


















Stafford Manor
High School

Year 10 Autumn Term 1

Core Knowledge

-  Art
-  Biology
-  Business
-  Chemistry
-  Design Technology
-  English
-  French
-  Geography
-  History
-  Information Technology
-  Maths
-  PE
-  Performing Arts
-  Physics
-  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 media experimentation board?

- A good range of medias such as:
 - Polyprinting
 - Monoprint
 - Clay work
 - Sgraffito, etc.
- A title which links with the board.
- Annotations that explain what you have done and why.

3. Describe what a record board is.

- A board that shows how you can draw, what medias you are capable of using and how you challenge yourself with them.

4. 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.



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

1. What is Meiosis?

- Meiosis is where cell division that produces gametes (sex cells)
- One cell division produces 4 **haploid** daughter cells. (23 chromosomes)
- The cells are genetically **different** to the parent cell.

2. What is the structure of DNA?

- Double helix.
- 4 complementary bases (Adenine-Thymine, Cytosine-Guanine).
- Bases joined together by weak Hydrogen bonds.
- Sugar Phosphate backbone.

3. How do we extract DNA from fruit?

- Mash** (break down cell walls) → **Mix** (release the DNA) → **Heat** → **Filter** (to remove insoluble material) → **Cool** → **Precipitate** by adding ethanol (to make the DNA visible.)

4. What are the key words in inheritance?

- Allele** – Version of a gene
- Heterozygous** – Different alleles
- Homozygous** – Same Alleles
- Recessive** – Needs 2 to be visible in phenotype. (lower case)
- Dominant** – Only needs one to be present. (Capital letter).
- Phenotype** – Visible characteristics
- Genotype** – Combination of alleles that code for the phenotype.

5. How to use a punnett square.

- Add parental genotypes.
- Complete offspring genotypes.
- T – tall t short
- 50% tall (Tt) and 50% short (tt)

	T	t
t	Tt	tt
t	Tt	tt

6. How can you predict inheritance of Sex?

- Female alleles are XX and males alleles are XY.
- 50% chance of male offspring and 50% chance of female.

7. What is the difference between environmental and genetic variation?

- Environmental variation is caused by changes in the environment, e.g. scar, accent, tattoo.
- Genetic variation is inherited, e.g. eye colour, blood type, sickle cell anaemia.

BUSINESS

1. Why do business ideas come about?

Because of...

- 🔌 changes in technology
- 🔌 changes in what consumers want
- 🔌 products and services becoming obsolete

2. Where do business ideas come from?

- 🔌 A completely original idea (invention)
- 🔌 Adapting an existing idea (innovation)

3. What are examples of adaptations to products?

- 🔌 New flavours
- 🔌 Different colours
- 🔌 Online access
- 🔌 Personalisation

4. Why might a business fail?

- 🔌 An entrepreneur does not know the market well enough
- 🔌 Not having enough capital to start the business
- 🔌 Poor decision making
- 🔌 Competition from other businesses
- 🔌 Not meeting the needs of customers

5. How can a business add value to a product?

- 🔌 Branding (creating an image for a product)
- 🔌 Quality (eg using better quality ingredients than competitors)
- 🔌 Design (unique features)
- 🔌 Convenience (it saves the customer time)

6. What are customer needs?

- 🔌 Price
- 🔌 Quality
- 🔌 Choice
- 🔌 Convenience
- 🔌 Good service
- 🔌 Design

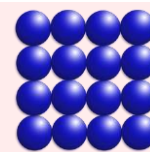
7. What are the main purposes of market research?

- 🔌 To identify and understand customer need
- 🔌 Identify market gaps
- 🔌 Reduce risk
- 🔌 Inform business decisions

CHEMISTRY

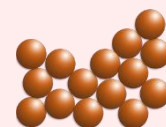
1. What is the movement and arrangement of particles in a solid?

- 🌀 **Movement:** Vibrating about a **fixed position**
- 🌀 **Arrangement:** **Regular** pattern and **touching**



2. What is the movement and arrangement of particles in a liquid?

- 🌀 **Movement:** Can move / **flow**
- 🌀 **Arrangement:** **Random** pattern and **touching**



3. What is the movement and arrangement of particles in a gas?

- 🌀 **Movement:** Moving fast in **all directions**
- 🌀 **Arrangement:** **Random** pattern and **not touching**



4. What are the main state changes?

- 🌀 **Melting:** Solid turning into a liquid (e.g. ice melting)
- 🌀 **Freezing:** Liquid turning into a solid (e.g. water turning into ice)
- 🌀 **Evaporating:** Liquid turning into a gas (e.g. water turning into steam)
- 🌀 **Condensing:** Gas turning into a liquid (e.g. condensation on windows)

5. What do the words 'soluble' and 'insoluble' mean?

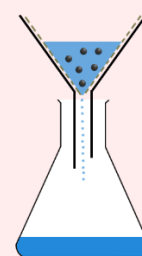
- 🌀 **Soluble:** Something that will dissolve (e.g. salt)
- 🌀 **Insoluble:** Something that will not dissolve (e.g. sand)

6. How do you carry out filtration?

- 🌀 Key trigger: **insoluble** or **undissolved**
 - Key Steps: **Tip** → **Filter funnel** → **Filter paper** → **Remain**

Example: During a chemical reaction, copper carbonate is added to nitric acid. At the end of the reaction, a solution of copper chloride contains bits of undissolved copper carbonate. Describe how to remove the copper carbonate.

