


















**Stafford Manor**  
High School

## **Year 10 Autumn Term 2**

### **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 evolution?

- The gradual and continual change of organisms over time.

## 2. What are the stages of Darwin's theory of evolution?

- Genetic variation → Over – reproduction → Competition → Survival → Reproduction → Gradual change.

## 3. What evidence do we have for evolution?

- Fossils: Identify similarities and differences in bone structure between fossils and later species.
- Stone tools: Newer tools are more advanced.
- Bacterial resistance: Emergence of bacteria resistant to antibiotics.

## 4. What are the five kingdoms of classification?

- Plant, Animal, Fungi, Prokaryote, Protist

## 5. What are the 3 domains?

- Archaea, Bacteria, Eukaryote.

## 6. What is the taxonomic hierarchy?

- Kingdom, Phylum, Class, Order, Family, Genus, Species.
- Binomial names are a 2 part Latin naming system, made up of the **Genus** and the **Species**; eg **Homo sapiens**.

## 7. What are the stages of selective breeding?

- Select organisms with desired characteristics → Breed them together → Select offspring with desired characteristics → repeat over many generations.

## 8. What is Genetic Engineering?

- Modifying the genome of an organism by introducing a gene from another organism to give a desired characteristic.

## 9. What are advantages and disadvantages of selective breeding?

- Advantages: Increase crop yield, breed animals for disease resistance.
- Disadvantages: Health problems from inbreeding, lack of genetic variation, ethical issues.

## 10. What are advantages and disadvantages of genetic engineering?

- Advantages: Improved yields, mass produce synthetic medicines, e.g. insulin, produce foods beneficial to health, e.g. golden rice.
- Disadvantages: Unknown effects on human health, and biodiversity, ethical issues, introduce selection pressures.

## 1. How can markets be segmented?

- Location
- Demographics
- Lifestyle
- Income
- Age

## 2. What is a market map?

- A diagram that positions all products within a market using two features (e.g. price and quality)

## 3. What are the ways that a business can compete?

- Price
- Quality
- Location
- Product Range
- Customer Service

## 4. What are the types of market?

- Monopoly – a market where there is only business
- Oligopoly – a market where a few firms dominate the market
- Competitive – a market where lots of small firms offer very similar products

## 5. What is the difference between an aim and an objective?

Aims are long term goals. Objectives are more specific, measurable, time constrained steps

## 6. What does SMART stand for?

**S**pecific, **M**easurable, **A**chievable, **R**ealistic, **T**ime-framed

## 7. Name three examples of fixed costs

- Rent
- Rates
- Bills (electricity, heating, phone)

## 8. Name three examples of variable costs

- Raw materials
- Packaging
- Delivery Costs

# CHEMISTRY

## 1. What ions make something acidic or alkaline?

- ❖ **Acid: Hydrogen** ( $\text{H}^+$ ) ions
- ❖ **Alkali: Hydroxide** ( $\text{OH}^-$ ) ions

## 2. What are the colours for acids and alkalis in different indicators?

- ❖ **Phenolphthalein (colourless):** Acid: Colourless; Alkali: Pink
- ❖ **Methyl Orange (orange):** Acid: Red; Alkali: Yellow
- ❖ **Litmus solution (purple):** Acid: Red; Alkali: Blue

## 3. What does dilute and concentrated mean?

- ❖ **Dilute:** Less  $\text{H}^+$  ions **in the same volume**
- ❖ **Concentrated:** More  $\text{H}^+$  ions **in the same volume**

## 4. What is the test for carbon dioxide?

- ❖ Bubble the gas through **limewater**.
- ❖ Carbon dioxide turns limewater **cloudy**.

## 5. What is the test for hydrogen?

- ❖ Add a **lit splint** into the gas...
- ❖ ...and you will hear a **squeaky pop** (if hydrogen is present).

## 6. What are the endings for different salts?

- ❖ Hydrochloric acid forms a **chloride** salt.
- ❖ Nitric acid forms a **nitrate** salt.
- ❖ Sulfuric acid forms a **sulfate** salt.

## 7. What are the by-products in acid-base reactions?

- ❖ Pure Metal, e.g. Copper: **Hydrogen** gas.
- ❖ Metal Hydroxide, e.g. Copper hydroxide: **Water**.
- ❖ Metal Carbonate, e.g. Copper carbonate: **Carbon dioxide and water**.

