



Stafford Manor
High School

Year 11 Autumn Term 2

Core Knowledge

- Art
- Biology
- Business
- Chemistry
- Design Technology (DT)
- English
- French
- Geography
- Health and Social Care
- History
- Information Technology
- Maths
- Media
- Performing Arts
- Physical Education (PE)
- Physics
- SEL
- Textiles

1. Describe why presentation is important.

- ✿ How we present work can demonstrate professionalism.
- ✿ We present our analysis in a way that is appropriate for the different medias used.

2. What must be included in a successful record board?

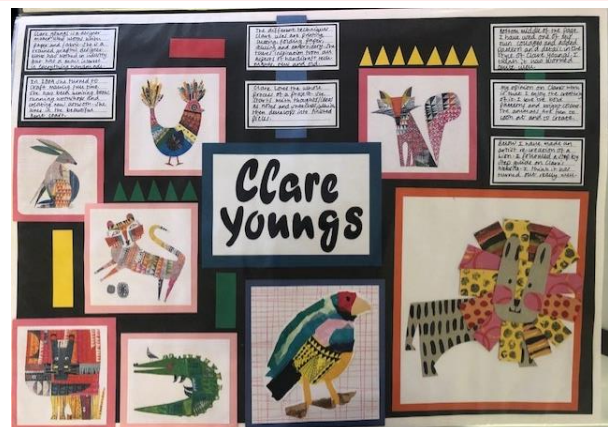
- ✿ A title of the relevant board.
- ✿ A selection of at least x5 high quality drawings in different medias.
- ✿ Annotations based on the drawings. Always using the guidance booklet to assist you.

3. Why is it important to analyse artists?

- ✿ We write and learn about artists so we can better understand the world of art and learn from what others have done.

4. What must be included in an artist research page:

- ✿ A title which is the artist's name.
- ✿ Images of the artist's work.
- ✿ A copy of the artist's work which is called an artist recreation.
- ✿ Information about the artist.
- ✿ A background that links with the artist.



5. Key word definitions:

- ✿ **Composition:** How different elements are combined.
- ✿ **Contemporary:** Art made today by living artists.
- ✿ **Contour:** the artist outlines the shape / mass of an object.
- ✿ **Curling:** Strips of paper that are rolled/looped to create shapes
- ✿ **Geometric:** Using shapes to create a piece of art
- ✿ **Overlapping:** Placing objects over one another to create depth.
- ✿ **Perspective:** Gives art a 3D look.
- ✿ **Realistic:** Subjects painted from everyday life.
- ✿ **Shading:** Darkening of a drawing to show depth.
- ✿ **Soft edged:** Indicates a gradual or smooth transition.
- ✿ **Symmetry:** Involves mirroring of portions of an image.

BIOLOGY

AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

1. How do humans positively affect ecosystems?

- 🌱 Maintaining rainforests
- 🌱 Reducing habitat destruction
- 🌱 Reducing water pollution
- 🌱 Replanting hedgerows and woodlands
- 🌱 Raise awareness.

2. How do humans negatively affect ecosystems?

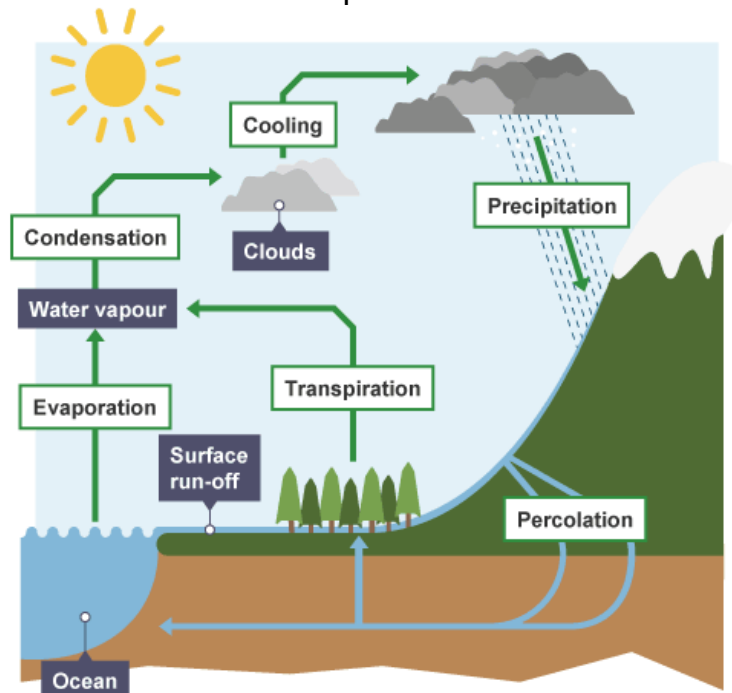
- 🌱 Production of greenhouse gases leading to global warming
- 🌱 Introducing non-indigenous species
- 🌱 Producing sulphur dioxide – causing acid rain.
- 🌱 Clearing land to build on.
- 🌱 Overfishing

3. What is eutrophication

- 🌱 Excess fertiliser washes into lake → Algal bloom → Blocks sunlight → prevents photosynthesis → anoxic (no Oxygen) water → organisms die.

4. The water cycle

- 🌱 Precipitation → Percolation → Evaporation → Condensation → Precipitation



5. The Carbon Cycle

- 🌱 Photosynthesis and Carbon absorption in the seas remove Carbon Dioxide from the atmosphere.
- 🌱 Respiration, Combustion, Decomposition return Carbon Dioxide to the atmosphere.

