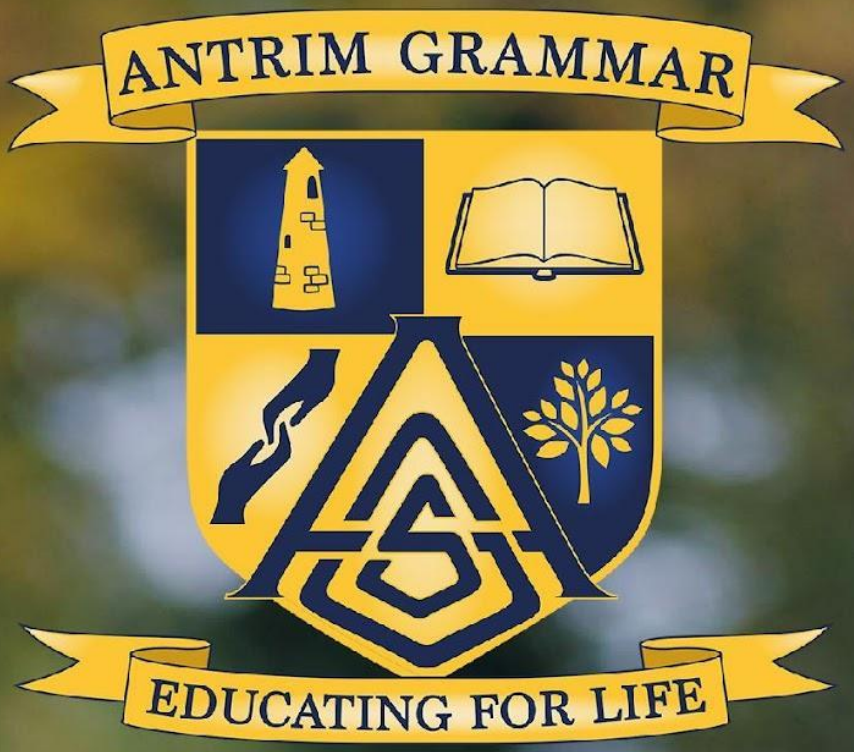


Year 13 Revision Topics

Winter Examinations 2025

This booklet outlines the key topics your should revise for your subjects for the Winter Mock Examinations.	
Subject	**Topics to be revised**
Biology	**AS1 (All content covered and associated Practicals)** 1.1 Molecules 1.2 Enzymes 1.3 Viruses 1.4 Cells 1.5 Continuity of cells 1.6 Cell Physiology 1.7 Tissues and organs
Business Studies	Fundamentals 1. Enterprise and entrepreneurship 2. Central purpose of business 3. Forms of business ownership 4. Stakeholder groups 5. Markets and market forces Operations 6. Quality Management 7. Approaches to and measures of quality 8. Productivity and investment Human Resources 9. Organisational Design 10. Investing in People 11. Motivation
Chemistry	All topics covered in AS 1 ● Formulae, equations and amounts of substance ● Atomic Structure ● Bonding

	• Intermolecular Forces • Structures • Shapes of Molecules • Redox • Halogens • Acid-base titrations
Computer Science	1. Hardware and Communication 2. Logical Operations 3. Data Transmission 4. Data Representation and Data Types 5. Principles of Programming 6. Organisation of Data 7. Database Systems 8. The Operating System
Design and Technology	**EQUCAS Theory Booklets 1, 2 and 3** ***1 Design & Innovation - Mrs Holland*** ***2 Materials and Components - Mr McMahon*** ***3 Processes - Mr Campbell*** Pupils will be examined on topics they have covered with their respective teacher in each area.
English Literature	**Unit AS1 - Poetry - Robert Frost and Heaney - 60 minutes.** **Revise**: Poetic Methods, Context and connections between the relevant poems. A poetry anthology is provided. **Unit AS2 - 'A Streetcar Named Desire' - 60 minutes.** **Revise:** Context, Characters, Themes, Dramatic Devices and analytical interpretation. Section B is closed book. **Your teachers will also place Knowledge Organisers into your Google Classroom.**
French	You will have a Listening, Reading and Use of Language exam. Revise vocabulary on topics covered to date. Revise all grammar covered to date.
Further Mathematics	• Roots of Polynomials • Vectors • Matrices