## 8. What happens to the ions during neutralisation?

- ❖ When neutralisation occurs, the hydrogen ions,  $\text{H}^+$ , react with the hydroxide ions to form water:



- ❖ If a carbonate is present, the carbonate ion,  $\text{CO}_3^{2-}$ , reacts with the hydrogen ion to form carbon dioxide and water:



# 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:

- ✦ MDF
- ✦ Chipboard
- ✦ Hardboard
- ✦ Oak
- ✦ Mahogany

### Plastics:

- ✦ Acrylic
- ✦ Polypropylene
- ✦ Polythene
- ✦ Urea
- ✦ Formaldehyde

### Metals:

- ✦ Aluminium
- ✦ Stainless steel
- ✦ Cast iron
- ✦ Copper
- ✦ Brass

# ENGLISH

## 1. Who are the characters in the play 'An Inspector Calls'?

- ❖ Mr and Mrs Birling, Eric Birling, Shelia Birling, Gerald Croft, Inspector Goole, Eva Smith / Daisy Renton, Edna.

## 2. What are the themes in the play?

- ❖ Responsibility, capitalism, socialism, gender, class, age.

## 3. When was the play first performed?

- ❖ 1945

## 4. When was the play set?

- ❖ 1912

## 5. Finish the quotation: 'Sinkable, ...'

- ❖ '...Absolutely unsinkable' (Mr Birling)

## 6. Finish the quotation: 'We are members of one body...'

- ❖ '... We are responsible for each other' (Inspector)

## 7. Finish the quotation: 'Everything we said happened, really had happened...'

- ❖ '... If it didn't end tragically, then that's luck for us but it might have.' (Shelia)

## 8. What do you have to do in English Paper 1, question 2?

- ❖ Analyse the way LANGUAGE is used in the specific area of text.

## 9. What do you have to do in English Paper 1, question 3?

- ❖ Analyse the way LANGUAGE is used in the specific area of text.

## 10. What do you have to do in English Paper 1, question 4?

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

## 11. What do you have to do in English Paper 1, question 5?

- ❖ Descriptive or narrative writing using an image as stimulus.

## 12. What does inference mean?

- ❖ An inference is a conclusion that you draw about something by using information that you already have about it.

# FRENCH

## 1. What is the present tense ending pattern for these verbs for je, tu, il, elle (singular forms)?



- je = e; tu = es; il = e; elle = e (eg je danse, tu dances, il danse)

## 2. What do these question words mean? Qui, Quand, Quoi?

- Who? When? What?

## 3. What do these question words mean? Combien? Comment?

- How much / how many? How?

## 4. What do these question words mean? Où? Pourquoi?

- Where? Why?

## 5. What do these key topic (1.1) verbs mean? Se marier, divorcer, s'entendre, se disputer, aimer, se rencontrer, vivre

- To get married, to divorce, to get on with, to argue with, to love, to meet, to live

## 6. What does this key topic (1.1) vocabulary mean? Une famille mono-parentale, drôle, égoïste, avoir de l'humour, les qualités personnelles, la carrière,

- Single-parent family, funny, selfish, have a sense of humour, personal qualities, career

## 7. What do these key topic (2.1) verbs mean? T chatter, partager, communiquer, discuter, penser, travailler

- To chat (on line), to share, to communicate, to discuss, to think, to work

## 8. Why is travailler a false friend (un faux ami)? What is the verb to travel?

- Travailler means to work, NOT travel. Voyager is the verb to travel

## 9. What does this key topic (2.1) vocabulary mean? Le copain /copine, en ligne, les selfies, des autres, les réseaux sociaux, les médias sociaux

- Friend, on line, selfies, others, social networks, social media

## 10. What does C'est mean? Ce sont? Ça?

- Friend, on line, selfies, others, social networks, social media



**11. What do these key topic verbs mean (2.2)? télécharger, utiliser, envoyer, éteindre**

🔗 To download, to use, to send, to switch off / turn off

**12. What is the difference between quel, quelle, quels and quelles?**

🔗 (Which /what) masc sing, fem sing, masc plural, fem pl

**13. What does this key topic vocabulary mean (2.2)? les renseignements, les avantages, les inconvénients, un sondage**

🔗 Information, advantages, disadvantages, a survey

# GEOGRAPHY

## 1. What impact did the Somerset Floods have on people, economy and environment?

- County, saturation, dredging, home destroyed, roads blocked, relief, climate, prolonged heavy rainfall, cost, loss of habitat, water sources contaminated, loss of income.