6. What bacteria is involved in the nitrogen cycle.

- | | |
|-----------------------------|-----------------------------|
| 🌱 Nitrogen fixing bacteria. | 🌱 Denitrifying bacteria |
| 🌱 Nitrifying bacteria | 🌱 Decomposing soil bacteria |

1. What is product differentiation?

- When a business makes a product stand out from rival products.

2. What are the four stages of the business life cycle?

- Introduction
- Growth
- Maturity
- Decline

3. What strategies can a business use to set a price?

- Penetration (setting a low price)
- Skimming (setting a high price to recoup research costs)
- Competition based (setting a price based on rival prices)

4. What influences pricing strategies

- Technology
- Competition
- Market Segments
- Product Life Cycle

5. What are three methods of promotion?

- Mass media (e.g. television, newspapers)
- Sponsorship
- Product Trials

6. What is place?

- It is not location
- It is about how the product gets to the consumer and which other businesses it needs to pass through

7. How can you build a competitive advantage?

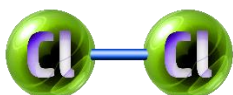
- Product – unique features, good quality
- Price – selling at the cheapest price in the market
- Promotion – creating a memorable advertising campaign
- Place – available in more stores than rivals

CHEMISTRY

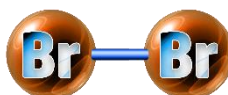
AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

1. What is the colour and state of chlorine, bromine and iodine?

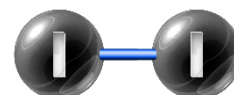
Chlorine: Green Gas



Bromine: Brown Liquid



Iodine: Black Solid



2. What are the physical properties of the halogens?

✿ **Low melting points**

✿ **Poor conductors** of electricity and heat

3. What is the test for chlorine gas?

✿ **Bleaches damp blue litmus paper**

4. How do the halogens react with metals?

✿ Metal + halogen → metal halide (change the ending to IDE)

🧪 Lithium + bromine → Lithium bromide

🧪 Copper + iodine → Copper Iodide

5. How do the halogens react with hydrogen?

✿ Hydrogen + halogen → hydrogen halide (just change the ending to IDE)

🧪 hydrogen + chlorine → hydrogen chloride

🧪 hydrogen + fluorine → hydrogen fluoride

6. What do you see during displacement reactions?

✿ Bromine formed: Colourless to **orange**.

✿ Iodine formed: Colourless to **brown**.

7. What does REDOX mean?

✿ A reaction where **reduction** and **oxidation** are **both** occurring.

8. What happens to reactivity as you go down group 7?

✿ Reactivity **decreases**

🌿 Most Reactive: **Fluorine** → **Chlorine** → **Bromine** → **Iodine** → **Astatine**

9. What happens to melting point and boiling point as you go down group 7?

✿ Melting points and boiling points both **increase** as you go down group 7.

DESIGN TECHNOLOGY

AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

1. Design strategies

- ✿ **Generate imaginative and creative design ideas using a range of different design strategies** - How different strategies can be applied, including: collaboration, user centred design, a systems approach, iterative design, avoiding design fixation.
- ✿ **Explore and develop their own ideas** - How this can be done using an iterative process including: sketching, modelling, testing, evaluation of their work to improve outcomes.

2. Communication of ideas

- ✿ **Develop, communicate, record and justify design ideas using a range of appropriate techniques such as** - freehand sketching, isometric and perspective, 2D and 3D drawings, system and schematic diagrams, annotated drawings that explain detailed, development or the conceptual stages of designing, exploded diagrams to show constructional detail or assembly, working drawings: 3rd angle orthographic, using conventions, dimensions and drawn to scale, audio and visual recordings in support of aspects of designing: eg interviews with client or users, mathematical modelling, computer based tools, modelling: working directly with materials and components, eg card modelling

3. Prototype development

- ✿ **Design and develop prototypes in response to client wants and needs** - Note the term prototype can be used to describe either a product or system. How the development of prototypes: satisfy the requirements of the brief, respond to client wants and needs, demonstrate innovation, are functional, consider aesthetics, are potentially marketable.
Students should know and understand how to evaluate prototypes and be able to: reflect critically, responding to feedback when evaluating their own prototypes, suggest modifications to improve them through inception and manufacture, assess if prototypes are fit for purpose.

4. Selection of materials and components

- ✿ Appropriate materials and components to make a prototype. How to select and use materials and components appropriate to the task considering: functional need, cost, availability.

5. Tolerances

- ✿ Work accurately using tolerances. How a range of materials are cut, shaped and formed to designated tolerances. Why tolerances are applied during making activities.

Themes in Macbeth

1. Ambition

- ❖ The play shows that ambition is dangerous because it can go out of control. Macbeth's ambition leads him to kill King Duncan and Banquo. Lady Macbeth's ambitions leads to her insanity later on in the play. It can be good, such as Banquo's ambition for his sons to be king because he does not act violently on this like Macbeth.

2. The Supernatural

- ❖ The supernatural deals with powers that cannot be explained normally with ideas of magic. The Witches are an evil supernatural force and bring chaos to the play, creating an unnatural order.

