SEPARATE SCIENCE

Y10 Mock Exams

Core Subject Information

Mock Exam Dates

24th June – 5th July

Revision Strategies

- Make flashcards of key information and test yourself
- Do practice exam questions
- Use online resources

Sparx Maths

Educake Science

Equipment

All exams: Pen, pencil, ruler & highlighters

Science: Pen, pencil, ruler, highlighters & calculator

Maths: Pen, pencil, ruler, highlighters, calculator, protractor & compass

Remember...

- *You can email your teachers on outlook to reset passwords.*
- *Every subject has resources on sharepoint you can access.*

Southport Learning Trust

English Language

The exam will be a full Paper 1
It is 1 hour 45 minutes. It is made up of 5 questions and 80 marks.

Question1 - (4 marks)

"List 4 things..."

- ***Read*** *the section of the text you're directed to and pull out key bits of information.*
- *You can use quotations.*

Question2 - (8 marks)

"How does the writer use language to..."

- *Identity 2-3 different* ***quotations***
- *Use* ***terminology*** *(metaphor / simile / personification / verb)*
- *Explain in detail the* ***meaning these words/phrases create for the reader***

Question3 - (8 marks)

"How has the writer structured the text to sustain interest?"

- *This question requires you to use the* ***full extract***
- *What are the main focuses for the* ***beginning***, ***middle*** *and* ***end****?*
- *Explain the* ***significance*** *of these sections*
- *Do* ***not*** *anaylse language (like in Q2) for this question.*

Question4 - (20 marks)

Evaluation and opinion

- *Form an* ***opinion*** *based on the statement*
- ***Argue*** *your points – aim for several paragraphs.*
- *Support your ideas with* ***quotations*** • *Include subject* ***terminology***
- *Explain in detail about the meaning these words/phrases create for the reader*

Question5 - (40 marks)

Creative writing based on image

- *Plan a description based on the image / plan a narrative.*
- *Be creative – you have some freedom and flexibility*
- *5 senses*
- *Range of sentence starters / styles*
- *Ambitious vocabulary / spellings*
- *Range of punctuation: ! ? . Aa ' " "; ()*

English Literature

The exam will be 2 hours 15 minutes
It will assess Macbeth, Power and Conflict Poetry & Unseen Poetry

MACBETH (45min)

30 marks (+4 for SPAG)

Follow the QR codes to see analysis from Mr Bruff on Youtube

POWER AND CONFLICT POETRY (45min)

One poem from the collection of 15 will be printed.

You will need to compare it to another poem from the 15.

All 15 poems in 13 minutes!

How to compare poems

1. **Ozymandias - Percy Bysshe Shelley**
2. **London - William Blake**
3. **Extract from the Prelude - William Wordsworth**
4. **My Last Duchess - Robert Browning**
5. **The Charge of the Light Brigade - Alfred Lord Tennyson**
6. **Exposure - Wilfred Owen**
7. **Storm on the Island - Seamus Heaney**
8. **Bayonet Charge - Ted Hughes**
9. **Remains - Simon Armitage**
10. **Poppies - Jane Weir**
11. **War Photographer - Carol Ann Duffy**
12. **Tissue - Imtiaz Dharker**
13. **The Émigrée - Carol Rumens**
14. **Kamikaze - Beatrice Garland**
15. **Checking Out me History - John Agard**

UNSEEN POETRY (45min)

24 marks – An essay question based on an unseen poem

8 marks – Compare the methods used in both poems, such as structure, themes, language etc.

Mathematics (H)

Sparx Maths

The exam will be **3** exam papers
They are 90 minutes each
Paper 1 = non-calculator Paper 2&3 = calculator

- Log on to Sparx Maths.
- Select 'independent learning' at the side of the homepage.
- Select '**GCSE**' and choose difficulty level.

- Type the **SPARX CODE** into the topic box.

Topic	SPARX CODE
Finding prime numbers	U236
Prime factor decomposition	U739
Solving simultaneous equations using elimination	U760
Estimating roots and powers	U299
Using the exact values of trigonometric ratios	U319
Writing and simplifying ratios	U687
Expanding single brackets	U179
Interpreting equations of straight line graphs	U669
Solving shape problems involving coordinates	U889
Translation	U196
Finding averages from grouped data	U877
Expanding double brackets	U768
Using the product rule for counting	U369
Solving simultaneous equations using substitution	U757
Completing the square	U397
Converting recurring decimals to fractions	U689
Equations of parallel and perpendicular lines	U898
Using a written method to divide with decimals	U868