## 2. How do you know climate change is real? What is the evidence?

- Ice cores, tree ring analysis, pollen analysis, paintings, satellite imagery, permafrost melt, hazard frequency, sea level rise.

## 3. Describe the natural causes of climate change.

- Milutin Milankovitch cycles: Eccentricity, Axial tilt, Precession. Sunspots and volcanic activity.

## 4. To what extent are humans to blame for climate change?

- Enhanced greenhouse effect, fossil fuels, cars, factories.

## 5. Describe the strategies used to mitigate climate change.

- Afforestation, international agreements – such as Paris Accord, Kyoto Protocol and COP, renewable energy and carbon capture.

## 6. Explain how humans have started adapting to climate change.

- Agricultural changes, managing water supply, reducing the risk of rising sea levels.

## 7. What is a food chain?

- The direct links between producers and consumers in the form of a simple line.

## 8. What is a biome?

- A large-scale ecosystem such as hot desert or tropical rainforest.

## 9. What are the key characteristics of the hot desert biome?

- Less 200ml rainfall per annum, high temperatures in the day, cooler temperatures at night, located all round the world the biggest is the Sahara.

## 10. How have animals and plants adapted to life in the hot desert biome?

- Camel – 2 sets of eyelashes, thick fur to help release heat, humps store fat, large flat feet.
- Needle like leaves to reduce transpiration and for protection.
- 25m long roots to access water deep underground.
- Shallow roots to soak up early morning dew. Waxy, fleshy stems to retain water.

# HEALTH & SOCIAL CARE

## 1. What is meant by a factor affecting development?

- ❖ Factors are circumstances that affect an individual's growth and development.
- ❖ The circumstances may be linked to their health, the way they live, their lives and their home environment.

## 2. Physical factors affecting development include:

- ❖ Inherited conditions (sickle cell disease, cystic fibrosis, muscular dystrophy, Marfan syndrome and Huntington's disease)
- ❖ Experience of illness and disease
- ❖ Mental ill health (anxiety, stress, depression)
- ❖ Physical ill health (cardiovascular disease, obesity, type 2 diabetes)
- ❖ Disabilities
- ❖ Sensory impairments

## 3. Lifestyle factors affecting development include:

- |                     |                    |
|---------------------|--------------------|
| ❖ Nutrition         | ❖ Alcohol          |
| ❖ Physical activity | ❖ Substance misuse |
| ❖ Smoking           |                    |

## 4. Emotional factors affecting development include:

- |                     |                         |
|---------------------|-------------------------|
| ❖ Fear              | ❖ Happiness/contentment |
| ❖ Anxiety/worry     | ❖ Security              |
| ❖ Upset/sadness     | ❖ Attachment            |
| ❖ Grief/bereavement |                         |

## 5. Social factors affecting development include:

- ❖ Supportive and unsupportive relationships with others – friends, family, peers and colleagues.
- ❖ Social inclusion and exclusion
- ❖ Bullying
- ❖ Discrimination

## 6. Cultural factors affecting development include:

- |                                 |                           |
|---------------------------------|---------------------------|
| ❖ Religion                      | ❖ Community participation |
| ❖ Gender roles and expectations | ❖ Race                    |
| ❖ Gender identity               |                           |
| ❖ Sexual orientation            |                           |

## 7. Environmental factors affecting development include:

- ❖ Housing needs, conditions, location
- ❖ Home environment
- ❖ Exposure to pollution (air, noise and light)

## 8. Economic factors affecting development include:

- ❖ Employment situation
- ❖ Financial resources (income, inheritance, savings)

# HISTORY

## 1. What was the Industrial Revolution?

- ✿ The process of change from a farming and handicraft economy to one dominated by industry and machine manufacturing

## 2. What did Britain begin to establish all over the world?

- ✿ Colonies

## 3. How did the growth of the British Empire help fuel immigration?

- ✿ The slave trade brought people from Africa and the Caribbean to Britain
- ✿ African and Asian people worked on British Empire ships as sailors