Geography	**Human** 1. Census data and vital registration (be able to define each); 2. Theories of population sustainability – the arguments of Malthus and Boserup; 3. The three (named!) stages of The Epidemiological Transition; 4. The Demographic Transition Model and why birth rates and death rates change through time with reference to place; 5. Over, Under & Optimum Population; 6. China (the need for and impacts (positive and negative) of the OCP)); 7. The Rural-urban continuum diagram; and 8. ASSI, AONB and National Parks (to include Mournes National Park case study). **Physical** 1. Global distribution of biomes; 2. Climate and soils associated with Tundra and Temperate Grasslands; and 3. Case study of actual and potential impacts of climate change (Alaska). 4. The drainage basin as a system; 5. Storm hydrograph; 6. River processes (erosional, transportation and depositional); 7. River landforms
Health & Social Care	● Define the following concepts: health; ill-health; disease; stress-related illness; mental health; and mental illness; ● Demonstrate knowledge and understanding of the physical, intellectual, emotional and social needs of service users such as children, older people, those with illnesses, physical disabilities, learning disabilities or mental health needs; ● Demonstrate knowledge and understanding of how to meet these needs in a range of health, social care and early years settings; ● Discuss how individuals can take responsibility for their health ● Evaluate the potential impact of physical health and ill-health on psychological well-being; and

	• Assess the potential effects of ill-health for both individuals and their families on education; employment; income; leisure activities; and relationships. • Define the terms prejudice and discrimination • Describe examples of discrimination and anti-discriminatory practice relevant to: race; beliefs; gender; disability; cognitive ability; mental health; and sexuality. • Demonstrate an understanding of how both discriminatory and anti-discriminatory practice can impact on physical, social and psychological health and well-being.
History	**AS Germany – 1 hour 15-minute paper. You will be asked a usefulness question (20 marks) and an interpretation question (30 marks) only. There will be no 10-mark question. Part of your revision should be practising examination technique.** **The Weimar Republic 1919–29** • The National Constituent Assembly, • Weimar Constitution and the main terms of the Treaty of Versailles • The political threats to the Weimar Republic from left and right 1919–23 • The reasons for the economic instability of the Weimar Republic 1919–23 • The strengths and weaknesses of the economy 1924–29 and the extent of economic recovery • The development of the Nazi Party 1923–29, including the Munich Beer Hall Putsch, the significance of the Bamberg Nazi Party conference, the creation of the national party structure and the contributions of Strasser and Goebbels **The decline of the Weimar Republic 1929–33 and the rise of the Nazis** • The economic and political impact of the Wall Street Crash on the Weimar Republic 1929–33 • The decline of parliamentary government and the rise of presidential government • The collapse of Müller's Grand Coalition and the impact of Brüning's policies

	• The electoral breakthrough of the Nazis in Presidential and Reichstag elections 1929–33 • The roles of von Schleicher, von Hindenburg and von Papen and 'political intrigue', leading to Hitler's appointment as Chancellor on 30 January 1933 **AS Russia – 90 - minute paper 2 x 8-mark question and 2 x 22 mark question** **The February Revolution** • The economic, military and political impact of the war on Russia. • Nicholas as war leader. • The growth of political opposition to tsarism. • The undermining of tsarism by the rule of the tsarina and Rasputin • Explanation of how and why the February Revolution occurred. **The October Revolution** • The basic weaknesses of the Provisional Government • the nature of the Provisional Government • Dual Authority with the Petrograd Soviet • The significance of Lenin's return and the April Theses • The difficulties that beset the Provisional Government • continuation with the war • political instability • the threat from the sailors and workers • the threat from the regions • the July Days • the land question and how it was exploited by the Bolsheviks • the Kornilov revolt **The roles of Lenin and Trotsky in guiding the Bolsheviks to power** • Role of Lenin for Bolshevik success • Role of Trotsky for Bolshevik success • Economic and geographic factors

