

# Year 11 Autumn Term 2 Core Knowledge

- Art
- Biology
- Business
- Chemistry
- 🤨 Design Technology
- 🔮 English
- French
- Geography
- History
- Information Technology
- Maths
- Performing Arts
- PE
- 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 record board?

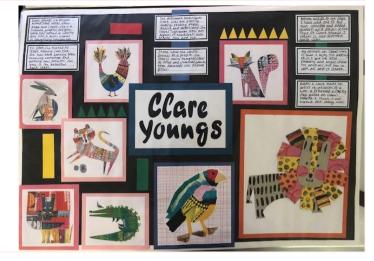
- A title of the relevant board.
- A selection of at least x5 high quality drawings in different medias.
- Annotations based on the drawings. Always using the guidance booklet to assist you.

# 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.



# 1. What are the endocrine glands and what do they produce?

- Endocrine glands produce hormones (chemical messengers)
- Adrenal → Adrenalin, Pituitary → ADH, growth hormone, Thyroid → Thyroxine, Ovaries → Oestrogen, Testes → Testosterone, Pancreas → Insulin

# 2. How does adrenalin affect the body? (HIGHER)

- Increases Heart rate, blood pressure, blood flow and blood sugar levels.
- Causes a fight or flight reaction.

# 3. What are the stages of the menstrual cycle?

- Days 1- 7 Menstruation
- Day 14 Ovulation (release of an egg from ovary)
- Day 8-15 Build-up of uterus lining.
- ◆ Day 15 28 If egg remains unfertilised uterus lining is maintained until it breaks down and the cycle begins again. If egg is fertilised, it implants in uterus lining and cycle stops.

# 4. What hormones are involved in the menstrual cycle?

- Oestrogen causes the uterus lining to build up. High level stimulates LH surge.
- Progesterone Maintains the lining of the uterus.
- FSH Stimulates an egg to mature in the ovary
- LH Stimulates ovulation.

# 5. What are hormonal and barrier contraceptives?

- Condoms useful to prevent STI's and fertilisation.
- Diaphragm or cap. Placed at entrance to uterus, prevent fertilisations, does not prevent transmission of STI's.
- Hormone pill. Releases hormones (oestrogen, progesterone or both) to prevent fertilisation. Does not prevent transmission of STI's.

### 6. What is homeostasis?

Maintenance of a constant internal environment.

# 7. How does our body regulate blood sugar?

- High blood sugar Pancreas releases insulin, Glucose stored as Glycogen in Liver cells.
- Low blood sugar Pancreas releases Glucagon, Glycogen in liver is converted back to Glucose and released into the blood.



Year 11 Term 2

# 1. What is the purpose of production?

The purpose of production is to create goods and services

# 2. What are the three types of production method?

- Job (e.g. tailoring)
- Batch (e.g. bread)
- Flow (e.g. bottled drinks)

# 3. What are the impacts of technology?

- Lower costs due to lower labour costs
- Increased productivity (no breaks or holidays)
- Improved quality and consistency

### 4. What is JIT?

JIT stands for Just In Time. A business is run with such little stock that supplies have to arrive 'just in time' before they run out.

### 5. What are the benefits and limitations of JIT?

### Benefits:

Less storage space needed, saving costs

Fresher produce

Less capital tied up in stock

Limitations:

Greater risk of running out

No bulk-buying discounts

# 6. What is Quality Control?

Finished goods are inspected, checks for defects rather than preventing them. It is costly, as it can lead to a high level of wastage.

# 7. What is Quality Assurance?

Quality is checked at every stage in the production process – with the aim to prevent defects. This is more time consuming, but defective products can be dismissed before being completed.

# 8. What is a warranty?

The guarantee by a producer that it will repair any faults in a product for a specific period of time.



# 1. What are the four ways to speed up a chemical reaction?

- Increase the temperature
- Increase the concentration
- Increase the surface area (crush it up!)
- Use a catalyst

# 2. What are the independent, dependent and control variables?

- Independent Variable: The variable that is changed in an investigation.
- Dependent Variable: The variable that is recorded in an investigation.
- Control Variables: The variables that are kept the same in an investigation.

