



ROYAL SCHOOL

ARMAGH

KEY STAGE 3

Year 10

JANUARY 2025

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Answering Questions:

- If a question is worth 5 marks you should aim to give 3 points.
- If a question is worth 10 marks, and asks for you to give both sides of an argument, you should aim to include 3 points on each side. You should also give a paragraph at the end showing your own view

Top Tips for Revision

- Make sure you know which topics you need to revise - make a revision list and a timetable of when you will revise each subject.
- Make your revision active. Don't just read notes. You could make flash cards, mind maps or use post it notes
- You could stick your mindmaps up on the wall and then walk around your room reciting the key details out loud.
- You could record yourself reading your revision notes and listen back to it regularly.
- Watching videos online can really help to bring your notes alive!
- Use colour and stick to the same colour for different topics
- Test yourself by completing practice questions or asking a friend to test you! This will identify areas of strength and weakness
- Build in rewards for your revision eg: your favourite snack or using social media
- Revise in short bursts: 20 - 25 minutes, then have a 5 minute break.

1. BIOLOGY

Cells

- Definition of a cell
- Hierarchy of life
- Parts of the light microscope
- Total magnification equation
- Label and describe the function of structures in plant and animal cells
- Similarities and differences between plant and animal cells
- Specialised cells
- Equations for photosynthesis and respiration
- Diffusion
- Osmosis

Photosynthesis

- Respiration and photosynthesis equations
- How the plant uses glucose
- Labels of structures in a leaf
- Adaptations for light absorption and gas exchange
- Floating discs experiment
- Stomata (incl. experiment)
- Testing a leaf for starch
- Rate of photosynthesis experiment

Food and Digestion

- Seven food groups
- Balanced diet
- Food pyramid
- Nutrients in food and their function
- Food tests: methods and colour changes

2. CHEMISTRY

Unit 1 - Chemical Reactions

Chemical and Physical Changes

- Know the differences between **physical changes** and **chemical changes**.
- List **examples of physical changes** e.g. changes of state.
- List **examples of chemical changes** e.g. cooking
- Explain how you know a chemical reaction has occurred.

Exothermic and Endothermic Reactions

- **An Exothermic reaction is one in which heat is given out, the surroundings warm up.**
- **An Endothermic reaction is one in which heat is taken in, the surroundings cool down.**
- Describe an experiment to investigate exothermic/endothermic reactions.
- Draw any apparatus needed to conduct an exo/endothermic reaction.

Reduction/Oxidation and Redox

- **Oxidation is the addition of oxygen to an element or a compound.**
- **Reduction is the removal of oxygen from a compound.**
- List some examples of oxidation and reduction reactions and describe any observations e.g. burning Mg in oxygen and reduction of CuO.
- Learn any apparatus diagrams.
- Explain what a REDOX reaction is
- Explain the terms oxidising and reducing agent.

*** Thermal decomposition will NOT be on the exam ***

Unit 2 – Acids and Alkalis

Acids and Bases

- Explain what an acid, alkali and a base is
- List some examples of acids and alkalis
- Discuss **safety aspects** of using acids and alkalis e.g. **hazard symbols**
- Explain the difference between 'concentrated' and 'weak'

Indicators

- Recall that acids and alkalis can be identified using indicators
- Know the colour changes of red litmus, blue litmus, methyl orange, phenolphthalein and universal indicator.
- Explain how universal indicator can be used to determine the strength of an acid or alkali using the pH scale.
- Know the pH values of strong acids, weak acids, neutral substances, strong alkalis and weak alkalis.
- List examples of strong and weak acids/alkalis (including household substances).
- Discuss the limitations of using litmus paper over universal indicator.

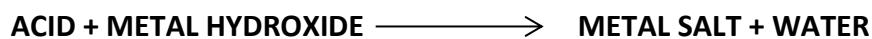
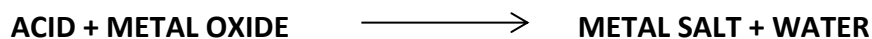
Neutralisation

- Explain what happens during a neutralisation reaction.
- Be able to write a chemical equation for neutralisation (symbol equation)
- Describe practically how to use an indicator to make a neutral solution/salt.
- List everyday example of neutralisation reactions.