3. Fate and Free Will

- ❖ Fate and Free Will - Do we have total control over our future, or are things already planned for us? Macbeth deals with this question when the Witches prophesise him becoming king.
- ❖ Macbeth uses his free will to make his fate come true. Banquo, on the other hand, would rather fate take its own course.

4. Loyalty and Betrayal

- ❖ Loyalty and Betrayal - Loyalty is rewarded in the play and betrayal is punished. Macbeth is loyal to King Duncan and is rewarded with the new title of Thane of Cawdor. Macbeth and Lady Macbeth pretend to be loyal in order to betray King Duncan.
- ❖ Kingship - A good king should be calm, humble, loyal and believe in fair justice much like King Duncan. A bad king is one who is selfish, greedy, a liar and violent most of the time, much like Macbeth. Kings should also be chosen by God under Divine Right.

5. What were the beliefs and values of the time?

- ❖ Patriarchy - Women not as important as men. Jacobean men held women responsible for the original sin (Adam & Eve)
- ❖ Divine Rights of Kings: God like status of Kings meaning that they should not be killed
- ❖ Monarchy: King James 1st was hugely interested in Witchcraft
- ❖ Treason – Gunpowder Plot
- ❖ The Great Chain of Being – a hierarchy in Christianity that starts with God
- ❖ The Code of Chivalry – a moral conduct that included behaviour towards women and went beyond the battlefield

6. Key Quotations - Macbeth

- ❖ "For brave Macbeth--well he deserves that name--" Act 1:2 – Macbeth is being described as brave by King Duncan's Sergeant.
- ❖ "Stars, hide your fires; Let not light see my black and deep desires:" Act 1:4 - Macbeth has found out that he has been promoted and is now thinking to himself about what evil idea he can have to become king.
- ❖ "Will all great Neptune's ocean wash this blood clean from my hand?" Act 2:2 - Macbeth feels guilty for killing King Duncan.

7. Key Quotations – Lady Macbeth

- ❖ "Yet do I fear thy nature; it is too full o' the milk of human kindness" Act 1:5 – Lady Macbeth understands her husband might not take his opportunity to become king as he can be too kind.
- ❖ "look like the innocent flower, but be the serpent under't." Act 1:6 – Lady Macbeth is giving advice to Macbeth to look normal, but keep his evil ambitions in his heart.
- ❖ "Out, damned spot! out, I say!" – Act 5:1 Lady Macbeth feels guilt-ridden later on in the play compared to her early cold-hearted nature.
- ❖ "all the perfumes of Arabia will not sweeten this little hand"- Act 5:1 – Much like Macbeth who asks for all of the oceans to wash his hands, Lady Macbeth cannot get the smell of blood off her hands and knows no escape from her guilt.

8. Key Quotations – The Witches

- ❖ "When shall we three meet again in thunder, lightning, or in rain?" – Act 1:1 The weather the Witches describe at the beginning of the play sets up the mood of the play as one of being dark and sinister.
- ❖ "Fair is foul, and foul is fair" – Act 1:1– The Witches want to see the change in order. Bad things will be seen as rewarding and good things will bring disaster.

FRENCH

AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

Theme 3: environment; moving between tenses

- ☞ **Il fait beau** Nice weather
- ☞ **Il fait mauvais** Horrible weather
- ☞ **Il fait chaud** hot weather
- ☞ **Il fait froid** cold weather
- ☞ **Il y a du soleil** sunny
- ☞ **Il y a du vent** windy
- ☞ **Il y a du brouillard** foggy
- ☞ **Il y a des orages** stormy
- ☞ **Il pleut** raining
- ☞ **Il neige** snow
- ☞ **Il gèle** frozen / icy

- ☞ **Imperfect tense**: (used to / was)
- ☞ Change from present to imperfect
- ☞ **(Être) je suis (I am)** j'étais (I was)

- ☞ **Perfect tense**: (have done / did)
- ☞ Change from present to perfect
- ☞ **(être) je suis (I am)** J'ai été (I have been)
- ☞ **(avoir) j'ai (I have)** j'ai eu (I have had)
- ☞ **(aller) je vais (I go)** je suis allé(e) (I went)
- ☞ **(faire) je fais (I do)** j'ai fait (I did)
- ☞ **(jouer) je joue (I play)** j'ai joué (I played)

- ☞ **(avoir) j'ai (I have)** j'avais (I used to have)
- ☞ **(aller) je vais (I go)** j'allais (I was going)
- ☞ **(faire) je fais (I do)** je faisais (I used to do)
- ☞ **(jouer) je joue (I play)** je jouais (I used to play)

- ☞ Future conditional
- ☞ **j'aimerais**: I would like
- ☞ **je voudrais**: I would like

GEOGRAPHY

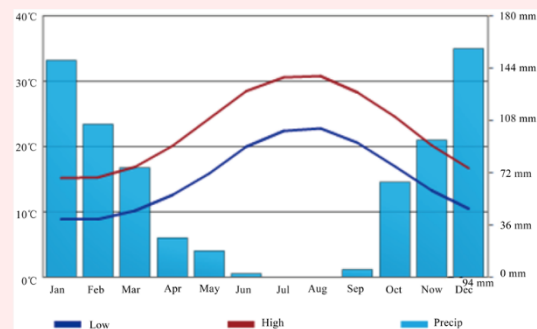
AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