## 4. Why was there a huge influx of Irish migration in the 1840s?

- ✿ The Potato harvest in Ireland failed causing mass starvation

## 5. What challenges did Irish migrants face?

- ✿ Poor living conditions

## 6. What were Asian sailors also known as?

- ✿ Lascars

## 7. Why was life difficult for migrant sailors?

- ✿ Sailors lived in slums
- ✿ Sailors faced widespread racism
- ✿ Many resorted to begging

## 8. What impact did Italian migrants have on Britain?

- ✿ Introduction of ice cream
- ✿ Revitalised the Catholic Church in Britain

## 9. Why did Jews migrate to Britain in 1880s?

- ✿ They were fleeing pogroms in Eastern Europe

## 10. What were the impacts of Jewish migration?

- ✿ Worked in the clothing industry
- ✿ Due to these Jews being more traditional, there was a rise in anti-Semitism

# HISTORY

## 11. When did the two world wars take place?

- 🔴 First World War: 1914 – 1918
- 🔴 Second World War: 1939 - 1945

## 12. What happened to Britain's Empire after 1945?

- 🔴 Countries became independent

## 13. What is the Commonwealth?

- 🔴 An international organisation that includes many countries that were in the British Empire

## 14. When did Britain join the EU?

- 🔴 1973

## 15. When did Britain vote to leave the EU?

- 🔴 2016

## 16. Where were German immigrants sent during the World Wars?

- 🔴 Internment camps

## 17. How many Belgian refugees came to Britain in the First World War?

- 🔴 250,000

## 18. Where did people come from during the Second World War?

- 🔴 Britain's Empire – to help fight
- 🔴 Poland - refugees

## 19. What was the Kindertransport?

- 🔴 It rescued Jewish children from Nazi Germany, Austria & Czechoslovakia

## 20. What was the British Nationality Act, 1948?

- 🔴 It gave British citizenship to all people living in the Commonwealth

## 21. Why did thousands come to Britain post 1948?

- 🔴 Economic reasons – many on the Windrush from the West Indies
- 🔴 Political reasons – partition of India led to many leaving
- 🔴 Escape persecution – Ugandan Asian and Kenyan Asian refugees

## 22. What were many of the Commonwealth migrants victims of?

- 🔴 Racism and race riots

## 23. What was the Commonwealth Immigrants Act, 1962?

- 🔴 An Act to try and control immigrants coming from the Commonwealth
- 🔴 Immigrants had to apply for a work voucher

## 24. What was the National Front?

- 🔴 A racist political party

## 25. What is an asylum seeker?

- 🔴 Refugees who have to apply for permission to stay.

# INFORMATION TECHNOLOGY



Year 10 Half Term 2

## 1. What is the difference between data and information?

Data contains raw facts and figures. Information is data that has been processed (by a computer).

## 2. What are the benefits to encoding data?

- Data is more secure
- Less storage space required
- Faster searching for data

## 3. Why is good quality data important?

Poor quality data can lead to incorrect conclusions, poor decision-making, and significant risks.

On the other hand, high-quality data enables businesses to make accurate insights, improve decision-making, reduce risks, save costs, improve the customer experience, and comply with regulatory requirements

## 4. What are the advantages of using ICT to store data?

- Security
- Automatic Backups
- Better accessibility
- Disaster Recovery
- Easy Sharing

## 5. What are the disadvantages of using ICT to store data?

- Network connection required if working in different locations
- Additional costs

## 6. Name three types of data capture

- Bar code reader
- Optical Character Recognition (OCR)
- Speech Recognition

## 7. What are the differences between LAN and WAN?

LAN means local area network. WAN means wide area network. LANs connect users and applications in close geographical proximity (same building). WANs connect users and applications a much wider area.