Reactions of Acids

- Recall how acids react with **metal hydroxides and metal oxides**.
- Write out word equations for the above reactions.
- Be able to draw and label any apparatus associated with each experiment.

Remember:



Writing word equations

- Explain what a salt is and how they are formed
- Know what salts are formed from different acids
- Write word equations for reactions of acids.

3. ENGLISH

Revise the “Noughts and Crosses” novel, using the revision booklet which has been scaffolded by character and theme, make quotation banks for Sephy, Callum and the themes named in the revision booklet. Practise using some of the questions on the 'potential questions' page, using the PETE/PETAL strategy.

Pupils should make sure they know key extracts or incidents from the novel and key quotes.

4. FRENCH

- Countries pg 1
- Nationalities pg 1
- Prepositions with towns, countries and nationalities pg 1
- Key verbs pg 4
- Methods of transport with aller / voyager pg 6
- Prepositions with transport (en/à) pg 6
- The irregular verb PRENDRE (to take)..le/la/l' transport pg 7
- Advantages and disadvantages of methods of transport pg 9
- Train station (recognise meaning for Listening and Reading papers) pg 14 + 15
- Future tense using aller + infinitive pg 18
- Talking about future holiday plans (when, where, how, accommodation, activities) pg 19
- Booking a hotel room (recognise meaning for Listening and Reading papers) pg 23
- Past tense pg 28 + 29
- Weather (present - revision from Yr 9) and past pg 41 + 42

5. GEOGRAPHY

Unit of Study: Ecosystems

Required Knowledge and Understanding

Keywords

What are ecosystems?

- Definition of an ecosystem
- Non-living (abiotic) environments
- Living (biotic) environments
- Levels of ecosystems (micro, meso, global)

Energy flows and nutrient cycling

- Energy flows, photosynthesis, food chains/web
- Trophic levels
- Recycling of nutrients - nutrient cycling

Case study: deciduous forest ecosystem in Britain: Gosford

World biomes

- Distribution of main global biomes

Tropical rainforest

- Location of TRFs
- Climate
 - **Climate graph**
- Flora and fauna (vegetation layers)
- Nutrient Cycling
- Adaptations

Hot and cold deserts

- Location of hot and cold deserts
- Climate
 - **Climate graphs**
- Flora and fauna
- Adaptations
- Nutrient Cycling

How do humans affect ecosystems?

- Coral reefs
 - ✓ What are coral reefs?
 - ✓ Location
 - ✓ Coral reef facts
 - ✓ Benefits of coral reefs
 - ✓ Threats to coral reefs
 - ✓ Management of coral reefs

6. HISTORY

Ireland 1800-1912

- Unionism and Ulster p30-33
- Unionism p34-35
- Ulster resistance to Home Rule and Nationalist response p35-p44

Europe and War 1914

- Europe in 1914 p4-7
- Germany, its rise to power and Kaiser Wilhelm p8-14
- Alliance systems p15-18
- Nationalism p19-20
- Assassination of Franz Ferdinand p21-26
- Summer 1914 p27-32

7. HOME ECONOMICS

- Bone Health:
 - Calcium – functions, daily requirements, and sources
 - Osteoporosis – definition, peak bone mass, causes of osteoporosis, symptoms, dietary and lifestyle advice to reduce the risk of osteoporosis.
 - Vitamin D – functions, sources, deficiencies of this vitamin in the diet.
- Blood Health:
 - Iron – functions and sources
 - Anaemia – definition, symptoms, groups of people who are at risk of developing anaemia.
 - Vitamin C – functions, sources, daily requirements, and deficiency of vitamin C in the diet.
- Type 2 diabetes
 - Definition
 - Who is at risk of developing Type 2 diabetes
 - Risk factors for developing type 2 diabetes
 - Dietary and lifestyle advice to prevent type 2 diabetes.
 - Symptoms

8. ICT

Revise all notes from the following handouts. Your test will be based on the handouts below.

- Data and Information Handout
- ICT, AI and Employment Handout
- AI Ethics Handout
- Network Technologies Handout - pages 2-7 and pages 15-18
- Class activity - HTML: Bird watch website
1.0: <https://projects.raspberrypi.org/en/projects/cd-sebento-htmlcss-1/0>

9. MATHEMATICS

What will the exam consist of?