1. Look at the graph on the right. Which two months experience the least amount of rainfall?

July and August

2. How much rain falls in December?

160mm

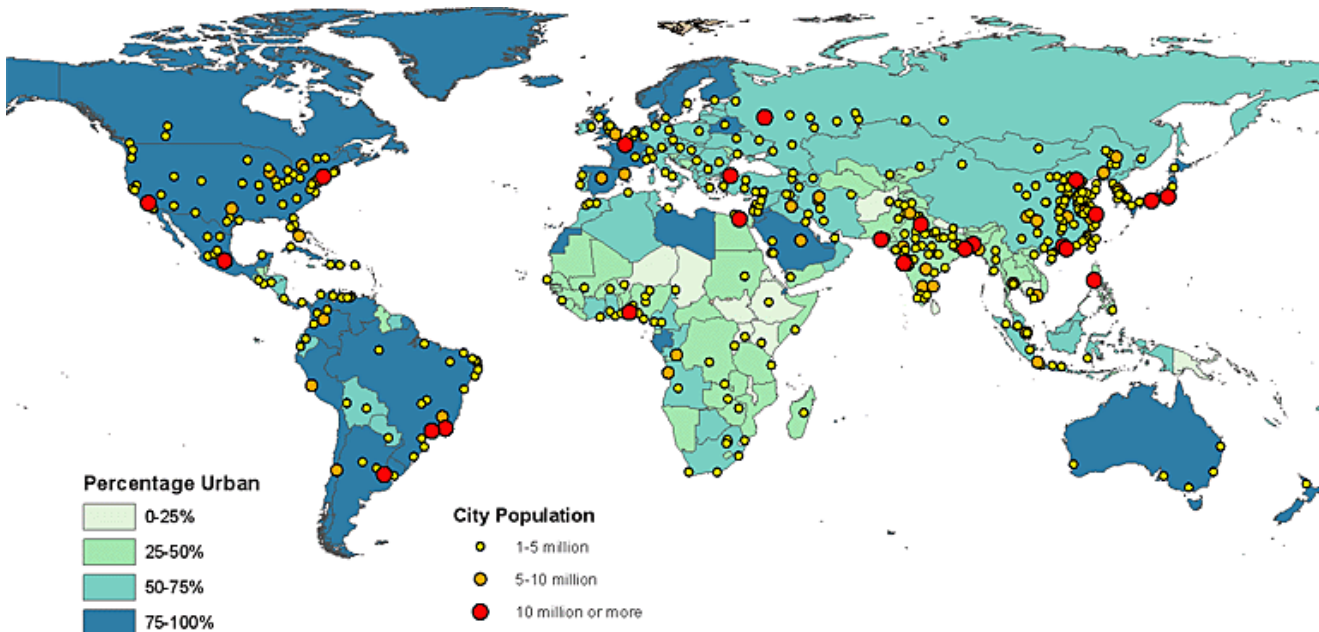


3. List two characteristics of a hurricane,

Has an eye, circular clouds, spirals

4. What happens to a hurricane when it reaches land?

Loses energy



5. According to the map how many megacities are in Europe?

Three

6. Why does Australia have no megacities?

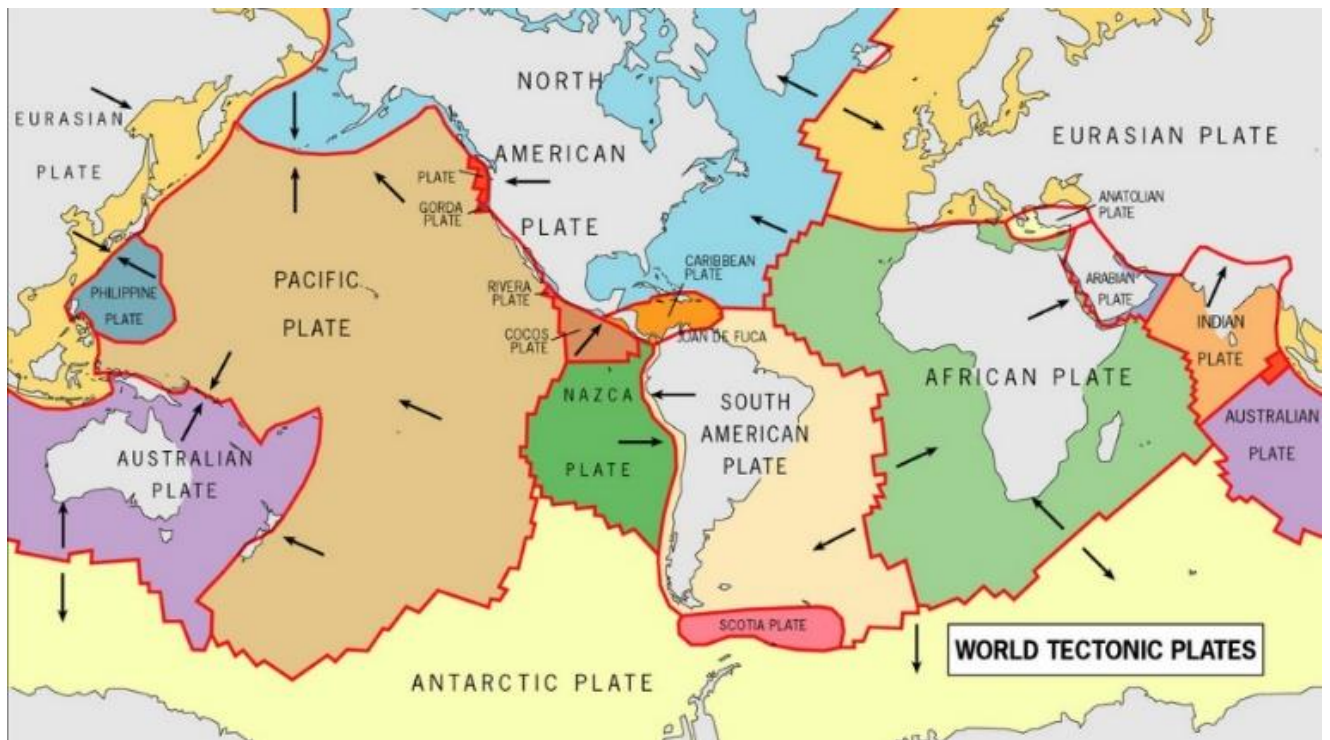
Relatively small population, mostly located on the coast