Topic	SPARX CODE
Venn diagrams with set notation	U748
Substituting into functions	U637
Finding original values in percentage calculations	U286
Converting between fractions, decimals and percentages	U888
Angles in polygons	U427
Sample space diagrams	U104
Expected results from repeated experiments	U166
Compound interest calculations	U332
Sharing amounts in a given ratio	U577
Understanding similarity	U551
Interpreting frequency tables with grouped data	U312
Interpreting pie charts	U172
Finding bounds for calculations	U587
Changing the subjects of formulae	U556
Position-to-term rules for quadratic sequences	U206
Finding the surface area of cubes and cuboids	U929
Plotting graphs of quadratic functions	U989
Using a written method to multiply decimals	U293
Dividing fractions	U544

Separate Science - Biology

Educake

The exam will be a **full Paper 1**
It is 1hr 45 minutes

1. Cell Biology

- CELL STRUCTURE:
  - Parts of a cell
  - Magnification & Microscopes
  - Specialised cells
  - Culturing Microorganisms
- CELL DIVISON:
  - Cell cycle
  - Mitosis
  - Stem cells
- CELL TRANSPORT:
  - Diffusion
  - Osmosis
  - Active Transport

Videos #2-12

2. Organisation

- DIGESTION
  - Digestive sys\tem
  - Enzymes
- PLANT TISSUES
  - Stomata, xylem & phloem
- CARDIOVASCULAR SYSTEM & DISEASE
  - Heart & Blood
  - Blood vessels
  - Heart disease
  - Cancer

Videos #16-26

3. Infection & Response

- INFECTION
- Pathogens
- Diseases
- Transmission
- Plant disease
- DEFENCE & DRUGS
  - Body's defenses
  - Immune system
  - Vaccination
  - Testing drugs
  - Monoclonal antibodies

Videos #34-46

4. Bioenergetics

- RESPIRATION
  - Aerobic & anaerobic
  - Fermentation
  - Metabolism
- PHOTOSYNTHESIS
  - Equation
  - Limiting factors
  - Measuring rate

Videos #48-51

Separate Science - Chemistry

Educake

The exam will be a **full Paper 1**
It is 1hr 45 minutes

1. Atomic Structure & Periodic Table

- ATOMIC STRUCTURE
  - Elements, mixtures & compounds
  - Separation techniques
  - Atomic structure & electronic configuration
- PERIODIC TABLE
  - Development of periodic table
  - Transition metals, Groups 0, 1 & 7
  - Transition Metals

Videos #1-12

2. Bonding, Structure & Properties of Matter

- IONIC, COVALENT & METALLIC BONDING
- STATES OF MATTER
  - Solids, liquids, gases and changes of state
  - Allotropes of carbon and nanoparticles

Videos #13-23

3. Quantitative Chemistry

- Conservation of mass & relative formula mass
- Molar calculations and percentage yield.
- Atom economy
- Concentrations & Limiting reactants

Videos #24 &26
Higher - #25. 27-33

4. Chemical Changes

ACID REACTIONS
- Neutralisation
- Titrations
- Making salts

ELECTROLYSIS
- Separation
- Extracting metals

- REACTIVITY OF METALS
  - Metal + water
  - Metal + acid
  - Oxidation & reduction
  - Displacement
  - Reactivity series
  - Extracting metals

Videos #34-42

5. Energy Changes

- EXOTHERMIC & ENDOTHERMIC REACTIONS
  - Reaction profiles and activation energy
  - Chemical and fuel cells

Video #43
Higher - #44-45

Separate Science - Physics

Educake

The exam will be a **full Paper 1**
It is 1hr 45 minutes

1. Energy

- ENERGY CHANGES
- Energy stores & transfers
- Power, work and efficiency
- Conductors
- Specific Heat Capacity

- ENERGY RESOURCES
  - Energy from sun
  - Producing electricity
  - Renewables
  - Non-renewables

Videos #1-13

2. Electricity

- CIRCUITS
  - Components, current and charge
  - IV Characteristics of components
  - Resistance of a wire

- MAINS ELECTRICITY
- Plugs, fuses, mains electricity
- The National Grid & Transformers

- STATIC ELECTRICITY

Videos #14-25

3. Particle Model of Matter

STATES OF MATTER
- Solids, liquids, gases
- Density
- Specific latent heat
- Pressure
- Pressure in gases

Videos #26-30

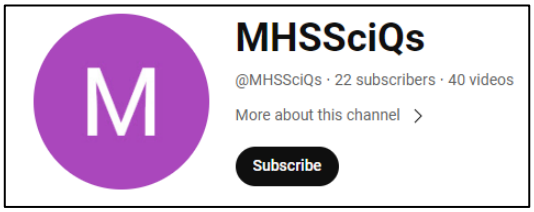
4. Atomic Structure

HISTORY OF ATOMIC MODEL
- JJ Thompson, Rutherford, Bohr
- Isotopes and Ions

FISSION & FUSION

RADIOACTIVITY
- Alpha, Beta, Gamma
- Half-life
- Irradiation
- Contamination
- Hazards to health
- Background radiation

Videos #31-37



← Exam technique and hints!