- 🌀 **Tip** the solution into a **filter funnel** with **filter paper** in it. The copper carbonate will **remain** in the filter paper.

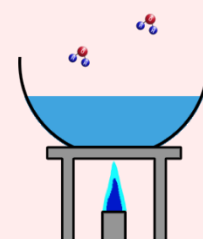


7. How do you carry out crystallisation?

- 🌀 Key trigger: **soluble, crystals** or **dissolved**
 - 🌀 Key Steps: **Heat** → **Evaporate** → **Crystals** → **Dry**

Example: During a chemical reaction, copper carbonate is added to nitric acid. At the end of the reaction, a solution of copper chloride forms. Describe how to produce pure, dry crystals of copper chloride.

- 🌀 **Heat** the solution and **evaporate** ½ of the water. Leave to cool so that **crystals** of copper chloride form. **Dry** the crystals using filter paper.



DESIGN TECHNOLOGY

1. Describe the advantages of CAD (Computer aided design)

- Designs can be created, saved and edited easily – saving time.
- Designs can be copied or repeated easily.
- Designs can be worked on by remote teams at the same time.
- Designs can be rendered to look photo realistic.
- CAD is very accurate.
- CAD software can process complex stress testing.

2. Describe the disadvantages of CAD

- It is complex to learn.
- It can be very expensive and can have compatibility issues.
- It can have security issues, risking data corruption/breaches.

3. Describe the advantages of computer aided manufacturing

- It is quick, consistent and accurate.
- You make less mistakes as there is no human error.
- You need less workforce, so it is cost saving.

4. Describe the advantages of CAM

- Training is needed to operate CAM.
- It costs a lot of money to buy the machines.
- If the machines break, production stops.
- Job losses could mean social decline.

5. What does planned obsolescence mean?

- Where a product is designed to have a specific life span.

6. What does “design for maintenance” mean?

- Products that are designed to be repaired and maintained.

7. What are the four scales of production?

- One off: Making a unique item.
- Batch: Making a few/set amount.
- Mass: When you make thousands.
- Continuous: Open ended production

7. Name different types of woods, plastics and metals:

Woods:	Plastics:	Metals:
• MDF	• Acrylic	• Aluminium
• Chipboard	• Polypropylene	• Stainless steel
• Hardboard	• Polythene	• Cast iron
• Oak	• Urea	• Copper
• Mahogany	• Formaldehyde	• Brass

ENGLISH

1. What is required in question 1 of the AQA exam paper?

- 🔗 List 4 things that link to the question

2. What is required in question 2 of the AQA exam paper?

- 🔗 Analyse the way language is used to describe a feature in the specific area of the text.

3. What is required in question 3 of the AQA exam paper?

- 🔗 Analyse the way structure has been used to interest the reader in the story or the section of the story provided

4. What is required in question 4 of the AQA exam paper?

- 🔗 Evaluate how far you agree with the different elements of the statement put forward.

5. Key word definitions:

- 🔗 **Capitalism:** A social and economic system in which the means for producing and distributing goods are privately owned.
- 🔗 **Conscience:** A moral sense of right and wrong
- 🔗 **Didactic:** A moral message, meaning to give instructions
- 🔗 **Libertarian:** An ideology that promotes the protection of individual rights.
- 🔗 **Microcosm:** A small place, society, or situation that has the same characteristics as something much larger.
- 🔗 **Misogynist:** Hatred or prejudice against women.
- 🔗 **Omniscient:** The quality of having unlimited knowledge
- 🔗 **Patriarchy:** A society controlled or dominated by men
- 🔗 **Socialism:** A social and economic system which favours shared social or government ownership and control of the means of production and distribution.

6. Key Characters in "An Inspector Calls":

- 🔗 **Mr Birling:** pompous, overconfident, stubborn, a social climber,
- 🔗 **Mrs Birling:** cold, supercilious, prejudiced.
- 🔗 **Sheila:** naïve, perceptive, curious, compassionate.
- 🔗 **Eric:** Irresponsible, reckless, frustrated, repentant.
- 🔗 **Gerald:** aristocratic, self-assured, thoughtless.
- 🔗 **Eva Smith:** warm-hearted, moralistic, representative.
- 🔗 **Inspector Goole:** classless, resolute, moralistic, other-worldly.
- 🔗 **Edna:** representative of the working class.