7. Which country has the most megacities?

India

8. Why are most cities located on a coastline?

Trade purposes



9. Name two plates that are moving towards each other.

 South American and Nazca, Australian and Pacific Plate

10. Which two plates are moving away from each other?

 Eurasian and North American, African and South American

HEALTH & SOCIAL CARE

AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

1. Define what is meant by 'skills' in health and social care

- 🔗 A skill is the ability to undertake a certain task, such as being able to communicate effectively or take someone's blood pressure

2. List the skills needed to work in health and social care

- 🔗 Problem solving
- 🔗 Observation
- 🔗 Dealing with difficult situations
- 🔗 Organisation

3. Define attributes in health and social care

- 🔗 Personal attributes are qualities that make someone who they are, such as being kind or honest.

4. List the attributes needed to work in health and social care

- 🔗 Empathy
- 🔗 Patience
- 🔗 Trustworthiness
- 🔗 Honesty

5. Define the 6 C's when providing care in a health and social care setting

- 🔗 **Care:** receiving correct and consistent care.
- 🔗 **Compassion:** empathy, respect and dignity.
- 🔗 **Competence:** skills and knowledge to deliver effective care, based on research.
- 🔗 **Communication:** involving individuals and/or carers and listening.
- 🔗 **Courage:** doing the right thing and speaking up when concerns arise.
- 🔗 **Commitment:** to improve care and experience for individuals.

6. What are the benefits to individuals if they have access to well skilled staff that follow the 6 C's

- 🔗 High quality care will be received
- 🔗 Individuals will be treated with respect and not experience discrimination.
- 🔗 Have their dignity, privacy and right promoted and protected.
- 🔗 Be empowered and have independence
- 🔗 Be involved in care decisions and protected from harm.

7. Define obstacles in the context of health and social care

- 🔗 Something personal to an individual that blocks a person moving forward or when action is prevented or made difficult.

8. List (with examples) obstacles individuals may experience, preventing them from accessing care.

- | | |
|-----------------------------|------------------------|
| 🔗 Emotional | 🔗 Unachievable targets |
| 🔗 Time constraints | 🔗 Lack of support |
| 🔗 Availability of resources | |

HISTORY

AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

1. How many states were there at the beginning of the USA?

 13

2. What were names of the territories transferred to the US by the British in 1783?

 North west and South west territories

3. What happened in 1803?

 Louisiana Purchase

4. When was the Missouri Compromise?

 1820

5. When was the Indian Removal Act passed?

 1830

6. Where were people migrating to in the West?

 California and Oregon

7. Which religious group migrated to the Great Salt Lake?

 The Mormons

8. When did the California Gold Rush happen?

 1848/49

INFORMATION TECHNOLOGY

AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

1. What is a place holder?

- ✿ Text that temporarily takes the place of the final data, allowing the document fields to be selected before the source file is available.

2. What is a field?

- ✿ A category of information within a table (i.e. the column headings)

3. What is needed for your logo?

- ✿ It must be contemporary and captivating.
- ✿ Must have a colour palette that shows warmth.

4. What should be in your order system?

- ✿ How much demand there is for different varieties of hot chocolate.
- ✿ A list of names of customers that have placed orders.

5. What should be in your invoice system?

- ✿ The invoices need to be accurate, understandable and professional.

6. What should be in your marketing letter?

- ✿ A letter with an exclusive deal.
- ✿ To be sent to customers that have spent over £120 in the last year.
- ✿ They will be offered a 10% discount.

7. What software should I use for each task?

- ✿ **Database:** Microsoft Access
- ✿ **Spreadsheet:** Microsoft Excel
- ✿ **Automated Document:** Microsoft Word
- ✿ **Images/Logos:** Adobe Photoshop

1. What makes an expression 'quadratic'?

It contains a square term e.g. x^2

2. How would you plot a quadratic graph?

Use a table of values then plot the coordinates

3. What methods can you use to solve a quadratic equation?

Factorise the equation, or plot the graph to find the values

4. What do quadratic, cubic and reciprocal graphs look like?

Quadratic = u or n (one change of direction)

Cubic = like an s shape (more than one change in direction)

Reciprocal = Very steep gradient then gradual levels off (never meets zero)