# 3. Explain the effect of temperature on rate of reaction

- If you increase the temperature, there is more kinetic energy.
- This means there will be more successful collisions per second.

# 4. Explain the effect of concentration on rate of reaction

- Increasing concentration means more particles in the same volume.
- This means there will be more frequent collisions.

# 5. Explain the effect of surface area on rate of reaction

- Crushing up a tablet increases the surface area-to-volume ratio.
- This means there will be more frequent collisions.

# 6. Definition of Exothermic

- Temperature increases.
- Heat energy is given out to the surroundings.

## 7. Definition of Endothermic

- Temperature decreases.
- Heat energy is taken in from the surroundings.

# 8. What is a catalyst?

- Speeds up a chemical reaction.
- Doesn't get used up / remains chemically unchanged.



# 1. What do I need to do for each assessment objective?

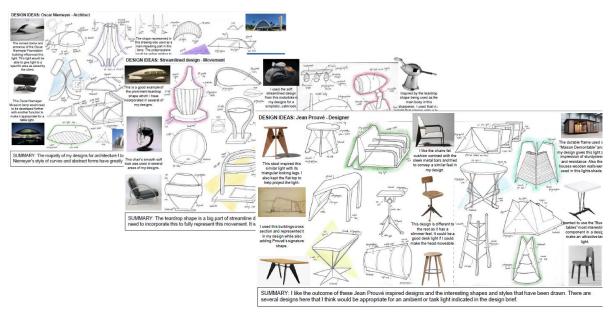
- AO1.A: Identify and investigate design possibilities. (10 marks)
- AO1.B: Produce a design brief and specification. (10 marks)
- AO2.C: Generate design ideas (20 marks)
- AO2.D: Develop design ideas (20 marks)
- AO2.E: Realising design ideas (20 marks)
- AO3.F: Analysing and evaluating (20 marks)

# 2. How do I get 10 marks in section A - design possibilities?

- Identify design possibilities.
- Investigate client needs and wants.
- Investigate factors including economic and social challenges.
- Use the work of others (past and/or present) to form ideas.
- Use a range of research techniques (primary/secondary) in order to draw accurate conclusions.
- Investigate throughout their project to help inform decisions.

# 3. How do I get 10 marks in section C - design ideas?

- Demonstrate flair and originality.
- 📀 Take risks with your design.
- Use a variety of techniques to communicate.
- Be imaginative in your approach by experimenting with different ideas and possibilities that avoid design fixation.
- The highest marks will be for generating ideas that are different to the work of the majority of your peers.





### 1. Who are the characters in the novel 'A Christmas Carol'?

Scrooge, Fred, Marley, Bob Cratchit, Tiny Tim, The Ghost of Christmas Past, The Ghost of Christmas Present, the Ghost of Christmas Yet to Come

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

Greed, Poverty, Class, Free Will, Social responsibility, The Supernatural, Redemption, Isolation, Transformation

### 3. When was the novel written?

1843

## 4. What was the poor Law?

This was the law that saw poor people being made to live and work in workhouses or sent to prison if they were unable to pay for their own housing or they had debts they couldn't pay.

# 5. Finish the quotation: 'If they would rather die, they had better do it,...'

\*...and decrease the surplus population' (Scrooge)

# 6. Finish the quotation: 'This boy is Ignorance...'

'... The girl is Want.' (Ghost of Christmas Present)

# 7. Finish the quotation: 'Scrooge was better than his word. He did it all, and infinitely more;...'

§ '... and to Tiny Tim, who did not die, he was a second father'