The exam will be based on topics from **Chapters 1, 2, 3, 4, 10, 11**

A full revision list is below. The exam will consist of one written paper lasting 1 hour 30 mins – you will be allowed to use a calculator throughout.

What should I bring to the Exam?

Calculator, Pen, Pencil, Ruler, Eraser

Algebra

- Solve linear equations involving one step, two steps and brackets
- Simplify algebraic expressions – including Algebraic fraction
- Substitute into formula
- Factorise an algebraic expression
- Set-up an algebraic expression
- Change the subject of the formula
- Solve using the method of Trial and Improvement

Number

- Write a number to the appropriate degree of accuracy (sf and dp)
- Use rounding to 1 significant figure to estimate a calculation
- Convert between fractions/decimals and percentages
- Find percentage increase and decrease
- Find the original amount of an item in a sale
- Change a number to and from standard form
- Write a number as a product of primes, HCF and LCM
- Use the rule of indices

Shape, Space and Measure

- Find the area and circumference of a circle
- Find the radius and diameter of a circle given the area or circumference
- Use compound measures (DST, DMV and PFA)
- Convert between units (metric to metric)

Revision Material

Your teacher will distribute revision questions in preparation for the examination. My Assessment 1, My Review and My Practice sections of the textbook are also useful for revision. Mathematics support is on Tuesday afterschool in M2.

10.MUSIC

Remember that this revision list is not exhaustive; instead, use it as a guideline for your more detailed revision. The headings should point you back to your music booklet where you will have covered topics in greater detail.

Elements of Music

You should be able to understand questions including the following terms covered in Years 8 and 9:

- Tempo;
- Dynamics;
- Texture;
- Pitch;
- Articulation; and
- Tonality.

Key vocabulary on page 3 is invaluable information which will be assessed itself as well as being incorporated into many other questions.

Jazz

The key features of and influences on blues, jazz and ragtime should be known.

- You should know the chords of the 12 bar blues as outlined on page 11 – including knowing what pitches create the different chords and how they are played on both keyboard (pg 11) and ukulele (pg 14).
- You should be able to recognise instruments commonly used in the styles covered, and how they are typically used in each style.
- You must be able to read and notate in both bass (pg 16/17) and treble clef.
- ‘In the Mood’ will feature in the listening section of the paper as a set work (pg. 21-23).



11. PHYSICS

Electricity

- Electrostatics
- Moving charges
- Conductors, insulators and resistors
- Series and parallel circuits
- Use of ammeter to measure current
- $V/I = R$

Forces

- Balanced and unbalanced forces
- Resultant force and acceleration
- Newton's Laws
- $F = ma$

Magnetism and Electromagnetism

- Permanent magnets
- Magnetic fields
- Electromagnetism
- Uses of magnets and electromagnetism

12. RELIGIOUS STUDIES

Topics to Revise

An Introduction to Islam

- Allah
- The Origins of Islam
- The Life of Muhammad
- The Sunni/Shi'ah Split
- The Qur'an
- The Mosque
- The Five Pillars

13. SPANISH

- Time and mealtimes
- ALL food and drink and what you and others have to eat and drink at different mealtimes
- Adverbs of frequency - *Siempre, a veces, nunca, etc...*
- Opinions on food. Remember:

Singular – *Me gusta el chocolate*

Plural – *Me gustan las manzanas*

- Adjectives to describe food
- Adjective agreement – *el pollo es sano*

la fruta es sana

los churros no son sanos

las verduras son sanas

- Shopping conversations – asking for fruit and veg, different quantities and amounts, and understanding how much it all costs.
- Numbers up to 500 (You only need to recognise numbers)
- Present Tense – Regular verbs
- Be able to ask and answer the following questions. When answering the questions, provide extra details, opinions and reasons for them when appropriate.
 1. ¿A qué hora desayunas / comes / cenas?
 2. ¿Qué tomas para el desayuno / la comida / la cena?
 3. ¿Te gusta _____? / ¿Te gustan _____?
- Body parts
- Saying what hurts
- How long for / since when (*desde hace / desde*)