5. What is the first step of solving a simultaneous equation?

Make either the x's or the y's the same by multiplication

6. What are the definitions of these circle key words?

-  **Tangent:** A straight line that touches the curve only once
-  **Chord:** A line joining two places on the circumference
-  **Segment:** Part of a circle bounded by a chord and a curve
-  **Sector:** Part of a circle made by an arc and two radii

7. What are the formulas for the circumference and area of a circle?

Circumference = $\pi \times D$ *Area* = $\pi \times r^2$

8. What is the formula to find the volume of a cylinder?

Volume = area of cross section $\times$ height/length ($\pi \times r^2 \times h$)

9. What is the formula to find the surface area of a cylinder?

2 $\times$ area of circle + area curved = $(2 \times \pi \times r^2) + (\pi \times D \times \text{height})$

10. What is the formula to find the volume of cones and pyramids?

$$\text{Volume} = \frac{\text{Area of cross section} \times \text{height}}{3}$$

1. What does denotation mean?

- ✿ Elements that are arguable, the factual elements that we all agree.

2. What does connotation mean?

- ✿ Elements that are arguable, elements that are personal to the viewer.

3. What is consumption?

- ✿ Audiences reading, listening or watching a media product

4. What does NEA stand for?

- ✿ Non-Examined Assessment

5. What does analysis mean?

- ✿ Breakdown of an image or idea; an explanation of why we believe something to be so

6. What is context?

- ✿ The elements, ideas and beliefs surrounding a media product that provides additional understanding

7. What is an icon?

- ✿ Images that have strong associations with a person, place, idea or time

8. What does polysemics mean?

- ✿ The idea that images and colours may be open to different interpretations

9. What does anchorage mean?

- ✿ Anchorage is when one element of a media product uses a different element of media to reinforce a specific idea

10. What does culture mean?

- ✿ The ideas, customs and social behaviour of a particular people or society

11. What is mise-en-scene?

- ✿ Everything in the frame of a shot in a tv show or film

12. What does point of view mean?

- ✿ Where the camera places the audience in relation to the action in a shot

PERFORMING ARTS

AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

1. Research

Outline the components that you considered when writing your creative brief. [10 Marks]

- the intended purpose
- the intended effect
- the intended performance space/occasion
- the intended audience
- themes and ideas (e.g. consideration of social or historical factors)
- the scale of the piece(s) (e.g. number of performers)
- their own interests and previous experience
- resources available (e.g. software, physical resources)
- different styles and their demands
- the work of at least 2 practitioners

2. Development logs for Drama/Acting -10 Marks

Candidates should show evidence of exploration that are appropriate to the piece they are creating:

• voice	• movement	• interaction
• scripting	• blocking	• development through improvisation

3. Development log for Dance/Choreography- 10 Marks

Candidates should show evidence of exploration that are appropriate to the piece they are creating:

• actions	• space	• Phrasing	• relationships
• motif	• narrative	• unison	• canon
• binary	• ternary	• dynamics	• question & answer

4. Development log for Music/Composition- 10 Marks

Candidates should show evidence of exploration that are appropriate to the piece they are creating:

• Melody	• Harmony	• Tonality	• Form and Structure
• Dynamics	• Sonority	• Texture	• Tempo
• Rhythm	• Metre	• Pitch	• Articulation

5. Development log for Production/Costume- 10 Marks

Candidates should show evidence of exploration that are appropriate to the piece they are creating:

• Character	• Shape	• Measuring performers
• Materials	• Texture	• Source and hire
• Period and style	• Colour	• Sew and assemble

6. Development log for Production/Hair/Makeup- 10 Marks

Candidates should show evidence of exploration of the following that are appropriate to the piece they are creating:

• Character	• Tools	• Prosthetics
• Materials	• Special effects	• Source and hire
• Period and style	• Colour	• Wig/hair design

7. Development log for Production/Set Design- 10 Marks

Candidates should show evidence of exploration that are appropriate to the piece they are creating:

• Location	• Tools	• Texture
• Materials	• Scale	• Source and hire
• Period and style	• Colour/shape	• Levels

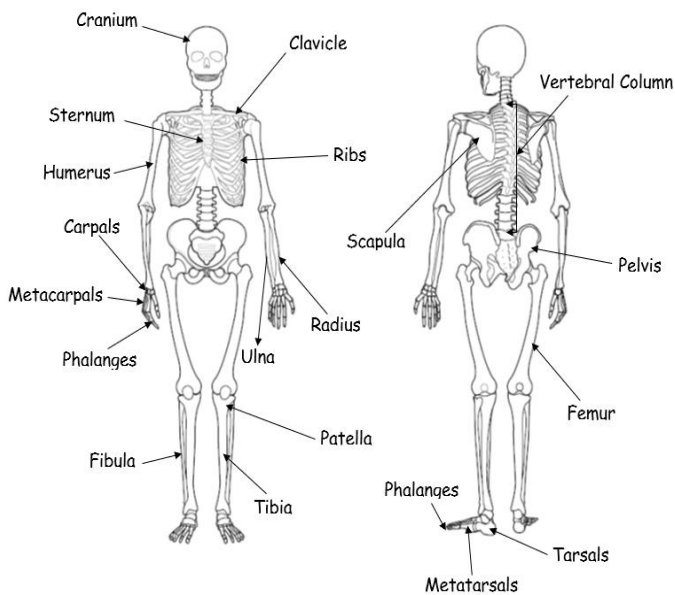
PHYSICAL EDUCATION

AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

1. State the six functions of the skeleton:

- ❖ Protection of vital organs.
- ❖ Muscle attachment.
- ❖ Joints for movement
- ❖ Platelets clot blood to stop bleeding.
- ❖ Blood cell production
- ❖ Store calcium & phosphorus to keep bones strong.