	• Weakness of the Whites • Aims and success of Lenin's economic policy • State Capitalism • War Communism
Life and Health Sciences	Consisting of all topics covered so far in Unit 2 Human Body Systems and Unit 3 Physical Chemistry in Industrial Processes • Circulatory System • Respiratory System • Chemical calculations • Volumetric analysis
BTEC IT	1. Unit 2 – Creating Systems to Manage Information a. Database Relationships & Normalisation b. Database Structures and Validation c. Queries and Reports d. Structure Testing 2. Unit 3 - Social Media: a. No examination, please follow coursework deadlines as given
Mathematics	<u>Paper 1 Pure</u> 1. Indices and Surds 2. Quadratics 3. Simultaneous Equations and Inequalities 4. Algebraic Manipulation 5. Graphs and Transformations 6. Straight Lines <u>Paper 2 Applied</u> 1. Vectors 2. Distance, Velocity and acceleration 3. Force and Newton's laws including connected particles 4. Resultant and component of forces 5. Equilibrium and acceleration under concurrent forces
Moving Image Arts	**AS Film Theory** Key learning outcomes of AS Unit 2: Critical Response focus on C**assical Hollywood Style/ Continuity Style and Albert Hitchcock.**

	• Camera • Continuity Editing/Storytelling conventions • Cinematography • Sound • Mise-en-scene **Alfred Hitchcock – The Arteur:** Techniques and influence on cinema Learn the CCEA Fact Files on the A Level drive! **Knowledge and understanding of Film Language Terminology** – This must be demonstrated consistently throughout your writing **(use the laminated film language prompt cards!)** • **Practise timed unseen clip analysis** (these will be available on the Google Classroom) **IT IS IMPERATIVE YOU THOROUGHLY KNOW ALL AREAS OF FILM LANGUAGE**
Politics	**<u>The British Political Process</u>** ***The paper will be 70 mins and include all types of questions in Section A of the paper (4, 10 and choice of 26 marker)*** **Executive - revise the full topic** 1)The Executive – structure and role 2)Role of the PM 3)How powerful is the PM? 4)The Cabinet system – role, concepts and effectiveness 5)The distribution of power with the Executive (PM and Cabinet) 6)Executive control of the Legislature – dictating events? **Parliament - revise up to and including the HoC legislative function** 1.The structure and membership of Parliament (HoC + HoL) 2.The functions of the House of Lords 3.How effectively does the HoL perform these functions? 4a. The legislative function of the HoC (+ legislative effectiveness)
Physics	Ch 1.1 Physical quantities Ch 1.2 Scalars and vectors

	Ch 1.3 Principle of moments Ch 1.4 Linear motion Ch 1.5 Dynamics Ch 1.6 Newton's Laws (if completed) Ch 1.7 Momentum (if completed) Ch 1.8 Energy (if completed) Ch 1.9 Electric current, p.d. and emf Ch 1.10 Resistance and resistivity Ch 1.11 Internal resistance and emf Ch 1.12 Potential divider circuits Practical Theory
Psychology	**Paper 2: 7181/2 (2025 specification)** **The topics below should be covered, paying particular attention to the items highlighted. You should assume that for <u>all</u> items covered in the revision list that ALL Assessment Objectives should be revised.** Classical Conditioning: Pavlov Operant Conditioning: Skinner Social Learning Theory: Bandura The Cognitive Approach (in particular computer models) The Biological Approach (in particular, evolution) Clinical Psychology & MH: Definitions in the field of Mental Health Clinical Psychology & MH: Clinical Characteristics Clinical Psychology & MH: Behavioural exp and treatment Clinical Psychology & MH Cognitive exp and treatment Clinical Psychology & MH: Bio exp and treatment Biopsychology: The Nervous System Biopsychology: Neurons & Synaptic Transmission Biopsychology: The Endocrine System Biopsychology: Fight or Flight Research Methods: Experimental Method