7. An Inspector Calls Key Quotes:

- ❖ **1. Act 1:** "By the way some of these cranks talk and write now, you'd think everybody has to look after everybody else, as if we were all mixed up together like bees in a hive – community and all that nonsense."
- ❖ **2. Act 1:** "If you don't come down sharply on some of these people, they'd soon be asking for the earth."
- ❖ **3. Act 1:** "But these girls aren't cheap labour – they're people."
- ❖ **4. Act 2:** "You mustn't try to build a wall between us and that girl."
- ❖ **5. Act 2:** "when this comes out at the inquest, it isn't going to do us much good. The press might easily take it up –"
- ❖ **6. Act 2:** "As if a girl of that sort would ever refuse money."
- ❖ **7. Act 3:** "I wasn't in love with her or anything – but I liked her – she was pretty and a good sport –"
- ❖ **8. Act 3:** "We are members of one body. We are responsible for each other."
- ❖ **9. Act 3:** "if men will not learn that lesson, then they will be taught it in fire and blood and anguish."
- ❖ **10. Act 3:** Everything we said had happened really had happened. If it didn't end tragically, then that's lucky for us. But it might have"
- ❖ **11. Act 3:** "Now look at the pair of them – the famous younger generation who know it all. And they can't even take a joke –"

8. What are the themes in "An inspector calls"?

- | | |
|-----------------------------|------------------------------|
| ❖ Responsibility | ❖ Individual vs state |
| ❖ Class | ❖ Time |
| ❖ Gender | ❖ Honesty and truth |
| ❖ Age | ❖ Prejudice |
| ❖ Rights of workers | ❖ Hypocrisy |
| ❖ Poverty and wealth | |

9. What happens in each act in "An Inspector Calls":

- ❖ **Act 1:** The Birling's are celebrating the engagement of S to G. An Inspector arrives to investigate the suicide of Eva. It is revealed that both Mr B and S were responsible for E losing two jobs.
- ❖ **Act 2:** G admits that he had an affair with E and leaves upset. Mrs B refused to give Eva any money when she came to beg for charity. Mrs B says that the father of the child should take responsibility.
- ❖ **Act 3:** E admits that he is the father of E's child. He feels terrible for what he has done. The Inspector leaves. G returns and informs the B's that there is no Inspector Goole.
- ❖ A phone call confirms this. However, a phone call reveals that an Inspector is on his way to question the Birlings.

FRENCH

1. How can I describe my family? Ma famille et moi!

- | | |
|---|---|
| <ul style="list-style-type: none">🍷 Adorer: to love🍷 Aimer: to like, to love🍷 Casse-pieds: annoying🍷 Le chat: cat🍷 Le chien: dog🍷 Le / la cousin(e): cousin🍷 Le demi-frère: half / step-brother🍷 La demi-sœur: half / step-sister🍷 Détester: to hate🍷 Divorcé(e): divorced🍷 La famille monoparentale: single-parent family🍷 Le frère: brother🍷 La grande sœur: big sister | <ul style="list-style-type: none">🍷 La grand-mère: grandmother🍷 Le grand-père: grandfather🍷 Les grands-parents (m): grandparents🍷 Habiter: to live🍷 Le lapin: rabbit🍷 La mère: mother🍷 Mon, ma, mes: my🍷 Le nom: name🍷 Les parents (m): parents🍷 Le père: father🍷 Le petit frère: younger brother🍷 La sœur: sister |
|---|---|

2. How can I describe my family and friends? Ma famille et mes amis!

- | | |
|--|---|
| <ul style="list-style-type: none">🍷 L'ami(e): friend🍷 Amusant(e): funny🍷 Bien s'entendre avec: to get on well with🍷 Le / la copain / copine: pal, mate🍷 Critiquer: to criticise🍷 Désagréable: unpleasant🍷 Difficile: difficult🍷 Se disputer: to argue🍷 Drôle: funny🍷 Égoïste: selfish🍷 En commun: in common🍷 En / de plus: moreover🍷 Le / la fils / fille unique: only son / daughter🍷 Généreux(-se): generous🍷 Gentil(le): kind🍷 Le goût: taste, interest🍷 Il / elle m'énerve: he / she gets on my nerves | <ul style="list-style-type: none">🍷 Intelligent(e): intelligent🍷 Jaloux(-se): jealous🍷 Laisser: to let🍷 Méchant(e): naughty, nasty🍷 Mignon(ne): cute🍷 Paresseux(-se): lazy🍷 Parfois / quelquefois: sometimes🍷 Le petit ami: boyfriend🍷 La petite amie: girlfriend🍷 Le petit copain: boyfriend🍷 La petite copine: girlfriend🍷 Sévère: strict🍷 Sortir: to go out🍷 Souvent: often🍷 Sympa
 nice🍷 Timide: shy🍷 Vraiment: really |
|--|---|