2. Label the structure of the skeleton:

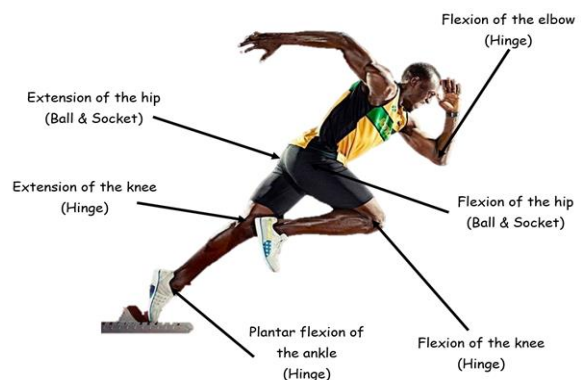


3. Name the bone types:

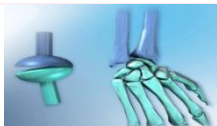
- ❖ **Long bones** act as levers so we can move.
- ❖ **Short bones** are important for weight bearing and to absorb shock.
- ❖ **Flat bones**, such as the ribs, protect organs.
- ❖ **Irregular bones** have odd shapes and perform a range of functions.

4. Describe the different types of movement at joints:

- ❖ **Flexion:** bending movement (decreases angle).
- ❖ **Extension:** Straightening movement (increase angle).
- ❖ **Abduction:** Moving away from midline.
- ❖ **Adduction:** Moving towards the midline.
- ❖ **Plantar flexion:** Pointing the toes downwards.
- ❖ **Dorsi flexion:** Pointing the toes upwards.
- ❖ **Rotation:** Rotation around a joint or axis.
- ❖ **Circumduction:** flexion/extension Abduction/adduction.



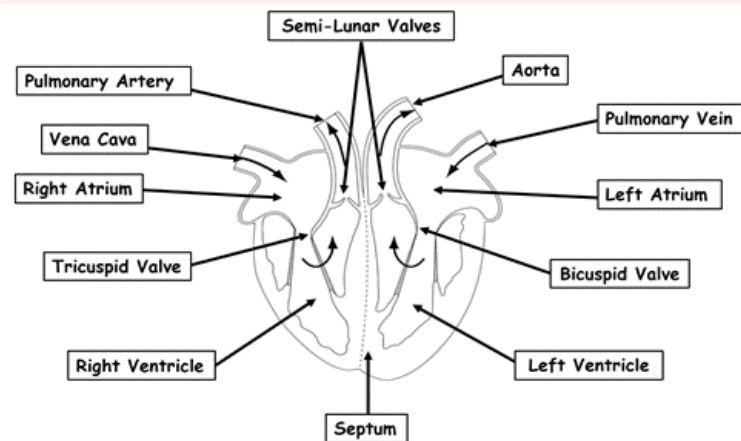
5. Name the four types of joints:

Hinge	Ball & Socket	Condyloid	Pivot
			
e.g. elbow and knee	e.g. hip and shoulder	e.g. wrist	e.g. neck (axis and Atlas)

6. Describe the functions of the cardiovascular system:

- ❖ Transport of nutrients.
- ❖ Transport of oxygen.
- ❖ Transport of carbon dioxide.
- ❖ Clotting of open wounds.
- ❖ Regulation of body temperature.

7. Label the structure of the heart:



8. Vasoconstriction and vasodilation:

❖ **Vasoconstriction** means blood vessels constrict to make them smaller.

❖ **Vasodilation** means that blood vessels dilate to make them bigger.



9. Describe the different parts of the heart:

- ❖ **Septum** separates the right and left sides of the heart
- ❖ **Valves** prevent the backflow of blood
- ❖ **Arteries** take blood away from the heart
- ❖ **Veins** take blood towards the heart
- ❖ **Pulmonary artery** take blood to the lungs
- ❖ **Pulmonary vein** takes blood from the lungs back to the heart
- ❖ **Aorta** delivers oxygenated blood to the body

10. Describe the structure of arteries, veins and capillaries.

- ❖ **Arteries** carry oxygenated blood to the muscles. They are thick so they can carry blood at high pressure.
- ❖ **Veins** carry waste products from respiration (e.g. carbon dioxide) away from the muscles to the lungs to be exhaled. They are thin and carry blood at low pressure.
- ❖ **Capillaries** allow gas exchange to happen quickly as they have very thin walls.

11. Describe the function of different parts of the blood:

- ❖ **Red blood cells** carry oxygen (to the muscles) and carbon dioxide (to the lungs).
- ❖ **White blood cells** fight infection and disease. They prevent infection if we get cut or scratched.
- ❖ **Platelets** help prevent bleeding by clotting (sticking together) and forming a plug.
- ❖ **Plasma** is the liquid part of the blood it acts as a transport system that transports the blood cells, platelets and nutrients to different parts of the body.

PHYSICS

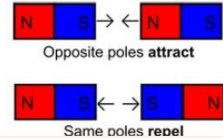
AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

1. Are all metals magnetic?

- Iron, steel, nickel and cobalt are magnetic (Most are not magnetic)

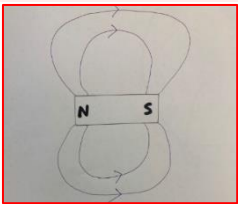
2. What do magnets do?