	Research Methods: Experimental Design Research Methods: Aims Research Methods: Hypotheses Research Methods: Variables Research Methods: Questionnaires & Interviews Research Methods: Sampling Research Methods: Central tendency (mean median, mode) Research Methods: Descriptive Statistics Research Methods: Graphs, tables scattergrams and bar charts Research Methods: Qualitative and Quantitative Data Research Methods: Design a Study
Religious Studies	***Module: An Introduction to Act of the Apostles (Assessed Unit)*** **The Beginnings of the Church** Knowledge, understanding and critical evaluation of: ● Jesus' initiation of the Church mission: The Commission and the Ascension (Ch1:1-11)**.** Pentecost: the events and their significance, the role of the Holy Spirit, Peter's speech (Ch 2). The activity of Peter and John - teaching and miracles: the lame man (Ch 3:1-26), before the Sanhedrin (Ch4:1-22), miracles and opposition (Ch5: 12-42). **Growth and Expansion of the Church** Knowledge, understanding and critical evaluation of: ● The seven helpers (Ch6:1-7). The role of Stephen – oppositions, accusations, speech – purpose and content, martyrdom (Ch6:8-Ch8:1). Stephen's theology. The effects of the martyrdom of Stephen for the church. The role of Philip – evangelising activity: one of the seven, Philip and the Ethiopian eunuch/official (Ch8:4-25), Philip in Samaria (Ch 8:26-40). The roles of Stephen and Philip in the implementation of the Great Commission and the furthering of the gospel. **Church Life and Organisation:** ● The practices of the early believers: baptism, prayer, possessions, daily life. (Ch2:43-47, Ch4:23-37). Discipline: Ananias and Sapphira (Ch5:1-11). Miracles: healing of the lame man (Ch3:1-10), prayer

	for miracles (Ch3:30, Ch4:23-31). Miracles and wonders, Peter's shadow (Ch5:12-16). The apostle's attitude towards opposition. **Other Aspects of Human Experience** Reflection on the relationship between Acts and 'other aspects of human experience: Perennial issues surrounding religious belief, life and practice. Characteristics and relevance of charismatic and Pentecostal movements. The role of miracles in strengthening faith. The growth of the church despite persecution. The defence of religious belief and practice in a hostile world. The challenge of religious witness in any age. **<u>AS4: Church History</u>** **Spread of Christianity:** Factors contributing to the spread. Greek background, Roman background, Jewish Background, Christianity itself. Political factors, Religious factors Social factors. Martyrdom – Blandina, Justin, Polycarp. Impact on the spread. What was the greatest factor? **Persecution:** Causes of persecution. Why were Christians persecuted? Effects of persecution. Impact: positive and negative. Impact: Positive and Negative EMPERORS (Sporadic and random persecution). Course and Nature of persecution under: Nero (Great fire of Rome), Domitian (also consider the 'did he persecute Christians?' debate),Trajan/Pliny correspondence, Marcus Aurelius, Decius, Diocletian. Natures of their persecution- local and sporadic. **Other Aspects of Human Experience**: Examples of martyrs throughout history outside your course of study. Examples of persecution outside the course of study. Continuing relevance of content covered in church history.
Spanish	The Spanish examination will consist of AS Unit 2: Section A: Listening (40 minutes) ● Q1: Questions and answers in Spanish ● Q2: Questions and answers in English Revise: ● Topic vocabulary covered so far ● Numbers ● Technique ● Be prepared for something random! Section B: Reading (50 minutes) ● Q1: Questions and answers in Spanish

