Y10

Preparation for SKI week

Contents

General Subject support

KS3 - England - BBC Bitesize	An excellent resource for most subjects
Seneca learning	Provides resources and quizzes and has free parent and student logins

English

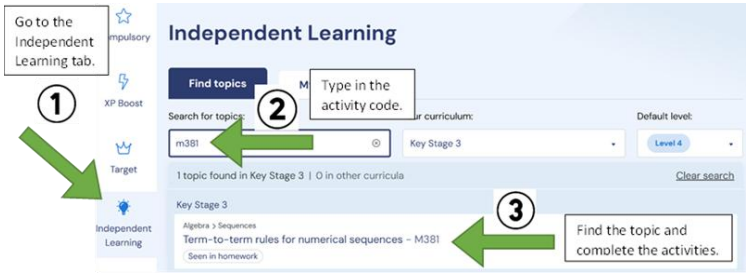
Assessment	Revision help
The assessment will be on 'Dr Jekyll & Mr Hyde'. You will be asked to write about a character in an extract from the text and in the wider novel.	Make sure that you know what happens in the text really well and that you are comfortable answering the following questions for the main characters in the novel: • What do you know about that character? • Where is your key evidence? • How is that character portrayed? • Why has Stevenson created this character? 19th century prose - GCSE English Literature - BBC Bitesize Dr. Jekyll and Mr. Hyde: Study Guide | SparkNotes 'Jekyll and Hyde' in 8 Minutes: Animated Summary

Maths

Assessment	Revision help
Paper 1: 1 hour 30 minutes (non-calculator) Paper 2: 1 hour 30 minutes (calculator)	Yr 10 Revision list

Sparx Maths

If you want to improve upon the areas you find challenging, then use the Sparx codes from our Big Picture sheets to do some independent practice.



Science

Year	Assessment	Revision help
Core Science	**Biology** – Health and disease (year 9), microscopes and Cells **Chemistry** – CC1 State of separation technics matter, CC3 Atoms, CC4 periodic table, CC14 rates of reaction, **Physics** – CP4Waves and CP5 light, CP1 motion **Triple Only Physics** – SP4 The Ear, ultrasound and infrasound and Lens	Revision list Foundation. Revision list Higher. GCSE Combined Science - Edexcel - BBC Bitesize Complete Tassomai questions www.tassomai.com
Triple Biology	**Biology** – Health and disease (year 9), microscopes and Cells Triple only content – testing food groups and	GCSE Biology (Single Science) - Edexcel - BBC Bitesize Complete Tassomai questions www.tassomai.com
Triple Chemistry	**Chemistry** – CC1 State of separation technics matter, CC3 Atoms, CC4 periodic table, CC14 rates of reaction.	GCSE Chemistry (Single Science) - Edexcel - BBC Bitesize Complete Tassomai questions www.tassomai.com
Triple Physics	**Physics** – CP4Waves and CP5 light, CP1 motion **Triple Only Physics** – SP4 The Ear, ultrasound and infrasound and Lens	GCSE Physics (Single Science) - Edexcel - BBC Bitesize Complete Tassomai questions www.tassomai.com
11 Core Science	**Biology** – Paper 1 **Chemistry** – Paper 2 **Physics** – Paper 3	GCSE Combined Science - Edexcel - BBC Bitesize Biology Paper 1 Quizlet Chemistry Paper 1 Quizlet FOUNDATION Revision lists Paper 1 – Biology Focus • Cell Biology: - Differences between plant and animal cells - Functions of cell organelles - DNA structure and chromosomes • Genetics & Variation: - Genes, inheritance, and variation - Selective breeding and genetic modification