3. How can I describe marriage! On se marie?

- l'adolescent(e): adolescent
- l'adulte (m / f): adult
- avoir de l'humour: to have a sense of humour
- avoir des enfants: to have children
- la beauté physique: physical beauty
- le centre d'intérêt: interest
- les cheveux (m): hair
- la compagnie: company
- fantastique: fantastic
- la fille: girl
- le garçon: boy
- grand(e): big, tall
- les lunettes (f): glasses
- se marier avec: to marry
- le / la même: same
- le / la partenaire idéal(e)
ideal partner
- petit(e): small, short
- porter: to wear, to carry
- les qualités personnelles (f)
personal qualities
- se rencontrer: to meet
- les yeux (m): eyes

4. Would you like to get married? Tu aimerais te marier?

- à mon avis: in my opinion
- adopter: to adopt
- la carrière: career
- célibataire: single, unmarried
- le divorce: divorce
- l'église: church
- ensemble: together
- la famille nombreuse: large family
- la femme: wife
- les fiançailles (f): engagement
- le / la fiancé(e): fiancé
- garder: to keep
- heureux(-se): happy
- l'homme (m): man
- jeune: young
- la liberté: freedom
- libre: free
- le mari: husband
- le monde: the world
- religieux(-se): religious
- le rêve
dream
- la robe blanche: white dress
- séparé(e): separated
- traditionnel(le): traditional
- la vie: life
- vivre: to live
- voir: to see

5. Other useful information:

The immediate future and the future tense

Use the present tense of the verb *aller* (to go) followed by an infinitive (e.g. *finir*) to express future plans. This is called the **immediate future**.

The present-tense forms of *aller* are: *je vais, tu vas, il / elle va, nous allons, vous allez, ils / elles vont*.

Je vais finir mes études.
I am going to finish my studies.

Il va se marier.
He is going to get married.

Note that with reflexive verbs, the reflexive pronoun (*me, te, se, nous, vous*) has to match the subject.

Je vais me marier.
I am going to get married.

The **future tense**, e.g. *je trouverai, j'aurai*, is used to talk about what will happen.

Grammaire page 188

Possessive adjectives (my, your, his, her)

Use *mon, ton, son* with a masculine singular noun: *mon père, ton collègue*.

Use *ma, ta, sa* with a feminine singular noun: *ma maison, sa sœur*.

However, if a feminine singular noun starts with a vowel, use *mon, ton, son*: *son amie Julie*.

Use *mes, tes, ses* with a plural noun: *mes frères, tes sœurs*.

Grammaire page 180

Qui and que

Qui (who, which, that) is often followed by a verb.

J'ai un frère qui s'appelle Henri.
I have a brother who is called Henri.

Que / Qu' (whom, which, that) is often followed by a subject, e.g. *je, tu, il*.
Un garçon que je connais.

A boy (that) I know.

Grammaire page 183

Adjective agreement

Adjectives have different endings depending on whether they describe masculine, feminine, singular or plural nouns.

Add *-e* if the noun is feminine:
il est intelligent, elle est intelligente.

Add *-s* if the noun is masculine plural:
ils sont intelligents.

Add *-es* if the noun is feminine plural:
elles sont intelligentes.

However, there are adjectives that do not follow this rule. Look at the common exceptions in the box.

Masculine singular	Feminine singular
<i>jaloux</i>	<i>jalouse</i>
<i>gentil</i>	<i>gentille</i>
<i>généreux</i>	<i>généreuse</i>
<i> paresseux</i>	<i> paresseuse</i>
<i>long</i>	<i>longue</i>
<i>sympa</i>	<i>sympa</i>
<i>timide</i>	<i>timide</i>

Grammaire page 178

GEOGRAPHY

1. What is a hazard?

- ☞ Hurricanes, tornadoes, volcanoes, earthquakes, landslides, floods, lighting, drought, meteorological and geological.

2. Explain the theory of continental drift.

- ☞ Tectonic plates, Pangea, convection currents, slab-pull theory.

3. Describe the types of hazards caused by tectonic plate movements.

- | | |
|-----------------------------|-----------------------------|
| ☞ Constructive plate margin | ☞ Conservative plate margin |
| ☞ Destructive plate margin | ☞ Collision plate margin |

4. What are earthquakes and how are they measured?

What are they:

- ☞ Focus → epicentre → shock waves → magnitude.

