

The Academic Curriculum

The intent of our academic curriculum is to deliver **Powerful Knowledge** to our students. At Creative Education Trust this is not contextualised as ‘the knowledge of the powerful’, but specialised knowledge in a range of subject disciplines. This will include both disciplinary knowledge and substantive knowledge within each area of study. This curriculum is not only designed to endow children with the social assets, skills and cultural capital needed to succeed and achieve, but also to instil in our children the power and confidence to question, synthesise and scrutinise in a range of disciplines, a variety of social contexts and in their own lives. Beyond a range of academic qualifications, the intended impact of this curriculum is for our students to be able to integrate into any social, academic or professional environment, as well as to question, instigate change or lead within those environments.

Below you will find a detailed overview of what Year 11 students are learning in each of their subjects in Half Term 1 and 2 (September – December)

Year 11 Curriculum – Autumn Term 2021 - To support parents and students.

Subject	Autumn Term Topics
English	<p>Theme: Unseen Poetry</p> <p>Students are learning to develop their understanding of how poets create meaning and influence the reader (Literature Paper 2). Students will explore and develop:</p> <ul style="list-style-type: none">• How the poet uses language, structure and setting to communicate their ideas• Their understanding the context of the era and how this has influenced the poem• Their ability to engage with the poems and formulate a perceptive and critical argument and make valid comparisons• Their understanding of the writers’ ideas and intended meaning• Their understanding of how the writer uses a range of linguistic and structural features to influence the reader• How to identify a range of versatile references from multiple poems
Maths	<p>Students are learning a variety of topics dependent on prior attainment and gaps in knowledge from the end of year 10 PPE examinations</p> <p>Topics include:</p> <ul style="list-style-type: none">• Algebraic Fractions• Changing the Subject• Quadratic Equations• Graphs and Transformation of Graphs

	<ul style="list-style-type: none"> • Velocity Time Graphs • Circle Theorems • Probability • Histograms • Cosine rule • Area of non-right angled triangles • Trigonometric ratios for any angle up to 360° • Distance–time graphs. • Tangents • Vectors • Linear and non-linear graphs • Powers and standard form • Congruence and similarity • Combine Events • Properties of Circles • Variation • Rules of indices • Ratio, speed and proportion • Number and sequences • Perimeter and area • Percentage • Sequences and nth term • Right angled triangles - Pythagoras, trigonometry, bearings • Substituting into expressions • Equations parallel to the axis • Drawing straight line graphs • Gradient of a line and interpreting $y=mx+c$ • Binomials • Interior and exterior angles of polygons
<p style="text-align: center;">Science</p>	<p>Students will study the following</p> <p>Biology: Bioenergetics; Respiration</p> <p>Both animals and plants use this oxygen to oxidise food in a process called aerobic respiration which transfers the energy that the organism needs to perform its functions. Conversely, anaerobic respiration does not require oxygen to transfer energy. During vigorous exercise the human body is unable to supply the cells with sufficient oxygen and it switches to anaerobic respiration. This process will supply energy but also causes the build-up of lactic acid in muscles which causes fatigue.</p> <p>Bioenergetics; Photosynthesis</p>

How plants harness the Sun's energy in photosynthesis in order to make food. This process of photosynthesis liberates oxygen which has built up over millions of years in the Earth's atmosphere.

Control- Homeostasis and response

That cells in the body can only survive within narrow physical and chemical limits. They require a constant temperature and pH as well as a constant supply of dissolved food and water. In order to do this the body requires control systems (nervous and hormonal) that constantly monitor and adjust the composition of the blood and tissues. These control systems include receptors which sense changes and effectors that bring about a response. The structure of the nervous system explains how it can bring about fast responses called reflex actions. The hormonal system usually brings about much slower changes by glands secreting hormones that travel in the bloodstream to target organs. Hormonal coordination is particularly important in reproduction since it controls the menstrual cycle. The role of hormones in reproduction has allowed scientists to develop not only contraceptive drugs but also drugs which can increase fertility.

Triple Science – how hormones control plants and how they can be used commercially to improve yield

Chemistry:

Rates and Equilibrium

Chemical reactions can occur at vastly different rates. Whilst the reactivity of chemicals is a significant factor in how fast chemical reactions proceed, there are many variables that can be manipulated in order to speed them up or slow them down. Chemical reactions may also be reversible and therefore the effect of different variables needs to be established in order to identify how to maximise the yield of desired product. Understanding energy changes that accompany chemical reactions is important for this process. In industry, chemists and chemical engineers determine the effect of different variables on reaction rate and yield of product. Whilst there may be compromises to be made, they carry out optimisation processes to ensure that enough product is produced within a sufficient time, and in an energy-efficient way.