## 8. Name three types of network topography

- Bus
- Star
- Ring

# MATHS

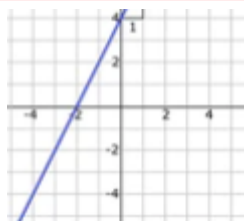
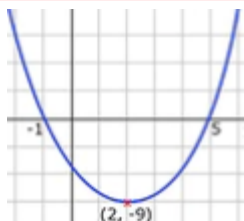
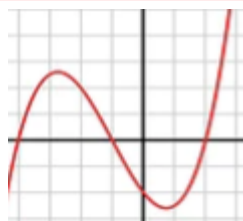
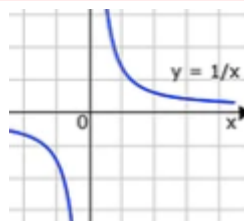
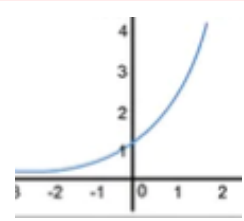
## 1. Key word definitions:

- 🔴 **Gradient:** A measure of how steep a line is
- 🔴 **Y-Intercept:** The point at which a line crosses the Y axis
- 🔴 **Parallel:** Lines that run in exactly the same direction
- 🔴 **Perpendicular:** Lines that meet at ninety degrees

## 2. What is the usual form of an equation for a straight line?

$$y = mx + c$$

## 3. What do the following types of graph look like?

Linear	Quadratic	Cubic	Reciprocal	Exponential
				

## 4. How do you calculate the gradient of a straight line?

difference in y  $\div$  difference in x

## 5. What is a reflection?

A transformation that changes a shape by *flipping* it over a mirror line

## 6. What is a translation?

A transformation that changes a shape by *moving* it.

## 7. What is a rotation?

A transformation that changes a shape by *turning* it.

## 8. What is an enlargement?

A transformation that changes a shape by making it *bigger or smaller*.

## 9. When describing a transformation what extra information do you need to give?

Reflection: 1. Mirror Line	Translation: 1. Vector	Rotation: 1. Centre 2. Angle 3. Direction	Enlargement: 1. Centre 2. Scale Factor
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### **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 reading an image mean?**

- ✿ The effect that a media image has on audiences; what they understand from the media product

### **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



# PHYSICAL EDUCATION

## 1. Principles of Training

### Principles of training: F I R S T O P

Principle	Explanation	Application
<b>F.I.T.T</b>	F = Frequency (how often) I = Intensity (how hard) T = Time (how long) T = Type of training	I train 3 times per week 3 sets of 8 reps of 15kg I train for 60 minutes I use circuit training
<b>Individual Needs</b>	Everybody is different and has different needs. It is important to match training to the requirements of the individual	Ronaldo is a professional footballer he trains 5 days per week. John plays Sunday league football and trains once per week
<b>Reversibility</b>	Just as football improves with training, it can decline if you stop training	Reversibility can be caused by lack of training or injury
<b>Specificity</b>	Training must match the requirements of the activity so that the right muscles and body systems are adapted	A sprinter should train for speed A rower should train using a rowing machine not a treadmill
<b>Thresholds of Training</b>	To improve fitness, you should train within your target zone. Your target zone will depend on the intensity of the activity Aerobic = 60 - 80% max HR Anaerobic = 80 - 90% max HR	Running a 10k is an aerobic activity. You should therefore train in the aerobic training zone of 60 - 80% of the max heart rate
<b>Overtraining</b>	Too much training can lead to injury and prevent improvement. Rest, duration of a session and the intensity are all important when training	Training everyday does not allow enough time for rest for recovery and adaptations
<b>Progressive Overload</b>	Progressive overload is gradually increasing the amount of training so that fitness gains occur, but without the risk of injury	Week 1 = run for 10 mins Week 2 run for 15 mins

