Knowledge Organiser to a friend and get them to test you
- Practise the vocabulary on Quizlet

During the test:

- Describe the people, location and activity
- Remember the rule of 3 – develop your answer
- Give an opinion, a reason and a contrasting opinion
- Be brave! Say something! More marks are awarded for communication than anything else – just go for it!