Crude Oil and Fuels, Polymers (Triple only)

Crude Oil

Students are learning that the chemistry of carbon compounds is so important that it forms a separate branch of chemistry. A great variety of carbon compounds is possible because carbon atoms can form chains and rings linked by C-C bonds. This branch of chemistry gets its name from the fact that the main sources of organic compounds are living, or once-living materials from plants and animals. These sources include fossil fuels which are a major source of feedstock for the petrochemical industry. Chemists are able to take organic molecules and modify them in many ways to make new and useful materials such as polymers, pharmaceuticals, perfumes and flavourings, dyes and detergents.

(Triple only):

Students will be able to explain how the organic products of fractional distillation and cracking are converted into compounds which contain different functional groups. Organic molecules, such as alkenes, alcohols and carboxylic acids, undergo a series of chemical reactions in order to make new and useful materials such as polymers, pharmaceuticals, perfumes, flavourings, dyes and detergents.

Physics: Forces and Motion

Understand how forces interact in a wide range of contexts, referring to interaction pairs.

Know the connection between weight, mass and gravity including how to use the equation.

Draw freebody diagrams to show resultant force and vector diagrams (HT) to illustrate resolution of forces.

Know how to calculate work done

Know that the extension of an object is proportional to the force applied until elastic limit

Know how to calculate the energy stored in a stretched object.

	<p>(Triple) Know how to calculate moments and the effects of levers and gear systems Know how to calculate pressure in a fluid and its effects, to include atmospheric pressure Know how to describe motion using distance and displacement. Understand the difference between scalar and vector quantities. Recall and use the speed equation, calculating average speed for non-uniform motion and understanding the difference between speed and velocity Draw distance time graphs and use them to determine speed, using tangents if appropriate. Recall and apply the equation to calculate acceleration and find acceleration using velocity time graphs. Calculate distance travelled using velocity time graphs. Know how Newtons Laws of Motion are applied Know how a variety of factors affect stopping distance, thinking distance and braking distance (Triple) know how to interpret graphs relating to stopping distances Know how to practically calculate reaction times Recall and apply the equation for momentum and know the principle of conservation of momentum (Triple) know how changes in momentum affect safety and how a variety of safety features affect the rate of change of momentum, using equations to calculate momentum</p>
History	<p>Edexcel: https://qualifications.pearson.com/content/dam/pdf/GCSE/History/2016/specification-and-sample-assessments/gcse-9-1-history-specification.pdf</p> <p>Paper 1 topic: Medicine through time The British sector of the Western Front, 1914–18: injuries, treatment and the trenches.</p> <ul style="list-style-type: none"> • The historic environment- examines the relationship between a place and historical events and developments. Much of the content is linked to the thematic study of medicine through time, but additionally some of the content focuses on the context of the Western Front. • Key skills- Evaluation of the usefulness of different types of sources for specific enquiries. Framing of questions relevant to the pursuit of a specific enquiry. Selection of appropriate sources for specific investigations. • The context of the British sector of Western Front and the theatre of war in Flanders and northern France. The trench system and the use of mines at Hill 60 near Ypres and the expansion of tunnels, caves and quarries at Arras. Significance for medical treatment of the nature of the terrain and problems of the transport and communications infrastructure. Conditions requiring medical treatment on the Western Front, including the problems of ill health arising from the trench environment. The nature of wounds and the problems of infection and increased numbers of head injuries. The effects of gas attacks. The work of the RAMC and FANY. The system of transport and the evacuation route. The underground hospital at Arras. The significance of the Western Front for experiments in surgery and medicine: new techniques in the treatment of wounds and infection, the Thomas splint, mobile x-ray units and blood banks. Knowledge of national and local sources relevant to the period and issue, e.g., army records, national newspapers, government reports, medical articles, personal accounts, photographs, hospital records, army statistics. <p>Paper 3 topic: Weimar and Nazi Germany, 1918–39</p>