		• Evolution & Fossils: - Human evolution timeline (Ardi, Lucy, Homo species) - Dating fossils (carbon dating, stratigraphy) • Health & Disease: - Communicable vs non-communicable diseases - Chlamydia and tuberculosis prevention - Waist-to-hip ratio and obesity risks • Cell Processes: - Mitosis and properties of daughter cells - Osmosis and diffusion (potato and agar cube experiments) Nervous System: - Reflex arc and motor neurone structure - Myelin sheath function and synapses **BBC Bitesize Biology Revision:** https://www.bbc.co.uk/bitesize/subjects/z9ddmp3 • ## Paper 2 – Chemistry Focus • States of Matter: - Particle arrangements in solids, liquids, gases - Changes of state (melting, boiling, sublimation) • Separation Techniques: - Chromatography and Rf values - Fractional distillation apparatus and function • Reactivity & Metals: - Reactivity series and metal extraction - Reactions of metals with acids - Identifying hydrogen gas (squeaky pop test) • Chemical Calculations: - Relative formula mass (e.g. $Zn(NO_3)_2$) - Percentage composition and concentration • Atomic Structure: - Subatomic particles and atomic number - Periodic table structure and electronic configuration • Ionic Compounds: - Precipitation reactions (e.g. $AgNO_3$ + KCl) - Conductivity in solids vs solutions • Hazard Symbols: - Identifying and interpreting safety symbols **BBC Bitesize Chemistry Revision:** https://www.bbc.co.uk/bitesize/subjects/zs6hvcw

Paper 3 – Physics Focus

- Waves:
  - Electromagnetic spectrum (uses and dangers)
  - Refraction and wave graphs
  - Transverse waves (e.g. earthquake waves)
- Forces & Motion:
  - Velocity-time graphs and acceleration
  - Newton's laws and resultant forces
  - Calculating acceleration and distance
- Energy Transfers:
  - Gravitational potential and kinetic energy
  - Energy stores and conversions
- Radioactivity:
  - Half-life and decay calculations
  - Identifying alpha, beta, gamma radiation
  - Absorber experiments and count rates
- Measurements & Graphs:
  - Using rulers and light gates
  - Graph gradients and interpreting results
- Wave Properties:
  - Amplitude, wavelength, wave speed
  - Practical methods to measure wave speed

BBC Bitesize Biology Revision:
https://www.bbc.co.uk/bitesize/subjects/z9ddmp3

BBC Bitesize Physics Revision:
https://www.bbc.co.uk/bitesize/subjects/zpm6fg8

Higher Revision list

Paper 1 – Biology Focus

- Communicable and non-communicable diseases
- Tuberculosis transmission and prevention
- Obesity and waist-to-hip ratio calculations
- Cancer and mitosis
- Osmosis and diffusion in cells
- Agar cube diffusion experiments
- Human evolution and fossil evidence
- Tool use in early humans
- Three-domain classification system
- Structure and function of bacteria
- Specific immune response
- Reaction time experiments
- Neurone structure and impulse speed

		• Genetic disorders: cystic fibrosis and Huntington's • DNA extraction and structure *BBC Bitesize:* *https://www.bbc.co.uk/bitesize/subjects/zrkw2hv* ### Paper 2 – Chemistry Focus • Atomic structure and isotopes • Ionic compounds and precipitation reactions • Conductivity in solutions and solids • Periodic table and electronic configuration • Boiling points and molecular structure • Separation techniques: distillation and chromatography • Metal extraction and reactivity • Calculations: relative formula mass, percentage composition • Electrolysis and ionic equations • Ammonia production: Haber process and equilibrium • Reversible reactions and dynamic equilibrium *BBC Bitesize:* *https://www.bbc.co.uk/bitesize/subjects/zs6hvcw* ### Paper 3 – Physics Focus • Forces and motion: acceleration, resultant force • Velocity-time and distance-time graphs • Wave properties: amplitude, wavelength, speed • Transverse waves and earthquake waves • Refraction and light experiments • Energy transfers: GPE, KE, dissipation • Momentum and Newton's laws • Radioactivity: alpha, beta, gamma decay • Half-life and activity units • Beta particle emission and nuclear changes *BBC Bitesize:* *https://www.bbc.co.uk/bitesize/subjects/zsxfnbk*
11 Triple Biology	**Biology** – Paper 1	GCSE Biology (Single Science) - Edexcel - BBC Bitesize Biology Paper 1 Quizlet