## 2. Methods of Training

### Types of Training

Continuous Training	Fartlek Training	Circuit Training	Interval Training	Plyometric Training	Weight Training
Is aerobic Has no breaks or rest (20 min or more) Sub-maximal exercise Improves cardiovascular & muscular endurance	Form of continuous training Varies in pace and terrain Aerobic & Anaerobic Improves cardiovascular & muscular endurance	Contains stations organised in a circuit they can be skill or fitness based, aerobic or anaerobic Intensity is measure by circuits, time or repetitions	High intense exercise followed by periods of rest to recover Usually anaerobic can be used in a variety of locations Improves speed but can improve strength and cardiovascular	High Intensity Short duration Breaks between sets (exercises) Involves jumping/bounding Improves power (speed & strength)	Form of interval training Involves reps and sets Weight provides the resistance Improves strength, power and muscular endurance
<b>Advantages</b>	<b>Advantages</b>	<b>Advantages</b>	<b>Advantages</b>	<b>Advantages</b>	<b>Advantages</b>
No equipment or facilities Has many health benefits (CHD)	No equipment or facilities Change of pace can be more interesting	Variety of stations generates interest Can be skill or fitness Can easily be adapted	Can be used to improve health and fitness (aerobic & anaerobic) No equipment needed	Develops power quickly No equipment	Can target specific areas of the body Easily adapted for different fitness
<b>Disadvantages</b>	<b>Disadvantages</b>	<b>Disadvantages</b>	<b>Disadvantages</b>	<b>Disadvantages</b>	<b>Disadvantages</b>
Boring No change of pace Can cause impact injuries	High intensity can be avoided A safe route may be hard to find	Equipment can be costly Can be time consuming to set up	Can be repetitive and boring Need to plan and keep track of sets	Can cause injury due to high intensity	Can cause injury with poor technique A spotter needed with free weights
<b>Sports</b>	<b>Sports</b>	<b>Sports</b>	<b>Sports</b>	<b>Sports</b>	<b>Sports</b>
Marathon running cycling swimming	Football Rugby Netball	Can be adapted to suit all sports	Usually for speed It can be adapted to other sports	Basketball Long jump Hurdles	Weight lifting, rugby shot-put

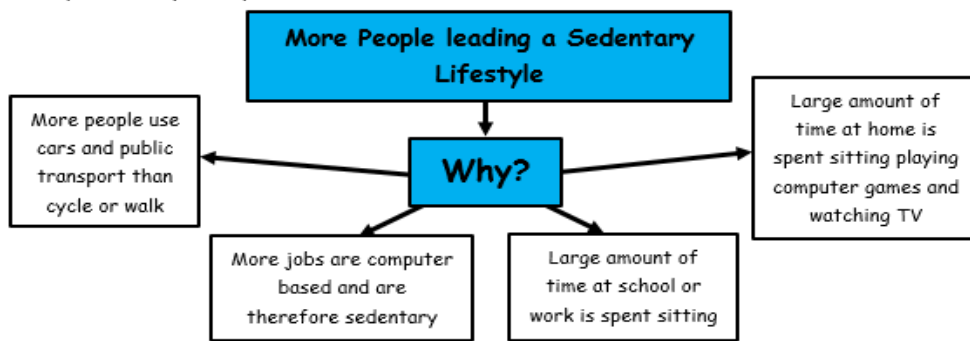
# PHYSICAL EDUCATION

## 1. Sedentary Lifestyle

### The consequences of a sedentary lifestyle

**Sedentary lifestyle** = A lifestyle is a lifestyle where there is little or no exercise

A sedentary lifestyle is doing less than 30 minutes physical activity per week. Sedentary behaviour refers to activities that use little energy such as watching Tv, playing computer games or sitting down. It is reported that British people on average sit for nearly 9 hours per day.









## 2. Health Risks

### Health risks associated with a sedentary lifestyle

Health risk	Explanation
Obesity	Due to inactivity and a reduction in metabolic rate
Depression	Being overweight or obese can lead to poor self-esteem and lack of confidence
Osteoporosis	Due to lack of weight bearing exercise
Poor muscle tone & posture	Due to inactivity muscles are weak
Type 2 diabetes	Being overweight can increase the risk of developing type 2 diabetes
Heart disease and stroke	High blood pressure and cholesterol increase the risk of a heart attack and a stroke

## 3. Diet and Nutrition

Macronutrients		
<p><b>Carbohydrates</b></p> <p><b>Function:</b></p> <ul style="list-style-type: none"> <li>Provide us with energy in both aerobic and anaerobic activities</li> <li>Eaten in large quantities compared to other macronutrients</li> </ul> <p><b>Found in:</b></p> <ul style="list-style-type: none"> <li>Bread, rice, pasta, potatoes</li> </ul> 	<p><b>Fats</b></p> <p><b>Function:</b></p> <ul style="list-style-type: none"> <li>Provide us with energy, is stored in the body and can lead to weight gain</li> <li>Should be the smallest percentage of macronutrients in the diet</li> </ul> <p><b>Found in:</b></p> <ul style="list-style-type: none"> <li>Butter, oil, fatty meats, fried food</li> </ul> 	<p><b>Proteins</b></p> <p><b>Function:</b></p> <ul style="list-style-type: none"> <li>Used for growth and repair, it can provide us with energy</li> <li>May be used by athlete for growth and repair of muscles</li> </ul> <p><b>Found in:</b></p> <ul style="list-style-type: none"> <li>Cheese, milk, eggs, lean meat, fish</li> </ul> 