# 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.



- 1. Into English: la biologie, la chemie, le dessin, le français, l'EPS, l'informatique, l'histoire, la géographie, l'anglais, les maths, le théâtre, le commerce, la physique
  - Biology, chemistry, art, French, PE, ICT, history, geography, English, maths, performing arts, business, physics
- 2. Into English: les devoirs, une élève, l'école, le collège, le lycée, la fac, les cours, les profs, l'instituteur / institutrice, la matière, la récré
  - HW, a pupil, school, middle school, high school, lessons, teachers, primary school teacher, subject, break
- 3. Into English: difficile, facile, dur, ennuyeux, insuffisant, mieux / meilleur, marrant, parresseux, stressant, inutile, utile, intelligent, bête, bien équipé
  - Difficult, easy, hard, boring, poor, better/ best, funny, lazy, stressful, useless, useful, clever, stupid, well-equipped
- 4. Into English: il faut, on peut, on doit
  - 🤨 You have to, you can, you must
- 5. What kind of verb follows these expressions?
  - Infinitive (eg il faut faire ses devoirs ; on ne doit pas porter le maquillage)
- 6. Translate: il faut faire ses devoir; on ne doit pas porter le maquillage ; on ne peut que manger à la cantine à midi
  - You have to do your HW; you musn't wear makeup; you can only eat at the canteen at lunch time
- 7. What do these expressions of quantity mean? Trop de, assez de, beaucoup de, autant de, plus de, moins de
  - too much, enough, alot, as much as, more than, less than
- 8. Name the tense: je fais, j'ai fait, je faisais, j'avais fait, je vais faire, je ferais, je ferai
  - present, perfect (past), imperfect (past), pluperfect (past), near future, future conditional, future



### 1. How has the UK economy changed?

- Primary, secondary, tertiary and quaternary
- Pre-industrial, industrial, deindustrialisation and post industrialisation

### 2. Which industries make up the UK's post industrial sector?

- Information technology
- Service industries and finance
- Research

### 3. What is a science park?

- A group of scientific and technical knowledge-based businesses located on a single site.
- Most are associated with universities, enabling them to use research facilities and employ skilled graduates.

### 4. What is a business park?

- An area of land occupied by a cluster of businesses
- Business parks are usually located on the edges of towns

## 5. What are the environmental impacts of industry?

- Large scale extraction industries such as mining and quarrying can have an impact on the environment.
- Today there is a much greater concern about the need for industries to be more environmentally sustainable.

# 6. How is the UK's rural landscape changing?

- South Cambridgeshire is experiencing rapid population growth as people move out of Cambridge and London to enjoy a different pace of life in the countryside.
- Remote rural areas such as the Outer Hebrides are experiencing population decline.

# 7. How the UK's transport infrastructure is changing?

- Road improvements
- Railway improvements
- Developing the UK ports
- Airport developments

#### 8. What is the north-south divide?

- This refers to the real or imagined cultural and economic differences between:
- The south of England (the South East, Greater London, the South West and parts of eastern England).
- The north of England (Yorkshire, the Humber, the North East and North West) and the rest of the UK.



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

A skills is the ability to undertake a certain tasks, 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 (lack of motivation, low self-esteem, acceptance of current state, anxiety or stress)
- Time constraints (work and family commitments)
- Availability of resources (financial, equipment, amenities)
- Unachievable targets
- Lack of support from family and friends

# HISTORY CIVIL WAR AND RECONSTRUCTION: 1861-1877

### 1. What divided the North and South of the USA?

Slavery

### 2. What increased the tension over slavery?

Westward expansion

### 3. What type of people wanted slavery to end?

Abolitionists

### 4. What broke the Missouri Compromise of 1820?

Kansas-Nebraska Act, 1854 – it allowed settlers to vote on whether they were to become free or slave states

# 5. What triggered the South's secession?

The election of Abraham Lincoln in 1860

# 6. Why were African Americans not allowed to serve in the Union Army?

Lincoln was worried that some border states would join the Confederacy

## 7. When were African-Americans allowed to join the Union Army?

After the Emancipation Proclamation of 1863

### 8. Who won the US Civil War?

The North

### 9. What was the 13th Amendment?

It made slavery illegal across the USA

### 10. Who became President after Lincoln's assassination?

Andrew Johnson

## 11. Who disagreed with Johnson's approach to Reconstruction?

Radical Republicans

# 12. How did the Radical Republicans take over Reconstruction?

- They placed the South under military rule and made them prove their loyalty
- They passed the 14<sup>th</sup> Amendment guaranteed citizenship to anyone born in the USA
- They passed the 15th Amendment the right for any man to vote