Measured:

- ☞ Richter Scale
- ☞ Mercalli Scale,

5. Describe the primary and secondary effects of the Haiti and Kobe earthquakes.

- | | |
|------------------------|-----------------------------|
| ☞ Death toll. | ☞ Hospitals destroyed. |
| ☞ Injured. | ☞ Homeless. |
| ☞ Buildings destroyed. | ☞ Destroyed infrastructure. |
| ☞ Schools destroyed. | |

6. Explain how Haiti responded to the effects of the earthquake.

- ☞ Aid supplied by USA.
- ☞ Red Cross.
- ☞ United Nations – Security.
- ☞ World Bank.
- ☞ Cash for work schemes.

8. Explain how Kobe responded to the effects of the earthquake.

- ☞ Jobs for reconstruction
- ☞ Friends and neighbours
- ☞ 1.2 million volunteers
- ☞ Shock proof buildings
- ☞ Temporary shelters.

HISTORY

1. Who had the most power in Medieval England?

- 🚫 The King and Nobility
- 🚫 The Catholic Church

2. What dictated the economy in Medieval England?

- 🚫 The economy was **rural** and relied on **farming**.
- 🚫 Wool was England's biggest export.
- 🚫 Wool was sent to the **Low Countries** to be made into cloth

3. When and why did the Jews migrate to England?

- 🚫 Jews migrated to England in the eleventh century.
- 🚫 Jews were protected by the kings of England.
- 🚫 Jews acted as moneylenders.
- 🚫 Not all Jews were moneylenders and many Jews built communities in England

4. Were Jews welcomed into England?

- 🚫 English people resented the special position of Jews.
- 🚫 Anti-Semitism was encouraged by the Church.
- 🚫 Jews were accused of blood libels – killing Christian children as part of religious rituals

5. How did persecution of Jews increase in the 1250's?

- 🚫 Henry III put restrictions / taxes on Jewish people.
- 🚫 In 1275 the "Statute of Jewry" was passed by Edward I and Jews had to wear identification.
- 🚫 Edward I then began forcing Jews to convert or leave England.
- 🚫 In 1290 Edward I expelled all Jews from England.

6. How did European migrants affect England?

- 🚫 They migrated to big towns such as London, Norwich & Lincoln.
- 🚫 Flemish migrants were skilled weavers who helped transform England from a rural economy to a manufacturing economy.
- 🚫 Dutch brewers introduced beer into England.
- 🚫 In 1440, 1% of the population in England were European immigrants.
- 🚫 Kings wanted foreign merchants and skilled workers to come to England – he could tax them more and they brought supplies and skills to England.

7. How were European migrants *officially* welcomed?

- ❖ War influenced official responses to migrants.
- ❖ For most of this period, England and France were often at war with each other.
- ❖ English people would become more hostile to French people and so governments reacted by introducing laws that penalised foreigners.
- ❖ In 1377, England was doing badly against France and the king ordered all foreigners to leave the country unless they proved their loyalty.
- ❖ In 1440, the king responded to anti-foreigner feeling by ordering all people living in England who were born in a different country to pay taxes called alien subsidies.

7. How were European migrants *unofficially* welcomed?

- ❖ It's difficult to be certain about the whole national reaction to migrants.
- ❖ In some cases, English people were often quite hostile towards migrants, which resulted sometimes in violence e.g. a riot in Norwich in 1312 killed Flemish weavers.
- ❖ Despite the hostility, many immigrants integrated and married English people.



INFORMATION TECHNOLOGY



1. What is an input device?

- ❖ A piece of equipment that allows data to be entered into a computer
- ❖ Examples: mouse, keyboard, digital camera, scanner, tablet, microphone, sensor

2. What is an output device?

- ❖ A piece of equipment that allows users to retrieve data from a computer (audio, visual or physical)
- ❖ Examples: monitor, speakers, headphones, printer, projector

3. What is a storage device?

- ❖ A device that saves and keeps data.
- ❖ They can be internal or external
- ❖ Examples: hard disk drive, dvd, solid state storage, cloud

4. What are the basic internal components of a computer?

- ❖ Motherboard
- ❖ Network interface card
- ❖ Sound card
- ❖ Graphics card
- ❖ CPU (Central Processing Unit)
- ❖ Ports

5. What is an application?

- ❖ Software that is installed on top of the operating system, such as MS Word, Firefox or Minecraft

6. What is a driver?

- ❖ Software that allows the operation system and a device to communicate with each other

7. What does GUI stand for?

- ❖ Graphical User Interface

MATHS

1. What do the words median, mode, mean and range mean?

- 🌀 **Median:** The middle of an ordered list of items
- 🌀 **Mode:** The most common item in a list
- 🌀 **Mean:** Add together then divide by how many there are
- 🌀 **Range:** The biggest value take away the smallest

2. How do you calculate the mean from a table?

- 🌀 If the data is grouped, find a midpoint. Multiply each midpoint by the frequency. Add these values together. Divide by the sum of the frequency.