Micronutrients	
<p><b>Vitamins &amp; Minerals</b></p> <ul style="list-style-type: none"> <li>Vitamins and minerals keep our body healthy and can improve your immune system.</li> <li>Vitamins are found in fresh fruit and vegetables</li> <li>Minerals are found in vegetables and meat</li> </ul> <p><b>Vitamin D:</b> Found in dairy products and helps the body absorb calcium</p> <p><b>Calcium:</b> Found in milk and other dairy products and helps keep our bones strong</p> 	<p><b>Water</b></p> <ul style="list-style-type: none"> <li>Water prevents dehydration and is found in most liquids and many foods</li> </ul>  <p><b>Fibre</b></p> <ul style="list-style-type: none"> <li>Fibre aids the digestive system and is found in foods such as cereals, vegetables and nuts</li> </ul> 

# PERFORMING ARTS

## 1. Task 1a- These are the questions you need to think about for Task 1a which is worth 6 marks

- ❖ the original author/composer/choreographer and their intentions for the piece(s)
- ❖ intended mood and style/genre
- ❖ themes and ideas
- ❖ performance space
- ❖ purpose
- ❖ the relationship between audience and the performer
- ❖ original target audience
- ❖ new target audience.

## 2. Task 1b- These are the questions you need to think about for Task 1b which is worth 5 marks

- ❖ What do you do already? In terms of Dance or Drama or Music
- ❖ This could be a dance school or dance lessons you attend
- ❖ It could be a talent show you take part in
- ❖ It could be acting classes/singing classes
- ❖ Learning to play the guitar at school
- ❖ Singing in the choir
- ❖ Include as much as you can about your own experiences

## 3. Task 2- These are the questions you need to think about for Task 2 which is worth 4 marks

- ❖ 1. What is a rehearsal schedule?
- ❖ 2. Why are they important to have in place?
- ❖ 3. Research what they look like
- ❖ 4. What things do you need to rehearse?

Rehearsal type/What	Time allocated	Focus for that rehearsal	Evidence/note
Rehearsal 1  First read through with my group	45 minutes	Group read through of the extract	First read through All characters have been decided on Read through each of the parts Stage directions will be read out too so we know what is happening Think about articulation of words, meaning of any words said, how they should be said etc Make sure we can pronounce all of our lines Get to know the other actors and their strengths/areas for development Ask questions to our teacher or other cast members

## 4. Task 3- These are the questions you need to think about for Task 3 which is worth 10 marks

- ❖ Produce a reflective journal that records the practical rehearsal process required to ensure you are fully prepared for the performance required in the brief. Candidates should show evidence of:
- ❖ action planning

- rehearsal preparation away from the rehearsal space (e.g., line learning/familiarisation with
- score/practice of dance moves, preparing virtual instruments/sounds)
- responding to direction/choreography
- receiving and recording blocking; annotating scripts/choreographic notation/scores
- refining
- observing appropriate health and safety requirements.

- Listen to instructions.
- No running in the drama space.
- No eating.
- Ensure equipment is put away.
- Be careful when using props especially breakables.
- Ensure the space is clear of obstructions.

- Ensure the stage is clicked together properly.
- Be aware of the space on the stage. Do not step back without checking how close you are to the edge.
- Ensure backstage is clear of obstructions.
- Tape any wires down- trip hazard.

#### **5. Task 4- These are the questions you need to think about for Task 4 which is worth 20 marks**

- Perform/present your chosen piece(s) to an audience. Candidates should show evidence of:
- accuracy
- coordination
- communication
- control
- dealing with mistakes; coping under pressure
- interpretation
- interpretation and development of character
- clarity of chosen acting style/genre.
- use of movement and gesture.
- use of voice
- response to text.

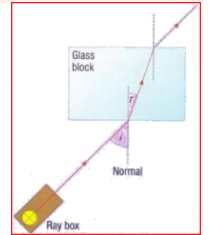
#### **6. Task 5- These are the questions you need to think about for Task 5 which is worth 15 marks**

- Evaluate the success of your performance including what you have learned from undertaking this
- work and how it will inform your future performances. Candidates should show evidence of:
- feedback from others
- whether the performance fulfilled its intentions
- strengths and areas for future development
- action planning and targets for future performances
- professional working practices, including appropriate health and safety.