	<p>Key skills- Causation, analysis and evaluation of contemporary sources and later interpretations and reasons why interpretations may differ.</p> <ul style="list-style-type: none"> • The legacy of the First World War. The abdication of the Kaiser, the armistice and revolution, 1918–19. The setting up of the Weimar Republic and the strengths and weaknesses of the new Constitution. The early challenges to the Weimar Republic, 1919–23 Reasons for the early unpopularity of the Republic, including the ‘stab in the back’ theory and the key terms of the Treaty of Versailles. Challenges to the Republic from Left and Right: Spartacists, Freikorps, the Kapp Putsch. The challenges of 1923: hyperinflation; the reasons for, and effects of, the French occupation of the Ruhr. The recovery of the Republic, 1924–29- reasons for economic recovery, including the work of Stresemann, the Rentenmark, the Dawes and Young Plans and American loans and investment. The impact on domestic policies of Stresemann’s achievements abroad: the Locarno Pact, joining the League of Nations and the Kellogg-Briand Pact. Changes in society, 1924–29- changes in the standard of living, including wages, housing, unemployment insurance. Changes in the position of women in work, politics and leisure. Cultural changes: developments in architecture, art and the cinema. • Hitler’s early career: joining the German Workers’ Party and setting up the Nazi Party, 1919–20. The early growth and features of the Party. The Twenty-Five Point Programme. The role of the SA. The reasons for, events and consequences of the Munich Putsch. Reasons for limited support for the Nazi Party, 1924–28. Party reorganisation and Mein Kampf. The Bamberg Conference of 1926.
<p>Geography</p>	<p>Half Term 1: Paper 2: The Changing Economic World Students will learn that there are global variations in economic development and quality of life. They will explore the different strategies for reducing the development gap. Students will explore:</p> <ul style="list-style-type: none"> • Development indicators (economic and social) and their use/usefulness. • DTM (Demographic Transition Model) • Causes and consequences of uneven development. • Disparities between global health and wealth. • Solutions to uneven development. • Tourism as a way of closing the development gap. • Case study of LIC/NEE (Low Income Countries/Newly Emerging Economies) - Industrial development and TNCs (Transnational Corporations) - social, economic and environmental change. <p>Students will undertake Human Geography Fieldwork and will develop fieldwork knowledge.</p> <p>Half Term 2: Paper 2: The Changing Economic World Students will understand how major changes in the economy of the UK have affected, and will continue to affect, employment patterns and regional growth. Students will explore:</p> <ul style="list-style-type: none"> • Causes of economic change in the UK • Post Industrial Society - UK

	<ul style="list-style-type: none"> • Employment sectors in UK (change over time) • Science and business parks • Environmental impacts of industry • Population growth/decline in rural areas • North/South divide. Changing infrastructure in UK • UK in the wider world
Citizenship	<p>Term 1 - Theme E By this point in the course students will have learnt about how diverse our culture is and the reasons for that as well as the political response to protecting everyone's rights in society. Pupils will have started and researched a project to be completed in this term. This involves the pupils identifying an issue such as discrimination in school, or the use of mobile phones in education. Their task will be to undertake the project and attempt to successfully make a change in their chosen area. This project forms the basis for half of Paper 2.</p> <ul style="list-style-type: none"> • Stage 3: Review research and analyse different viewpoints held • Stage 4: Plan action • Stage 5: Carry out action • Stage 6: Evaluate • Half-term • How best to write about your project in the exam?
Spanish	<p>Half Term 1: Culture Students will learn to discuss the theme of identity and culture through mealtimes, daily routine, illnesses, food and festivals.</p> <p>Students will learn: Reflexive verbs, Estar and tener for illnesses.</p> <ul style="list-style-type: none"> • The passive and avoiding the passive • Irregular verbs in the preterite tense (tener, poner, poder, venir, traer, decir) • Expressions followed by the infinitive (para, al, sin, antes de, después de ...) <p>Half Term 2 : Jobs and Future Employment Students will learn to:</p> <ul style="list-style-type: none"> • Talk about jobs, work experience, what you do to earn money, summer jobs and future plans <p>Students will learn:</p> <ul style="list-style-type: none"> • Masculine and feminine noun endings • The use of indefinite articles • The conditional tense