# 13. Why had Reconstruction ended by 1877?

- Support for it had weakened
- President Hayes took the military out of the South

# 14. How did Reconstruction not improve the lives of Black Americans?

- The KKK was allowed to dominate the South
- The South made it difficult for African-Americans to vote

# HISTORY SETTLEMENT AND CONFLICT: 1861-1877

# 1. What encouraged settlers onto the Plains?

- US Government policy
- Railroads

### 2. What was the Homestead Act, 1862?

Each settler got 160 acres of free land if they farmed it for 5 years

### 3. What was the Pacific Railroad Act, 1862?

The Act approved the construction of the First Transcontinental Railroad – connecting the east and west of the USA

## 4. Why was life on the Plains difficult?

- There was little to no wood
- Lack of water
- **Extreme** weathers

### 5. How were the Plains settled successfully?

- People adapted by making sod houses
- Windpumps and better machinery
- New crops (Turkey Red Wheat) were well-suited to the Plains

### 6. What were the cattle drives?

Large herds of cattle were driven by cowboys up from Texas to connect with railroad that was being built through the Plains

### 7. What did the cattle trails lead to?

Cow towns

# 8. What the Plains Indians angered by?

Railroads, ranching and gold rushes

# 9. Why were many Plains Indians unhappy with the reservation policy?

- The land they were moved onto was unfamiliar.
- Property of the property of th
- Good land would still be taken by settlers, despite treaties with US Gov.

# 10. What was the first major Indian War?

Little Crow's War, 1862

# 11. What was the Sand Creek Massacre, 1864?

A massacre of mainly Cheyenne women and children

# 12. What was the result of Red Cloud's War, 1866 - 68?

Signing of the Fort Laramie Treaty which created a large reservation in the Black Hills of Dakota

### 13. When was the Great Sioux War?

1876 - 77

# 14. What was the Battle of Little Big Horn and was it a success?

- A great Native American victory against the US army
- However, it strengthened the resolve of the army to defeat the Indians



### 1. What forced Native Americans to accept reservations?

The slaughter of the buffalo

### 2. What did reservations destroy?

Native American culture

### 3. What was the Dawes Act, 1887?

- The Act broke reservations into allotments based on population and hoped to turn Indians into self-sufficient farmers
- Indian schools were set-up

# 4. What was the impact of the Dawes Act?

- Indians lost land
- Men found it difficult to adapt to farming
- Indian children had to dress like White Americans and weren't allowed to speak tribal languages

### 5. What ended Indian resistance?

Wounded Knee Massacre

### 6. What did African-American lose, 1877 - 1900?

Their civil rights

# 7. What was the impact of Plessy v. Ferguson, 1896?

Segregation was considered constitutional

# 8. What were lynchings?

🤨 Killing without trials, often by hanging

### 9. Who were the 'Exodusters'?

African-Americans who moved west to escape the south

# 10. Why had the USA become a superpower by 1900?

- America experience rapid industrial growth
- Huge businesses in steel and oil emerged

## 11. What led to the growth of cities?

- Industrialisation
- Mass migration internally and from Europe

# 12. What were the negative consequences of the rise of big business, cities and mass migration?

- Corruption
- Poverty
- Inequality



Year 11 Half Term 2

### 1. What is a database used for?

A database is a collection of data organised in a way that makes it easy for a computer program to search and store information. Similar to an electronic filing system

# 2. What is a primary key?

A primary key is a field in a database table that acts as a unique identifier for each record.

### 3. What is a form?

A form is a window or screen that contains numerous data entry fields. Each field holds a field label so any user knows what type of data to enter.

## 4. What is a query?

A query is a method used for requesting information from a database which matches set criteria.

