



Year 10 Summer Revision Guide

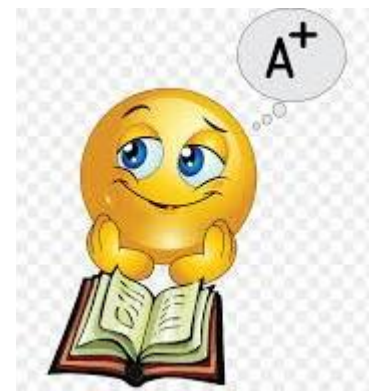
Biology

1. Cells & DNA Booklet

- Types of Cells
- Structures within each cell type (includes mitochondria and ribosomes)
- Definitions of each structure, Similarities & Differences,
- Structure of DNA,
- The difference between chromosomes and genes,
- How DNA codes for proteins,
- The scientists who contributed to the structure of DNA, their main discovery and approach taken,
- Extracting DNA from a banana,
- The differences between Mitosis and Meiosis,
- Cloning (which includes Dolly the Sheep),

2. Genetics:

- Punnett Squares
- Terminology.



3. Microbiology

- Types of Microorganisms
- Converting between units - m, mm, μ m, nm
- IAM Equation
- Aseptic Technique
- How Disease Spread
- Different types of disease - the type of microorganism which causes the disease, Symptoms, Spread & prevention of each.

4. Digestion and Enzymes

- Levels of organisation.
- Label organs on a body diagram and describe the function of each.
- Describe the main function of different organ systems and name the main organs each contains.
- Label the parts of the digestive system on a body model.
- Describe peristalsis.
- Name the enzymes found in each part of the digestive system, the type of food they break down and the products formed.
- Describe and explain adaptations of different parts of the digestive system, including:
 - The production of acid in the stomach.
 - The production of bile in the gall bladder.
- Describe and explain how villi in the small intestine are adapted for absorption of digested food.
- Describe the function of the large intestine.

Chemistry

Unit 1 – Atoms & the Periodic Table

- Standard form and units
- The definitions of an atom, a molecule, an element and a compound.
- The structure of the atom - electrons, neutrons and protons.
- The importance of the Periodic Table to Chemistry and a little of the history behind its development.
- Trends on the Periodic Table, such as, the reactivity of Group I & II elements.
- To use the Periodic Table to calculate the number of electrons, protons and neutrons in an atom.
- Electronic Structure.
- Valencies and naming compounds.

Unit 2 – Acids, Bases & Salts

- Definitions: acid, base, neutral, indicator
- Formulae of acids and alkalis
- pH scale – colour order and examples
- The disappearing ink experiment
- Neutralisation
- Working out salt names and word equations
- General method for Salt preparation
- Gas tests for hydrogen and carbon dioxide
- Balancing equations
- Relevance of acids and alkalis to everyday life
- The Contact Process.

Unit 3 – Chemical Energetics

- What is an exothermic reaction?
- What is an endothermic reaction?
- Why are reactions exothermic or endothermic in terms of either chemical bonds or kinetic energy
- How hand-warmers work
- Research the principles behind how a fridge works
- How to calculate the energy content of foods
- How fireworks work.

ENGLISH

These topics should be included in your revision programme. Refer to notes, worksheets and textbook and 'The Student Guide to Literacy'.

Punctuation:-

- o capital letters,
- o comma,
- o question and exclamation marks,
- o inverted commas and correct punctuation of speech,
- o sentences (simple, compound and complex),
- o paragraphs,
- o apostrophe,
- o colon and semi colon.

Grammar:-

- o nouns- common, proper, collective and abstract.
- o verbs and tenses,
- o adjectives,
- o adverbs,
- o pronouns,
- o conjunctions.



Poetry:-

- o simile, metaphor, personification, repetition,
- o alliteration, assonance, onomatopoeia, stanza, rhyme, rhythm,
- o personification, anecdote, hyperbole.

Writing for Purpose and Audience:-

- o correct layout of formal and informal letters, a magazine report, and a speech,
- o revise over persuasive openings and endings,
- o revise over persuasive language techniques.

Shakespeare Text:-

- o plot,
- o characters and character interactions,
- o central themes and key scenes,
- o relevant historical context,
- o language effects e.g. use of imagery, humour, creation of dramatic tension,
- o writing to analyse – use of PEE to explain and analyse writing.

Drama:-

- o understand key terms- plot, cast, facial expressions, movement, interactions, gesture, voice, tone.

GERMAN

For your German exam, you will be tested in the skills of **Listening, Speaking, Reading** and **Writing**. The Listening and Speaking Examinations will be carried out in class prior to the examination week. The Reading and Writing Exams will be carried out during the examination week.

For the Speaking Examination, you will need to thoroughly learn the answers to questions from Units 5, 6 and 9 (questions 5-22 on pages 12-15 of your yellow booklet).

For all aspects of the exam, you will need to know all vocabulary and grammar from pages 21-45 (Units 5,6, 9 and part of Unit 7) in your yellow vocabulary, grammar and oral notes booklet. You will need to be able to translate vocabulary from German into English and from English into German.