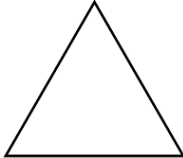

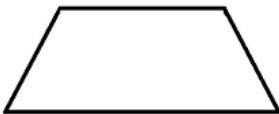
3. How do you calculate the median from a table?

- 🌀 Find the median position by adding one to the total frequency then dividing by two. Count through the frequencies to find this value. This group contains the median.

4. Key word definitions:

- 🌀 **Ascending:** Ordering from smallest to largest
- 🌀 **Descending:** Ordering from largest to smallest
- 🌀 **Spread:** How close together items are
- 🌀 **Class:** A group of data, eg: $15 < x \leq 20$

5. How do you calculate the area of different shapes?

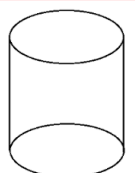
Rectangle:	Triangle	Parallelogram	Trapezium
			
Base x height	Base x height divided by 2	Base x perpendicular height	Add the parallel sides, multiply the height then divide by 2

6. What is the difference between surface area and volume?

- 🌀 **Volume:** The amount of space that a solid shape takes up (measured in cubes)
- 🌀 **Surface Area:** The area of all of the faces of a 3D shape added together (measured in squares)

7. What are prisms and cylinders?

- 🌀 A prism is a 3D shape with the same cross section throughout.
- 🌀 Volume of a prism = area of cross section x length
- 🌀 A cylinder is a prism with a circular cross section.



PHYSICAL EDUCATION

1. State the definition for "health"

- 🚫 A state of complete **emotional**, **physical** and **social** wellbeing and not merely the absence of disease.

2. State some of the benefits of exercise on physical health:

Burns calories	Strengthens bones	Reduces blood pressure
----------------	-------------------	------------------------

3. State some of the negative effects of exercise:

- 🚫 Over exertion can cause increased blood pressure / heart attacks.
- 🚫 Overuse injuries such as tennis elbow can occur.

4. State some of the benefits of exercise on mental health:

- 🚫 Takes your mind off your problems and relieves stress.
- 🚫 Increases serotonin levels, reducing depression.
- 🚫 Can be enjoyable/fun and reduce boredom.

5. State some of the negative effects of exercise on mental health

- 🚫 An injury can lead to depression as you are unable to train.
- 🚫 Sport can lead to frustration, anger and anxiety.

6. State some of the benefits of exercise on social health

- 🚫 We can meet new people / make new friends as well as meeting current friends.
- 🚫 It can improve our cooperation skills and social skills.
- 🚫 A child may develop their social skills and an elderly person may prevent loneliness from regular exercise.

7. State some of the negative effects of exercise on social health

- 🚫 Some performers may spend too much time training and less time with their families.

8. State the five sections of a training programme:

Aim	Design	Develop	Monitor	Evaluate
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9. Describe the difference between anorexia and obesity:

- 🚫 **Anorexia**: Not eating enough. Effects: little energy / tired / weak.
- 🚫 **Obesity**: Eating too much. Effects: lack of mobility / joint problems.

10. Why should teenagers get 8-10 hours of sleep per night?

- 🚫 Lack of sleep leads to tiredness, meaning your performance drops.

11. State some effects of drinking alcohol and smoking.

- | Smoking: | Alcohol: |
|-----------------|----------------------------|
| 🚫 Bronchitis | 🚫 Heart failure |
| 🚫 Heart disease | 🚫 Increased blood pressure |
| 🚫 Lung Cancer | 🚫 Liver disease |

12. Define fitness, exercise and performance:

- 🌀 **Fitness:** The ability to meet the demands of the environment.
- 🌀 **Exercise:** A form of activity done to maintain and improve health or physical fitness. It is not competitive sport'.
- 🌀 **Performance:** How well a task is performed'.

13. Why is fitness testing important?

- 🌀 Fitness testing is first carried out at the start of a fitness plan to **establish fitness levels**.
- 🌀 It is used to identify strengths and weaknesses as well as planning and setting **targets**.
- 🌀 A fitness test is also carried out during/after a programme to check for **improvements** and test for **effectiveness**.