## 5. What are reports?

Reports are a mechanism for presenting Information taken from a database.

### 6. What is the difference between a field and a record?

A field is a single piece of data e.g. employees name. A record is a complete set of fields e.g. all data stored on the employee.

# 7. What is mail merge?

Mail merge is a word processing feature that allows users to personalise letters with names and addresses from a database.

# 8. What two pieces of software are required to mail merge?

A word processor and database software (which could be a spreadsheet)



# 1. Key word definitions:

Bearing: An angle that describes a direction

**©** Congruent: Shapes that are exactly the same

Sketch: Does not need to be measured

**Elevation**: The view of a 3D shape or object from one side.

# 2. What three things should you remember about bearings?

1. Always measured from north

2. Always measured clockwise

3. Written using three digits (e.g. 050 not 50)

# 3. Name the four conditions for unique triangles

SSS, SAS, ASA, RHS

### 4. What is a locus?

A locus is a path of points. More than one locus are called loci.

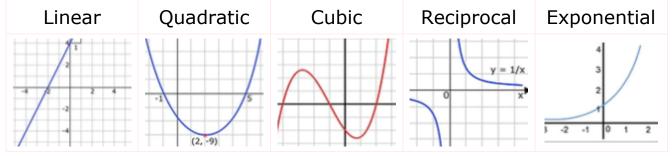
# 5. Key word definitions:

Face: The flat surface of a shape

Edge: The line where two faces meet

Vertex: The point where three or more edges meet

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



# 7. What are the two types of turning point?

- 1. Maximum (the top of a curve)
- 2. Minimum (the bottom of a curve)



### 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

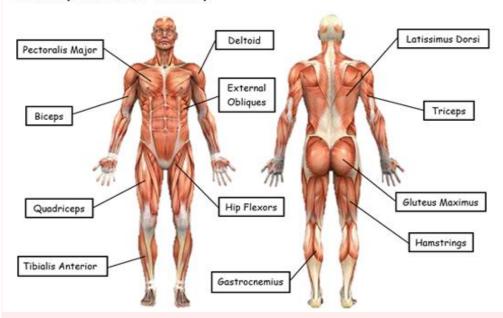
# 12. What does point of view mean?

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



# 1. Names and Location of the voluntary muscles

Voluntary muscles of the body:



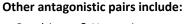
# 2. Antagonistic Muscle Pairs

#### Antagonistic muscle pairs:

When we bend the elbow (flexion) the biceps contract and the triceps relax Agonist = Biceps Antagonist = Triceps



When we straighten the elbow (extension) the triceps contract and the biceps relax Agonist = Triceps Antagonist = Biceps



- Quadriceps & Hamstrings
- Hip flexors & Gluteus Maximus
- Gastrocnemius & Tibialis Anterior

# 3. Classification of Muscles

### **Voluntary muscles**

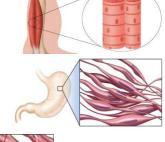
- Found on the skeleton e.g. biceps triceps & quadriceps
- Conscious control
- Attach to the skeleton to create movement

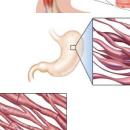
#### **Involuntary muscles**

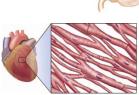
- Found in the stomach, intestines & blood vessels
- Unconscious control
- Contract slowly and rhythmically

#### Cardiac muscle

- Found in the wall of the heart
- Unconscious control
  - Do not tire









# 1. What do I need to be a good actor?

### Observation and Imitation:

o Observe people, characters, and situations in real life. Good actors often draw from real-life experiences and observations to make their performances more authentic.

### Practice:

 Rehearse regularly to improve your skills. Work on monologues, scenes, and improvisation to build your confidence and versatility.

### **Voice and Speech Training:**

 Develop good vocal control and diction. Clear communication is crucial for an actor, and voice training can help you project and articulate effectively.

## Physical Fitness:

 Maintain physical fitness to ensure you have the stamina and flexibility required for different roles. Many roles may involve physical activity, so staying in good shape is beneficial.