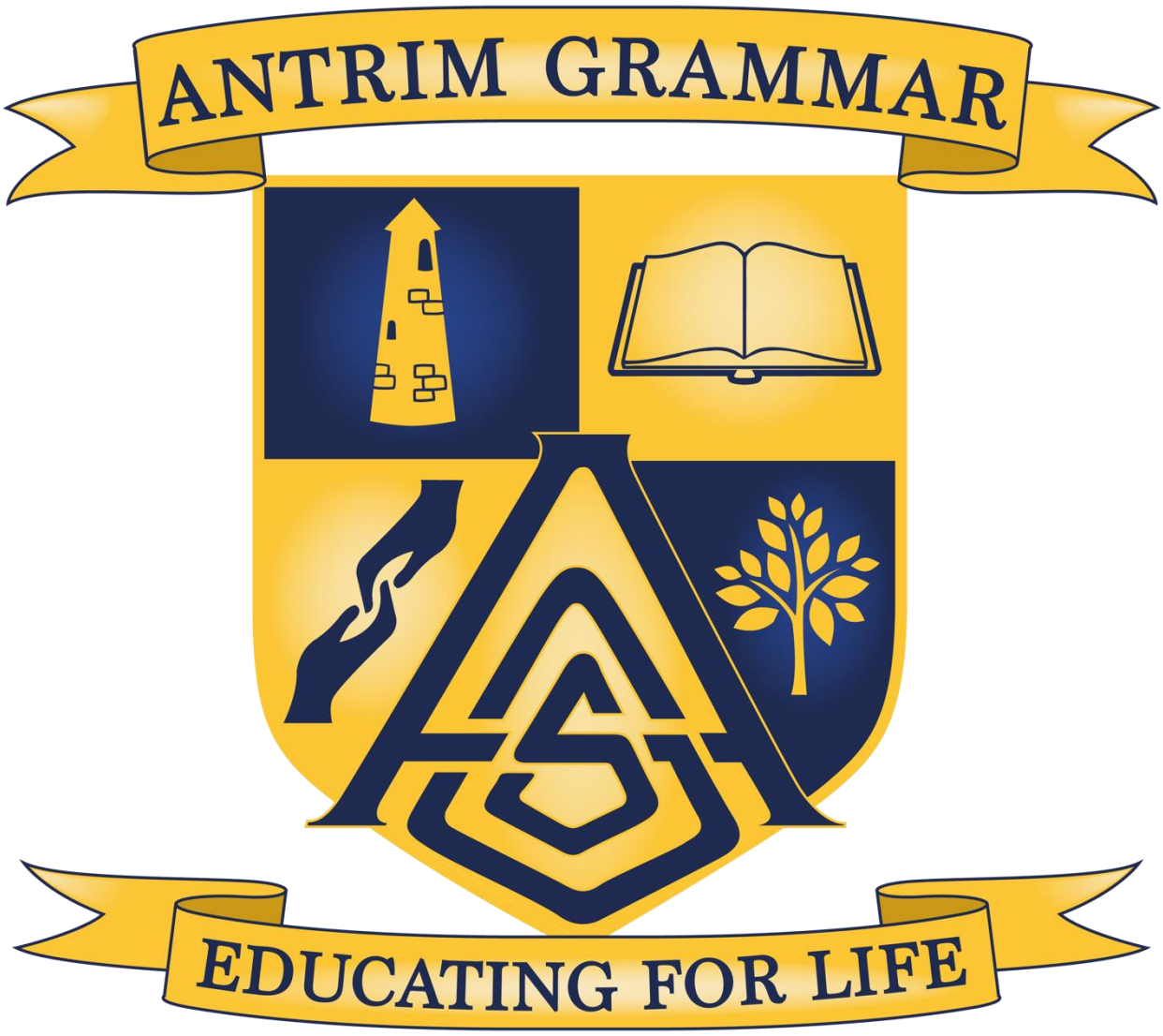
	• Q2: Translation into English Revise: • Topic vocabulary covered so far • Grammar covered so far • Technique • Be prepared for something random! Section C: Use of Language (30 minutes) • Q1 - 4: short grammar-based questions • Q5: translating sentences into Spanish Revise: • Grammar covered so far • GCSE vocabulary • Technique
BTEC Sport	**<u>A Structure of skeletal system.</u>** **Understand how the bones of the skeleton are used in sporting techniques and actions.** • Major bones to include cranium, clavicle, ribs, sternum, scapula, humerus, radius, ulna, carpals, metacarpals, phalanges, pelvis, vertebral column (cervical, thoracic, lumbar, sacrum, coccyx), femur, patella, tibia, fibula, tarsals, metatarsals. • Type of bone • Process of bone growth • Areas of the skeleton to include axial skeleton, appendicular skeleton, spine, curves of the spine, neutral spine alignment, postural deviations (kyphosis, scoliosis). **Function of skeletal system-Understand how the functions of the skeleton and bone types are used in sporting actions and exercise.** Functions of the skeleton when performing sporting techniques and actions: • supporting framework • protection • attachment for skeletal muscle • source of blood cell production • store of minerals • leverage