		Complete Tassomai questions www.tassomai.com
		
		Revision list
		1. Health and Nutrition
		• Interpreting percentile growth charts
		• Testing for fats in food
		• Products of fat digestion
		• Purpose of calorimetry
		2. Communicable and Non-Communicable Diseases
		• Preventing the spread of tuberculosis
		• Definition and examples of non-communicable diseases
		• Waist-to-hip ratio and health risks
		• Properties of cells produced by mitosis
		3. Cell Transport
		• Osmosis in plant cells (potato in distilled water)
		• Diffusion in agar cubes
		  ○ Surface area to volume ratio
		  ○ Calculating volume
		  ○ Time taken for diffusion
		4. Genetics and Reproduction
		• Mendel's experiments and conclusions
		• Dominant and recessive alleles (Punnett squares)
		• Environmental control in genetic experiments
		• Asexual vs sexual reproduction
		• Diploid nucleus definition
		5. Evolution and Classification
		• Fossil evidence of *Homo habilis* and *Australopithecus afarensis*
		• Causes of extinction
		• Differences between prokaryotes and eukaryotes
		• Three-domain classification system
		6. Disease and the Immune System
		• Structure and function of bacteria
		• Calculating magnification
		• Symptoms and transmission of cholera
		• Specific immune response
		7. Brain and Medical Technologies
		• CT and PET scans for tumour detection
		• Role of glucose in PET scans
		• Monoclonal antibodies: production and diagnostic use
		8. Nervous System and Reaction Time
		• Reaction time experiments (ruler drop test)
		• Median calculation
		• Controlling variables
		• Effect of caffeine on reaction time

		• Structure and function of sensory neurones • Neurone diameter and impulse speed **9. Genetic Disorders** • Cystic fibrosis: inheritance and symptoms • Huntington's disease: dominant allele inheritance • DNA extraction ○ Process and structure of DNA **10. Ecology and Biotechnology** • Population growth trends in Europe • Fertilisers: advantages, disadvantages, and experimental improvements • Biological control (ladybirds vs pesticides) • Tissue culture for cloning plants
11 Triple Chemistry	**Chemistry** – Paper 1	GCSE Chemistry (Single Science) - Edexcel - BBC Bitesize Chemistry Paper 1 Quizlet www.tassomai.com Complete Tassomai questions Detailed revision list **1. Chemical Cells and Fuel Cells** • Electrolytes and voltage in chemical cells • Reactivity series and voltage output • Dot and cross diagram for oxygen molecule • Advantages of hydrogen-oxygen fuel cells **2. Atomic Structure and Isotopes** • Subatomic particles: charge and mass • Atomic number and electrical neutrality • Calculating relative atomic mass from isotopic data **3. Ionic Compounds and Precipitation** • Reaction between silver nitrate and potassium chloride • Identifying and separating precipitates • Electrical conductivity in ionic solutions and metals **4. Acids, Fertilisers, and Atom Economy** • Litmus colour change and pH limitations • Uses of fertilisers in agriculture • Percentage yield and atom economy calculations • Improving atom economy in reactions **5. Periodic Table and Properties of Gases** • Period identification using electronic configuration • Boiling points and intermolecular forces • Energy and movement of molecules during cooling • Separation of gases by fractional distillation

		• Balanced equation for nitrogen and oxygen reaction
		6. Extraction of Metals
		• Thermal decomposition of malachite
		• Testing for carbon dioxide with limewater
		• Mass calculations using relative atomic masses
		• Comparing methods of copper extraction using carbon
		7. Metals and Alloys
		• Properties of transition metals
		• Sacrificial protection using zinc
		• Graphing alloy strength vs. nickel content
		• Interpreting and explaining alloy strength trends
		8. Magnesium Sulfate and Electrolysis
		• Solubility of sulfates
		• Percentage by mass and mole calculations
		• Electrolysis of magnesium sulfate
		  ○ Ion identification
		  ○ Oxidation and reduction reactions
		  ○ Ionic equations
		9. Ammonia and the Haber Process
		• Testing for ammonia gas
		• Dynamic equilibrium explanation
		• Effect of temperature and pressure on yield
		• Reversible reactions and ammonium chloride formation
		10. Titration and Neutralisation
		• Effect of dilution on pH and H^+ concentration
		• Calculating concentration in g/dm^3
		• Titration setup and errors
		• Using titration data to calculate unknown concentration