### Read and Study Scripts:

 Read a variety of scripts from different genres to understand different styles and tones of writing. Analyse characters and their motivations.

## 2. How should I play Mr Birling on stage?

Mr. Arthur Birling is a character from J.B. Priestley's play "An Inspector Calls." He is a prosperous factory owner and is characterised by his conservative views, capitalist beliefs, and a lack of social responsibility. When portraying Mr. Birling on stage, consider the following characteristics and behaviours:

### **Confidence and Authority:**

• Mr. Birling is a self-assured and authoritative character. Portray him with a confident demeanour, emphasizing his belief in his own importance and social standing.

#### **Posh Accent and Elocution:**

• Mr. Birling is a member of the upper class. Use a posh accent and polished elocution to convey his social status and background.

#### Traditional and Conservative Mannerisms:

Reflect Mr. Birling's conservative values through his mannerisms. He is resistant to change
and holds traditional beliefs, so his body language and gestures should reflect a certain
stiffness and formality.

#### **Authoritarian Posture:**

• Stand tall and use an authoritarian posture to emphasize his status as a successful businessman and the head of the family.

#### **Business-Like Attitude:**

• Mr. Birling is a businessman, so his demeanor should be business-like and pragmatic. Emphasize his focus on profit and success.

### Lack of Social Responsibility:

One of Mr. Birling's defining characteristics is his lack of social responsibility. He dismisses
the idea of a collective social responsibility, focusing instead on individual success. This
attitude should be evident in his speech and actions.

## 2. How should I play the Inspector on stage?

The Inspector in "An Inspector Calls" by J.B. Priestley is a mysterious and enigmatic character who plays a pivotal role in the play. The Inspector serves as a catalyst for the unraveling of the Birling family's secrets and exposes their moral shortcomings. When portraying the Inspector on stage, consider the following characteristics and behaviours:

### 1. Calm and Authoritative Demeanour:

• The Inspector maintains a calm and authoritative presence throughout the play. He is in control of the situation, and his demeanour should reflect this sense of authority.

### 2. Measured Speech:

• The Inspector's speech is measured and deliberate. He chooses his words carefully, and his tone remains consistent regardless of the reactions of the characters. This measured speech adds to the mysterious and commanding aura.

### 3. Non-Confrontational, Yet Persistent:

• While the Inspector is persistent in his questioning, he is not overtly confrontational. His calm demeanour and persistence gradually lead the characters to reveal their secrets.

### 4. Minimal Emotion:

• The Inspector exhibits minimal emotion throughout the play. He remains detached from the events and characters, focusing solely on revealing the truth.

### 5. Mysterious Aura:

• The Inspector has an air of mystery surrounding him. Portray a sense of ambiguity and intrigue in his interactions. The audience should be uncertain about his true identity and purpose.

### 6. **Neutral Clothing:**

• Consider the costume design for the Inspector. Neutral and unassuming clothing can enhance the sense of mystery surrounding his character.

### 7. Symbolic Gestures:

• The Inspector might use symbolic gestures or actions that add to the mystery. For example, he could handle props or set pieces in a symbolic manner, emphasizing the consequences of the characters' actions.

### 8. Firm, Unwavering Stance:

• Maintain a firm and unwavering stance to convey the Inspector's confidence and authority. This physical presence contributes to his ability to command attention.

### 9. Use of Silence:

• The Inspector sometimes uses silence effectively to let the weight of his questions and observations sink in. Consider the strategic use of pauses and silences in your performance.

### 10. Focus on Justice and Morality:

• Emphasize the Inspector's focus on justice and morality. He is not concerned with legal consequences but rather with exposing the characters' moral failings.

### 11. Consistency in Approach:

• The Inspector maintains a consistent approach with each character, gradually revealing the interconnectedness of their actions. Ensure consistency in his interactions to highlight his investigative nature.