	• weight bearing • reduce friction across a joint • Main functions of different bone types when performing sporting techniques and actions **Joints Understand how joints of the upper and lower skeleton are used in sporting techniques and actions** • Joints of the upper skeleton • Joints of the lower skeleton • Classification of joints • Types of synovial joints • The bones forming the following joints (shoulder, elbow, wrist, hip, knee, ankle, and their use in sporting techniques and actions). • Structure and function of components of synovial joints and their use in sporting techniques and actions • Range of movement at synovial joints **Responses and adaptions** • Adaptations of the skeletal system to exercise. The impact of long-term effects of exercise on sports performance., increased ligament strength. • Additional factors affecting the skeletal system • Skeletal disease • Age **B <u>The effects of exercise and sports performance on the muscular system</u>** **Characteristics and functions of different types of muscles** Understand different types of muscles and their use in sport. • Cardiac – non-fatiguing, • involuntary. • Skeletal – fatiguing, voluntary. • Smooth – involuntary, slow contraction **Major skeletal muscles of the muscular system**

	Major skeletal muscles and their combined use in a range of sporting actions. ● Deltoids, biceps, triceps, wrist flexors, wrist extensors, supinators and pronators, pectorals, abdominals, obliques, quadriceps, hip flexors, tibialis anterior, erector spinae, trapezius, latissimus dorsi, gluteals, hamstrings, gastrocnemius, soleus. **Antagonistic muscle pairs** ● Agonist. ● Antagonist. ● Synergist. ● Fixator. **Types of skeletal muscle contraction** ● Isometric. ● Concentric. ● Eccentric. **Fibre types** Understand fibre type recruitment during exercise and sports performance. Characteristics of each muscle fibre type: ● type I o type IIa o type IIx. ● Nervous control of muscle contraction (all or none law). **Responses of the muscular system to a single sport or exercise session** ● Increased blood supply. ● Increased muscle temperature. ● Increased muscle pliability. ● Lactate (high-intensity exercise). ● Micro tears (resistance exercise). **Adaptations of the muscular system to exercise** ● Hypertrophy. ● Increased tendon strength. ● Increase in myoglobin stores. ● Increase in number and size of mitochondria.

	• Increase in storage of glycogen. • Increase in storage of fat. • Increased tolerance to lactate. **Additional factors affecting the muscular system** • Age – effect of the aging process on loss of muscle mass. • Cramp – involuntary sustained skeletal muscle contraction **The effects of exercise and sports performance on the respiratory system** • Structure of the respiratory system (nasal cavity, epiglottis, pharynx, larynx, trachea, bronchus, bronchioles, lungs, alveoli, diaphragm, thoracic cavity). • Intercostal muscles (external and internal). **Function** • Mechanisms of breathing (inspiration and expiration) at rest and during exercise. • Gaseous exchange. **Lung volumes** • Tidal volume. • Vital capacity. • Residual volume. • Total lung volume. • Minute ventilation (VE). **Control of breathing** • Neural (medulla oblongata as the respiratory centre in the brain). • Chemical (chemoreceptors detect change in blood carbon dioxide concentrations and changes in pH). **Responses of the respiratory system to a single sport or exercise session** • Increase in breathing rate. • Increased tidal volume. **Adaptations of the respiratory system to exercise** • Increased vital capacity.

	● Increased strength of the respiratory muscles. ● Increase in oxygen and carbon dioxide diffusion rate. **Additional factors affecting the respiratory system** ● Asthma. ● Effects of altitude/partial pressure on the respiratory system.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