14. State some examples of fitness tests:

- | | |
|--------------------------|-------------------------|
| 🌀 12-minute Cooper Run. | 🌀 Sit and Reach. |
| 🌀 12-minute Cooper swim. | 🌀 Illinois ability run. |
| 🌀 Harvard step test. | 🌀 Grip dynamometer. |
| 🌀 30m sprint. | 🌀 Vertical Jump. |

15. Key definitions:

- 🌀 **Agility:** The ability to change position of the body quickly while maintaining control of the movement.
- 🌀 **Balance:** The ability to retain the body's centre of mass above the base of support.
- 🌀 **Body composition:** The relative ratio of fat mass to fat-free mass in the body.
- 🌀 **Cardiovascular fitness:** The ability to exercise the entire body for long periods of time without getting tired.
- 🌀 **Coordination:** The ability to use two or more body parts together.
- 🌀 **Muscular Endurance:** The ability to exercise the voluntary muscles many times without getting tired.
- 🌀 **Flexibility:** The range of movement possible at a joint.
- 🌀 **Power:** The ability to do strength performances quickly.
- 🌀 **Reaction Time:** The time taken to respond to a stimulus.
- 🌀 **Speed:** The amount of time it takes to perform a particular action or cover a particular distance.
- 🌀 **Strength:** The amount of force a muscle can exert against a resistance.

PERFORMING ARTS

1. How are the following techniques used in performances?

- 🎭 **Comedy:** A light or humorous tone that depicts amusing incidents where the characters usually triumph over adversity.
- 🎭 **Characterisation:** Creating a character through movement and dynamic choices
- 🎭 **Naturalism:** A style of performance where actors and designers try to create the illusion that what is happening on stage is 'reality'.
- 🎭 **Use of voice:** Adapting your voice to suit a character requirement. (Volume, tone, pitch pace, intonation).
- 🎭 **Freeze Frame:** A silent and motionless depiction of a scene created by actors (plural).
- 🎭 **Hot seating:** An in-depth questioning of a character
- 🎭 **Thought tracking:** Internal thoughts of a character spoken aloud.
- 🎭 **Physical Theatre:** Uses techniques such as movement, mime, gesture and dance instead of words.
- 🎭 **Multi-role playing:** An actor plays multiple characters.
- 🎭 **Blocking:** Deciding where an actor stands during a scene.
- 🎭 **Fourth Wall:** An imaginary wall between the actor and the audience.

2. What style of performance did Constantin Stanislavski use?

- 🎭 The actor must use his **imagination** to be able to answer all questions (when, where, why, how).
- 🎭 Believed that the audience should **emotionally** connect with the characters.
- 🎭 Actors should use their **own experience** to make their characters as believable as possible.

3. Name 6 techniques used by Constantin Stanislavski

- | | | |
|-------------------|--------------------|-----------------------|
| 🎭 The fourth wall | 🎭 Emotional Memory | 🎭 The Magic IF |
| 🎭 Sense Memory | 🎭 Objectives | 🎭 Given Circumstances |

4. What style of performance did Bertolt Brecht use?

- 🎭 'Art is not a mirror to reflect reality, but a hammer with which to shape it.'
- 🎭 Believed that theatre should be used to spread a message and comment on society.
- 🎭 The audience should always be aware they are watching a play and constantly questioning what they see.

5. Name 6 techniques used by Bertolt Brecht

- | | | |
|-------------------------|---------------------|-------------------|
| 🎭 Breaking the 4th wall | 🎭 Alienation effect | 🎭 Multirole |
| 🎭 Minimal set/props | 🎭 Use of masks | 🎭 Use of placards |

6. What are "genres" in performing arts?

- 🎭 The genre refers to the type or style.
- 🎭 This is important for the actors to know what the performance will be about and for the audience to decide if they wish to watch that performance style.

Examples:

🎭 Action	🎭 Musical	🎭 Sci-fi
🎭 Adventure	🎭 Mystery	🎭 Soap
🎭 Comedy	🎭 Romantic	🎭 Thriller
🎭 Drama	🎭 Romantic	🎭 Tragedy
🎭 Horror	🎭 Comedy	

7. What are "themes" in performing arts?

- 🎭 Themes refer to what the performance is about.
- 🎭 You may find many different themes running through a performance.

Examples:

🎭 War	🎭 Sacrifice	🎭 Desire
🎭 Crime	🎭 Death	🎭 Jealousy
🎭 Bullying	🎭 Love	🎭 Witchcraft
🎭 Revenge	🎭 Hate	🎭 Magic

8. What are the roles and responsibilities of actors?

- 🎭 Learn lines, work with other actors, be punctual, attend auditions, keep their voice in good health, work with the director and production team.

9. What are the roles and responsibilities of dancers?

- 🎭 Keep fit and healthy, attend auditions, learn new dance pieces, work with the director and other dancers, work as a team, listen to instruction.

10. What are the roles and responsibilities of directors?

- 🎭 Work as a team, be punctual, listen to everyone's thoughts, cast people for the show, work closely with the producer, have a vision and be able to share it, be professional at all times.