#### 12. Awareness of the Fourth Wall:

• The Inspector may have moments of breaking the fourth wall, addressing the audience directly or creating a sense of shared knowledge. Be aware of these moments and use them to engage the audience in the unfolding drama.



### 1. How does the structure of the atom allow current to flow?

Particle	Relative Mass	Relative Charge	
Proton	1	+1	
Neutron	1	0	
Electron	1/1860	-1	

An atom has no overall charge because the number of + protons and -electrons is the same (they cancel out).

In metals some electrons are 'free' to move.

### 2. How do we draw circuits?

<b>—</b>	—   <b>-</b> -	_/_		<b>-</b> ⊗-		
Cell	Battery	Open Switch	Closed Switch	Filament Bulb	311 (4)	
Fixed Resistor	Variable Resistor		——————————————————————————————————————	Fuse		
	<b>-∞</b> ″	<u>~~</u>	-\$			
Diode	LED	LDR	Thermistor			

In a **series circuit** the current only has one route to flow- passing through all components.

In a parallel circuit there are

junctions and the current will flow through one route or the other.

#### 3. What is current?

- Current is the rate of flow of charge it is measured with an ammeterwhich must be placed in series.
- Unit of current is amp (A), unit of electric charge is coulomb (C).

## 4. What is potential difference?

- Potential difference (voltage) is the energy transferred per unit of charge that passes, measured with a voltmeter- placed in parallel.
- Unit of voltage is the volt (V), also a joule per coulomb (J/C).

### 5. What is electrical resistance?

- Resistance is how difficult it is for current to flow the unit is ohms  $(\Omega)$ .
- If resistance increases then current reduces (and vice versa).

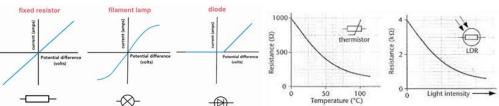
# 6. What equations can we use to help understand circuits?

- Charge (C) = current (A) x time (s)
- Energy (J) = charge (C) x voltage (V)
- Voltage (V) current (A) x resistance (Ω)



# 7. How can components affect the resistance of a circuit?

- A variable resistor changes the resistance of a circuit.
- When the voltage across different components is changed it can change the resistance.



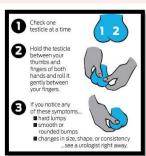
# 8. How can we investigate resistance?

- To investigate resistance you need to record the current and voltage when the potential difference of the circuit is changed.
- Set up the circuit as shown, record voltage and current, change the variable resistor and repeat. Use the equation resistance = voltage ÷ current.



# 1. What are the signs/symptoms that a male may have testicular cancer

- A sudden collection of fluid in the scrotum
- A small pea sized lump or enlargement in either testicle
- Back pain
- Unusual or abnormal testicle development
- A dull ache in the abdomen or groin
- A feeling of heaviness in the scrotum



# 2. What are the signs/symptoms that a female may have breast cancer

- Change in the size and shape of a breast
- Dimpling of the skin of the breast
- Blood leaking from the nipple
- A painless lump
- A rash on or around the nipple
- A nipple turning inwards (inverted)
- Bumps in and around the arm pit
- Swelling in the armpit.



# 3. Some of the items that need to be purchased when becoming a parent include...

Nappies: £12 (80 nappies)

Baby clothes: £10 (1 outfit)

Bottles: £14 (4 bottles)

Milk: £10 (1 formula box)

**Toys:** £5 - £50 per toy

**Cot:** £150

**Childcare:** £50-75 per day

**Pram:** £350

To raise a child it is estimated to cost approximately £938 per month

# 4. What does an unhealthy relationship look like?

- Coercion and threats
- Using privilege (treating you like a servant)
- Using children (threatening to take the children away)
- Minimising, denying and blaming
- Isolation
- Emotional abuse
- Intimidation



# 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

- Pencils
- Collage
- Watercolours
- Paints
- Chalk Pastels
- Charcoal
- Fineliners
- Pen
- Artist Markers
- Photoshop (CAD)
- Photographs

# Insights / written annotation

- 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 you 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