# PHYSICS

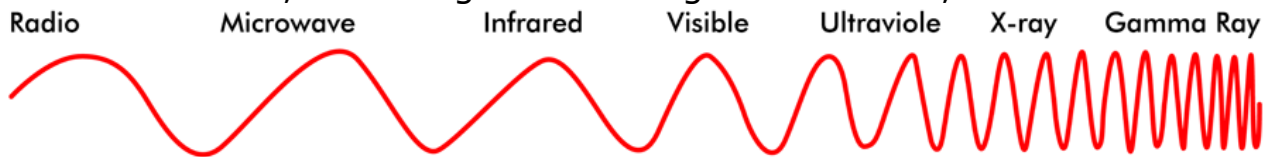
## 1. How do we investigate refraction?

- ❖ You need a thin beam of light from a **ray box**, a **ruler**, a pencil, a glass block and a **protractor**.
- ❖ Use a protractor measure the **angle of incidence** & the **angle of refraction**, repeat this for several angles over a range of angles. Measure angles against the normal line.



## 2. What are electromagnetic waves?

- ❖ The EM waves, from longest wavelength to shortest, are:



## 3. What do all electromagnetic waves have in common?

- ❖ All EM waves are **transverse** and **transfer energy**, they all travel at the **same speed** (in a vacuum)- **300,000,000 m/s** ( $3 \times 10^8$  m/s) and are produced by **changes within the atom**.

## 4. How are electromagnetic waves be used?

- ❖ **Radio waves** are used for broadcasting **TV** and **radio** signals, and **satellite transmissions**.
- ❖ **Microwaves** are used for **mobile phone** and **satellite** signals, as well as for heating food.
- ❖ **IR** light is used for **cooking food**, **remote controls**, by **electrical heaters**, optical fibres, **security systems** and **thermal imaging**.
- ❖ **Visible light** is the light we can **see**, so is used in **photography** and **illumination**. **red, orange, yellow, green, blue, indigo, violet**.
- ❖ **UV** is used in fluorescent lamps, to **detect forged notes** and for **disinfecting water**.
- ❖ **X-ray photos** are used to help **identify broken bones** and in **airport security** scanners.
- ❖ **Gamma rays** are used for **sterilising food** and **medical instruments**, and in the **treatment and detection of cancer**.

## 5. How can electromagnetic waves be harmful?

- ❖ Radio waves **cause no damage**.
- ❖ Microwaves can be absorbed by our cells and **cause internal heating of our blood**.
- ❖ Infrared is mostly absorbed or reflected by the skin and can **cause burns to the skin**.
- ❖ Visible light can **cause burns to the skin** (think lasers)
- ❖ Ultraviolet can **cause skin cancer**, it can also cause **damage to the eyes**, even blindness.
- ❖ X-rays and gamma rays pass into the body & are absorbed by deeper tissues & can **damage cells, cause mutations and lead to cancer**.





## 1. Consumer Rights: How do consumer laws protect us?

- ❖ Consumer law protects the consumer from companies that might sell them damaged goods or that might make promises they cannot keep.
- ❖ When you buy an item from a trader the item must be:
  - Of satisfactory quality
  - Fit for purpose
  - As described

## 2. Employment Rights: State the rights and employee has:

- ❖ Minimum Wage
- ❖ Maternity Pay
- ❖ Statutory Sick Pay
- ❖ Holiday Pay
- ❖ Health & Safety
- ❖ Contract of employment
- ❖ Freedom from Discrimination



## 3. Exploring a Pay Check: What information should be on your payslip?

- ❖ Employer & Employees Name
- ❖ Tax Code
- ❖ National Insurance Number
- ❖ Salary/Pay Rate
- ❖ Bonuses/Overtime/Responsibility Payments
- ❖ Income Tax
- ❖ National Insurance paid by Employer and Employee
- ❖ Pension Contribution by Employer and Employee
- ❖ Gross Pay
- ❖ Net Pay
- ❖ Student Loan
- ❖ Total Tax paid this period



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

## 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?