11 Triple Physics	**Physics** – paper 1	GCSE Physics (Single Science) - Edexcel - BBC Bitesize Complete Tassomai questions **1. Sound Waves** • Infrasound and ultrasound frequencies • Echo time calculations using speed and distance • Why humans cannot hear infrasound **2. Forces and Motion** • Resultant force and acceleration (F = m × a) • Air resistance calculation • Investigating force on a sloping runway • Graph interpretation: force vs. height • Gradient calculation from a graph **3. Waves** • Amplitude and wavelength from diagrams • Measuring wave speed in water

		• Transverse waves and their effects (e.g. earthquake waves) • Distance calculation using wave speed and time **4. Radioactivity and Nuclear Energy** • Gamma rays and ionising radiation • Nuclear reactor components (e.g. control rods) • Fluorine-18 decay curve and positron interactions • Fission chain reactions • Power comparison between countries (ratio calculation) **5. Light and Refraction** • Refraction experiment with glass block and ray box • Wavelength and frequency changes in different media • Speed change of light using $v = f \times \lambda$ **6. Energy and Motion** • Gravitational potential energy ($\Delta GPE = m \times g \times h$) • Acceleration from velocity and distance • Energy dissipation during motion • Velocity change on curved track • Gradient from distance-time graph **7. Lenses and Electromagnetic Radiation** • Lens power and focal length • Virtual and real image examples • Critical angle and total internal reflection • Temperature balance of celestial bodies (e.g. Ceres) **8. Momentum and Newton's Laws** • Momentum calculation ($p = m \times v$) • Time of contact during a kick • Newton's third law in action • Conservation of momentum in collisions **9. Radioactive Decay** • Activity units (Bq) • Penetrating abilities of alpha, beta, gamma • Kinetic energy of beta particles • Beta plus decay and nuclear changes • Comparison of alpha and gamma decay **10. Astronomy and Cosmology** • Star data: mass and age • Likelihood of becoming a black hole • Nuclear fusion and mass-energy conversion ($E = m \times c^2$) • Evidence for the Big Bang Theory

MFL

Assessment	Revision help
Spanish Grammatical activities and tenses	Revise the formation of • Present tense • Past tense • Immediate future tense Spanish Present Tense (El Presente) Flashcards | Quizlet Present Tense (regular verbs only) || Conjuguemos Present tense (verbs irregular in the yo-form) || Conjuguemos Near Future tense (ir+a+infinitive) || Conjuguemos Preterite Tense (regular verbs only) || Conjuguemos Preterite Tense (irregular verbs only) || Conjuguemos El preterito - Balloon pop

History

Assessment	Revision help
Students will sit a modified **GCSE Paper one – Medicine through time** – on medicine during the Medieval and Renaissance periods. Questions will include a mix of short answer, source response and essay questions. The exam will be 90 minutes in length.	Students can access all the lesson materials via: Carrington History - Home Students will need their MS login to do so. Students and parents have also already been emailed a digest of useful online resources including Edexcel GCSE History 2024 Revision Students have hardcopy revision materials to support them.