You should use the checklists in your booklet at the end of each unit to ensure you have revised all of the topics for the examination

GEOGRAPHY

ECOSYSTEMS

- Definition of an ecosystem
- Living and non-living components
- Producers, Consumers, Decomposers
- Herbivores, Carnivores, Omnivores
- Food Chains
- Tropical Rain forests – Climate, Vegetation, Distribution (location), Importance of rainforest, Animal/Plant adaptations, People, Destruction

OS MAPWORK SKILLS

- Direction
- Scale
- Measuring distances
- Symbols
- Grid references – 4 and 6
- Relief – 3 methods



VOLCANOES

- Structure of the Earth
- Parts of a volcano
- Types of volcano – active, dormant and extinct
- Impacts of volcanoes – positive and negative

HISTORY

- Changing role of women: suffragettes and suffragists, key figures.
- Role women played in WW1
- Titanic
- WW1 – Origins, countries involved, recruitment, Trench life and Trench Warfare.
- Treaty of Versailles
- Events that led to WW2
- Life on the Home Front during WW2

Home Economics

- **Budgeting** – income, expenditure, basic percentage budget (be able to make a budget for a set scenario)
- **Consumerism** – shopping, methods of payment e.g cash or credit, legislation to protect the consumer
- **Labelling** – statutory information on a food label, the washing code, safety labels
- **Advertising** – methods, who regulates it, techniques
- **Vegetarianism** – types of vegetarian; reasons for becoming vegetarian; Meal planning for vegetarians including time plans and reasons for choice. Remember nutritional knowledge from Year 8 and 9 is relevant here e.g 8 Tips and Eatwell guide

Mathematics

Number: SF/DP/BIDMAS/ Trial and Improvement

- Statistics booklet
- Algebra: Equations and inequalities
- Number: HCF/ LCM
- Upper and Lower bounds
- Fractions, Decimals, %
- Compound Interest including
- Financial Capability
- Revision SSM: Quads, Circles
- Angles and Polygons
- Area and Volume
- Pythagoras Theorem
- Co ordinate geometry
- Including mid point and length
- Graphical simultaneous equations
- Sequences
- Angles and Bearings
- Fractions and decimals, Chp 12
- Expanding Brackets (FOIL)
- Simultaneous Equations
- Probability
- Trigonometry

Religious Studies

- Islam (whole booklet!)
- Biblical Women and contemporary Issues (Story of Sarah, topic of surrogacy, the medical advances (Genetic Engineering, Stem Cell research, Designer Babies, Cosmetic Surgery, Cloning).
- Human Trafficking (stats, conditions of work, why Christians believe it is wrong, organisations that seek to help those who are victims of trafficking).

Spanish

This is a guideline as to what you need to revise for the Reading, Writing, Listening and Oral exams in Spanish. All material in your Year 10 Booklets will be needed but you may pay special attention to the following.

1. Talk about where you live, say where it is, what rooms and furniture is in your house and give a general opinion of your house.
2. Grammar in Unit 5 will include- giving distance, using de to show someone owns something.
- 3 Use of prepositions to say where things are.
4. Revision of the verbs Estar and Ser.
5. Talk about your hobbies, giving opinions and saying when you do them.
6. Telling the time.
7. Inviting someone to go places with you and arranging where to meet
8. Giving reasons why you cannot go somewhere.
9. Grammar in Unit 6 will include – Use of the verbs gustar and encantar.
10. Using – Ir a + the infinitive to express the future.
11. Irregular Verbs- Hacer/ salir and Stem changing verbs u>ue
12. Vocabulary used to order food in a restaurant and give opinions.
13. The verb Tener used to describe how you feel.
14. Regular er verbs and e> ie stem changing verbs.
15. Vocabulary used to talk about Daily Routine.
16. Reflexive Verbs/ Adverbs/ Comparisons



Technology & Design

Solidworks

- Aesthetics
- Ergonomics
- Solidworks tools including;
 - ✓ Sketch
 - ✓ Smart Dimension
 - ✓ Extruded boss/base
 - ✓ Extruded Cut
 - ✓ Trim
 - ✓ Zoom to fit
 - ✓ View orientation
 - ✓ Edit appearance
- Assembly drawing
- Saving drawings as a JPEG

Drawing in Perspective

- What is a perspective drawing?
- Why images are drawn in perspective
- Identify one-point perspective images
- Draw one perspective images
- Horizon, Vanishing point & Perspective Lines
- Draw two perspective images

Ballista

- Potential & Kinetic
- Parts of a ballista
- Trajectory
- Design Brief & Specification
- Types of wood screws
- Pilot hole
- Countersinking
- Wood joints & gusset plates
- Using nails
- Using screws
- Annotation
- Tools & machines;
 - ✓ Hand tools
 - ✓ Scroll saw
 - ✓ Linisher
 - ✓ Clamping
 - ✓ Removing wood
 - ✓ Drilling
 - ✓ Vacuum forming