	<ul style="list-style-type: none"> • Solía Future plans (using quiero, tengo la intención de, espero, pienso, voy a, me gustaría...)
German	<p>Half term 1: Holidays Students will learn about countries and holiday locations, weather, types of holiday, describing past holidays, holiday plans, describing towns, pros and cons of towns Grammar:</p> <ul style="list-style-type: none"> • Prepositions in / nach / an, • wenn clauses, • should / would / could do <p>Half term 2: World of Work Students will learn about jobs, places of work, hours and pay, work experience, job descriptions, applying for jobs, dream job, why learn foreign languages Grammar:</p> <ul style="list-style-type: none"> • Masculine and feminine nouns, • past tense modal verbs, • um...zu..
Computer Science	<p>Students will learn about network security, computer ethics, robust programs, programming languages and IDE.</p> <p>Students will learn how to prevent cyber-attacks:</p> <ul style="list-style-type: none"> • The threats posed to devices/systems • The knowledge / principles of each form of attack • Common prevention methods • The Impacts of digital technology on wider society • Legislation relevant to Computer Science <p>Students will learn how to create robust programs:</p> <ul style="list-style-type: none"> • What should be considered to ensure that a program caters for all likely input values • How to deal with invalid data in a program • Why commenting is useful and how to apply this appropriately • The purpose of testing • The types of testing • Using suitable test data • Characteristics and purpose of different levels of programming language • The purpose of translators • The characteristics of a compiler and an interpreter

	<ul style="list-style-type: none"> • Common tools and facilities available in an Integrated Development Environment (IDE)
Creative iMedia	<p>Term 1: Developing video game concepts</p> <p>Students will learn how to</p> <ul style="list-style-type: none"> • Create a professional proposal for a new computer game. • Create visualisation diagrams for your game design. • Save your files in a ordered and structure way. • Use consistent naming conventions. • Demonstrate understanding of current legislation and how it affects your work. <p>Term 2:</p> <p>Students will use the planning skills developed throughout Year 10 to develop a multimedia product that meets the needs outlined in the OCR set assignments. This will comprise tasks, broken down as follows:</p> <p>Task 1: Identify Interactive Multimedia Products:</p> <ul style="list-style-type: none"> • Investigate the range of interactive multimedia products available and where they are used • Identify design principles used with interactive multimedia products • Identify the hardware, software and peripherals required to create and view interactive multimedia products • Identify the different types of connection which can be used to access interactive multimedia products • Explain the limitations of connections, bandwidth and transfer speeds required to access interactive multimedia products • Include suitable file formats for use on different platforms <p>Task 2: Plan the interactive multimedia product:</p> <ul style="list-style-type: none"> • Consider the client requirements based on the brief • Identify the target audience, and what they will want from the interactive multimedia product. • Produce a work plan for the interactive multimedia product • Identify the resources which will be needed to create an interactive multimedia product <p>Exam Preparation</p> <ul style="list-style-type: none"> • Revision for the January sitting of the exam • Revise Pre production documents • Revise Hardware and software • Revise Legislation • Revise work plans
Art	Personal Portfolio Preparation

	<p>Students are developing and refining their Personal Portfolios. Students will be exploring and developing their own personal themes whilst producing sensitive, articulate and detailed observational work that demonstrates an embedded knowledge of the formal elements. They will be learning to critically analyse artists' work and produce a thought provoking visual analysis in a refined way. Students will be able to exploit the qualities of materials independently and skilfully through experimentation and be able to critically evaluate and articulate the outcomes.</p> <p>Students will develop their projects towards a final outcome worth 25% of their final Personal Portfolio grade.</p>
Graphics	<p>Term 1: Have completed the following sections of their NEA: Section A: Identifying and investigating design possibilities Section B: Producing a design brief and specification</p> <p>Theory recap:</p> <ul style="list-style-type: none"> • New and emerging technologies. <p>Term 2: Have completed the following sections of their NEA: Section C: Generating design ideas Section D: Developing design ideas</p> <p>Theory recap and preparing for mock exam:</p> <ul style="list-style-type: none"> • Design principles • Materials and their working properties.
Food	<p>Half Term 1:</p> <p>Students will start the year by practicing several higher skilled recipes to further develop and embed their food preparation and cooking skills.</p> <p>Students will recap section 3.2 of the specification. Students will be taught the content again and exam questions will be answered at the end of a topic. Homework will coincide with this learning. Students will recap:</p> <ul style="list-style-type: none"> • Macronutrients • Micronutrients • Healthy eating guidelines • Nutritional needs of different age groups • Nutritional needs for health (major diet related health risks).