11. How can we be safe when performing?

- | | |
|--|--|
| 🎭 Listen to instructions. | 🎭 Ensure the stage is clicked together properly. |
| 🎭 No running in the drama space. | 🎭 Be aware of the space on the stage. Do not step back without checking how close you are to the edge. |
| 🎭 No eating. | 🎭 Ensure backstage is clear of obstructions. |
| 🎭 Ensure equipment is put away. | 🎭 Tape any wires down- trip hazard. |
| 🎭 Be careful when using props especially breakables. | |
| 🎭 Ensure the space is clear of obstructions. | |

PHYSICS

1. What are waves?

- Waves are vibrations that transfer **energy**, they do not transfer matter (particles)

2. What are transverse waves?

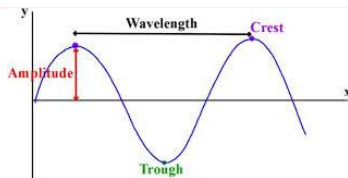
- Examples: Light, radio waves, microwaves and X-rays.
- The **vibrations** are **at right angles** to the **direction** that the wave **travels**

3. What are longitudinal waves?

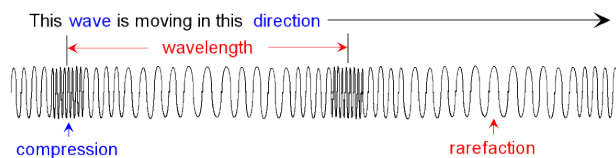
- Examples of longitudinal waves include sound waves
- The **vibrations** are **parallel** to the **direction** the wave **travels**

4. What do waves look like?

Transverse waves



Longitudinal waves



- The frequency of a wave is the number of waves that pass a point every second. We measure frequency in hertz (Hz)
- The period of a wave is the time taken to complete one full wave.

5. How can we calculate wave speed?

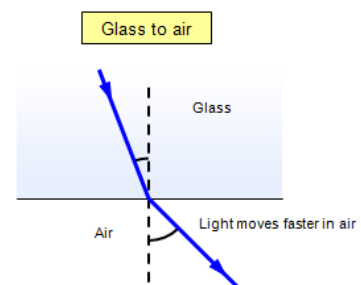
- Wave speed (m/s) = distance (m) \div time (s)
- Wave speed (m/s) = frequency (Hz) \times wavelength (m)

6. How can we investigate wave speed?

- To measure **distance**: **ruler** (short) or **trundle wheel** (long)
- To measure **time**: **stopwatch** (time must be longer than 1s).
- To measure **wavelength**: **length of 10 waves \div by 10.**
- To measure **frequency**: count the **number of waves** passing a point **in 10 seconds** and **divide by 10.**

7. What is the refraction of light?

- An **interface** is the boundary between two materials.
- As light passes from air into glass it slows down and **refracts** towards the normal
- As light passes from glass into air it speeds up and **refracts** away from the normal



TEXTILES

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
<ul style="list-style-type: none"> Pencils Collage Watercolours Paints Chalk Pastels 	<ul style="list-style-type: none"> Charcoal Fineliners Pen Artist Markers Photoshop (CAD) Photographs 	<ul style="list-style-type: none"> Written – pen / pencil Bullet points / key words / paragraphs Typed up on the computer

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?

5. Key words:

Composition

- 🔴 Background
- 🔴 Perspective
- 🔴 Proportion
- 🔴 Symmetry
- 🔴 Space
- 🔴 Scale
- 🔴 Foreground
- 🔴 Design
- 🔴 Decorative
- 🔴 Eye-Line
- 🔴 Focus
- 🔴 Blurred
- 🔴 Form

Drawing

- 🔴 Tone
- 🔴 Line
- 🔴 Texture
- 🔴 Pattern
- 🔴 Shading
- 🔴 Contour
- 🔴 Positive
- 🔴 Negative
- 🔴 Observational
- 🔴 2D and 3D
- 🔴 Figurative
- 🔴 Shape
- 🔴 Pattern
- 🔴 Composition
- 🔴 Perspective

Descriptive

- 🔴 Unrealistic
- 🔴 Realistic
- 🔴 Colourful
- 🔴 Bright
- 🔴 Linear
- 🔴 Rounded
- 🔴 Soft edged
- 🔴 Motion
- 🔴 Messy
- 🔴 Organised
- 🔴 Liquid
- 🔴 Geometric
- 🔴 Structured
- 🔴 Spiky
- 🔴 Hard
- 🔴 Still
- 🔴 Neat
- 🔴 Loud
- 🔴 Accurate
- 🔴 Disorganised

Verbs

- 🔴 Construct
- 🔴 Prepare
- 🔴 Manipulate
- 🔴 Improve
- 🔴 Criticize
- 🔴 Examine
- 🔴 Inspect
- 🔴 Practice
- 🔴 Demonstrate
- 🔴 Engage
- 🔴 Relate
- 🔴 Interpret
- 🔴 Observe
- 🔴 Identify
- 🔴 Label