Geography

Assessment	Revision help
Students will take a modified GCSE paper on their **Hazardous Earth topic** on plate tectonics, volcanoes and earthquakes – including case studies on Japan and Haiti.	Students can access all the lesson materials via: Carrington Geography - Home Students will need their MS login to do so. Students and parents have also already been emailed a digest of useful online resources including Edexcel GCSE Geography Revision

Religious Studies

Assessment	Revision Help
Students will be tested on everything they have covered since September, up until the end of this term on our first unit: **Christian Beliefs** SKI1 will be marked out of 27 marks. The exam will last for 45 minutes (unless you have extra exam concessions such as extra time, in which case, this will be honoured). There will be four questions on the paper as follows: **Question 1(a):** This will be a 3 mark 'outline' question asking you to outline something you've learnt in the unit, giving 3 points about it. **Question 1(b):** This will be a 4 mark 'describe' or 'explain' question asking students to 'explain' or 'describe' 2 points about a topic they have learnt. For example, 'Describe 2 Christian beliefs about the Trinity' or 'Explain 2 reasons why the Trinity is important to Christians.' You will be expected to have two paragraphs as an answer- each paragraph should have a point and explanation. **Question 1(c):** This will be a 5 mark 'describe' or 'explain' question asking students to 'explain' or 'describe' 2 points about a topic they have learnt (as with Question 1(b) above) **and to support one of the points you have made with a source of wisdom/authority** (for example, a quote from the Bible). For example, 'Describe 2 Christian beliefs about the Trinity' or 'Explain 2 reasons why the Trinity is important to Christians.' You will be expected to have two paragraphs as an answer- each paragraph should have a point and explanation. For one of your points, you should also refer to a source of wisdom/authority that supports the point you are making and you should say **why the source supports the point**. **Question 1(d):** This will be a 12 mark question. This question will also have 3 marks attached to it for SPAG (spelling, punctuation, grammar). So altogether, this question will be worth **15 marks**. For this question, you will be given a statement and you will be required to argue for and against the statement considering religious and non-religious views, coming to a justified conclusion at the end.	• Knowledge Organisers • Keyword Sheets • Quote Sheets • Exercise books • Past Paper Questions, Mark Schemes and Examiner Reports: Edexcel GCSE Religious Studies A (2016) | Pearson qualifications • Oak Academy: Christian beliefs KS4 | Y10 Religious education Lesson Resources | Oak National Academy • Arbor • Seneca

Psychology

Assessment	Revision help

- Social Influence topic part 1
  ○ Key Concepts
  ○ Theory: Situational factors
  ○ Study: Bickman and Obedience
- Research techniques: Ethics, Hypothesis and variables
	Learn definitions of all Keywords on Big Picture sheet and in classwork.
	SOCIAL INFLUENCE - PASSMORES PSYCHOLOGY LEARNING HUB

Business Studies

Year	Assessment	Revision help
10	The paper will be a selection of questions from Paper 1 covering topics such as. -Enterprise and Entrepreneurship -Market Research -Risk and Rewards -Customer needs -Market Segmentation You will only be tested on topics we have covered in lesson. All questions will follow the same format that we have explored in lessons and are stuck in your books. A big emphasis on Explain & Discuss	Two teachers youtube channel The Dynamic Nature of Business Explained BBC Bitesize GCSE Business - Edexcel - BBC Bitesize Your own exercise book will be a great place to start. Buying a revision guide from the school shop will help you every lesson until your final exam

PE

Year	Assessment	Revision help
10	No assessment. Learning of component 1 ready for PSA.1	To be added.

Economics

Assessment	Revision help
Year 10 Assessment 1	https://studyrocket.co.uk/revision/gcse-economics-ocr/introduction-to-economics/main-economic-groups-factors-of-production https://studyrocket.co.uk/revision/gcse-economics-ocr/introduction-to-economics/the-basic-economic-problem https://studyrocket.co.uk/revision/gcse-economics-ocr/the-role-of-markets-money/demand Mr Goff - You Tube (Videos 1-18)

eSports

Assessment	Revision help
No assessment – continue Unit 1 Learning for the Unit Assignment after Christmas	

Computing and Computer Science

Assessment	Revision help
Year 10 1st Assessment based on topics covered from Paper 1 from Edexcel Computer Science GCSE ▪ Binary and Data Representation ▪ Algorithms	Use work has already been completed on Class Notebook. **Seneca Revision** Binary and Data Representation Revision Algorithms Revision **BBC Bitesize** Binary and Data Representation Algorithms