- Two like (same) poles will repel.
- Two unlike (opposite) poles will attract.
- Uses of magnets: speakers, generators & compasses



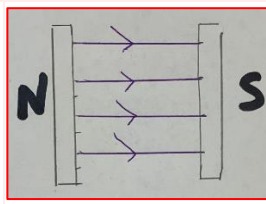
3. What do magnetic fields look like?

Surrounding a bar magnet



Lines are continuous loops.
They do not cross or overlap.
They go from N → S

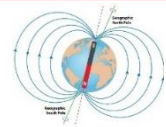
A uniform magnetic field



Lines are straight lines
They are equal distance apart.
They go from N → S

4. Why does the Earth have a magnetic field?

- The Earth's outer core contains molten **iron** and **nickel**.
- The movement of these metals causes a magnetic field.
- The field lines are similar to a bar magnet.

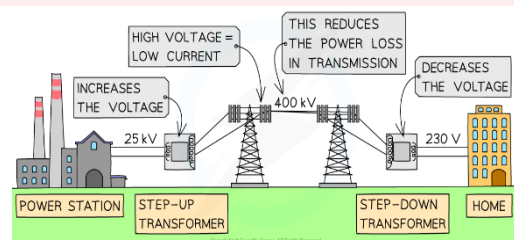


5. What is an electromagnet?

- If we pass current through a length of wire it produces a magnetic field.
- An **electromagnet** is a coil (a **solenoid**) with current flowing through.
- We can increase the strength of an electromagnet by increasing the current, using more coils of wire or winding the coil around a magnetic core.
- We can change the direction of the magnetic field by changing the direction of current.

6. What is the national grid?

- The national grid is a system of cables that deliver electricity from the power station to homes/schools/shops, etc...
- Electricity is transmitted at high voltages (low currents) to reduce energy lost via heating



7. Why are transformers used in the national grid?

- The current enters the transformer through the primary coil and leaves through the secondary coil.
- A **step-up** transformer has **more turns** on the secondary coil and **increases voltage** (decreases current)
- A **step-down** transformer has **less turns** on the secondary coil **decreases voltage** (increases current)



AUTUMN TERM 2 (CONTENT FROM AUTUMN TERM 1)

1. What are the four study options after completing your GCSE's?

- A-Levels
- Vocational (B-TEC or T-Level)
- Apprenticeship
- Employment (with an element of training within the role)

2. Local Further Education providers include:

- NSCG: Stafford College
- South Staffordshire College (Rodbaston, Tamworth, Lichfield, Cannock)
- Stafford Sixth Form Partnership
- The JCB Academy Sixth Form

3. Top tips when attending a college interview include:

- Turn your mobile phone off
- Be polite
- Smile, stand confidently and make eye contact
- Answer the questions you are asked
- Tell the truth
- Show interest

4. What is a CV?

CV: CV stands for curriculum vitae, it is a short-written summary of a person's career, qualifications, and education.

5. Information that **should** be included within a CV include

- | | |
|---|----------------|
| • Name and Contact Information | • Education |
| • Introduction | • Achievements |
| • Key Skills | • Interests |
| • Experience (paid, voluntary or work experience) | • References |

6. Information that **should not** be included within a CV include

- | | |
|---|---|
| • Spelling and grammatical errors | • Negative self-talk |
| • Inappropriate email addresses | • Lack of clarity about what you are seeking |
| • Links to social media accounts that may have unprofessional content | • Obvious signs you have not checked the job advert |

1. What should be included in your record board?

- ✿ Selecting images to draw to show you have understood the theme and can record (draw) items relating to this theme.
- ✿ Using different media to show skill within drawing, such as pencil, biro, coloured pencil, watercolour, tissue paper background, oil transfer print, ball pen (ink pen) or combining 2 media.
- ✿ All drawings need to be annotated to clearly show you can record your ideas and intentions to the theme and project.

2. How can I record my ideas?

- ✿ **Design Ideas** – Draw out your design ideas, they should be clearly inspired by your samples or sources. Annotate these to explain parts of your designs
- ✿ **Observational drawing** – Sketching objects that relate to your theme can help inspire design ideas – especially when creating patterns
- ✿ **Take photographs** – take photos of sources for inspiration or take process photos when you are making samples as evidence.
- ✿ **Annotation** – Annotation, ensure you annotate to explain your thoughts, this does not need to be a lot of writing, sometimes you might just bullet point!

3. What media can you use to record your ideas?

Design ideas / drawing		Insights / written annotation
✿ Pencils	✿ Charcoal	✿ Written – pen / pencil
✿ Collage	✿ Fineliners	✿ Bullet points / key words / paragraphs
✿ Watercolours	✿ Pen	✿ Typed up on the computer
✿ Paints	✿ Artist Markers	
✿ Chalk Pastels	✿ Photoshop (CAD)	
	✿ Photographs	

4. How do you annotate a design?

- ✿ What textile techniques have you used in your designs? Why?
- ✿ How does it link to the samples you have done?
- ✿ Is your design inspired by any of your sources? How? Why?
- ✿ What materials would you use? Why?
- ✿ How does this design link to your theme?
- ✿ What developments would you make to your designs? Why?