	<ul style="list-style-type: none"> • Energy needs (BMR/PAL) - NEA 2 Focus – 50% of overall grade. Briefs released. Students introduced to their brief. Students to make a very good start on Section A of the NEA. Research to be completed. Questionnaires to be completed over half term. <p>Half term 2:</p> <p>Students will start this half term with a real focus on NEA 2. Students to complete the below parts of NEA before Christmas:</p> <ul style="list-style-type: none"> • Section A – selecting dishes table • 3 x cooking trials completed • Section B write up. <p>Exam topics focus this half term are to:</p> <ul style="list-style-type: none"> • Consolidate nutritional knowledge • Learn about nutritional software • 3.5.1 - Factors affecting food choice – food marketing, fair trade, religious and cultural diets. • Primary and secondary processing (milk processing and cheesemaking) <p>Seneca homework coincides with learning.</p>
Resistant Materials	<p>Half Term 1: Have completed the following sections of their NEA: Section A: Identifying and investigating design possibilities Section B: Producing a design brief and specification</p> <p>Theory recap:</p> <ul style="list-style-type: none"> • Materials and their working properties • Commercial manufacture <p>Half Term 2: Have completed the following sections of their NEA: Section C: Generating design ideas Section D: Developing design ideas</p> <p>Theory recap and preparing for mock exam:</p> <ul style="list-style-type: none"> • Industry and enterprise

	<ul style="list-style-type: none"> • Sustainability and the environment
PE Core	<p>Students will be tackling complex and demanding physical activities. They should get involved in a range of activities that develops personal fitness and promotes an active, healthy lifestyle.</p> <p>Pupils should be taught to use and develop a variety of tactics and strategies to overcome opponents in team and individual games. They will further develop their technique and improve their performance in other competitive sports. They will take part in a range of environments which present intellectual and physical challenges, which encourage pupils to work in a team, building on trust and developing skills to solve problems, either individually or as a group.</p> <p>They will evaluate their performances compared to previous ones and demonstrate improvement across a range of physical activities to achieve their personal best and continue to take part regularly in competitive sports and activities outside school through community links or sports clubs. The students will also have the opportunity to explore and focus on options that they may pursue outside of school which will explicitly link to their lifelong participation.</p>
BTEC SPORT	<p>Students are applying the principles of personal training to a fitness training programme specific to them.</p> <ul style="list-style-type: none"> • Design a six-week personal fitness training programme which is suited to the students specific sporting goals and objectives. • Know about the musculoskeletal system and cardiorespiratory system and the effects on the body during fitness training. • Implement the six-week self-designed personal fitness training programme to achieve own goals and objectives • Review a personal fitness training programme.
Music	<p>Students are learning to prepare for final performances by developing the following skills:</p> <ul style="list-style-type: none"> • Accuracy • Fluency • Technical control • Intonation (where applicable) • Projection • Expression • Balance of ensemble • Communication with other performers • Stylistic awareness • Confidence <p>Students are completing a final draft of their own choice composition with considerations and developments of:</p> <ul style="list-style-type: none"> • Treble and bass clef notation • Develop more complex rhythms and compound time signatures

	<ul style="list-style-type: none"> • Use more complex harmonic language • Using modulations • Develop melodies with clear shape and structure • Organise pieces with clear shape and structure • Compose with stylistic awareness • Control of instruments and resources <p>Students are learning to play music for ensemble, whilst learning about:</p> <ul style="list-style-type: none"> • Chamber music • Jazz • Musical Theatre • Textures • Types of ensembles: e.g. solo, duo • Musical elements and devices • Instrumental and vocal techniques • Develop melodic and rhythmic dictation <p>Students will revise all assessment objectives and set works and develop exam technique in:</p> <ul style="list-style-type: none"> • Musical context • Musical elements • Musical styles • Musical devices • Instrumental and vocal playing techniques • Use of technology • Practise exam style questions
<p>Health and Social Care</p>	<p>Students will be exploring how factors can affect an individual's health and wellbeing positively or negatively. They will learn the definition of health and wellbeing: a combination of physical health and social and emotional wellbeing, and not just the absence of disease or illness. They will also explore the different physical, social, economic and environmental factors that can affect health and wellbeing:</p> <ul style="list-style-type: none"> • Genetic Inheritance • Diet and Exercise • Recreational Drugs • Personal hygiene • Relationships

	<ul style="list-style-type: none"> • Religion • Economic situation • Employment • Housing conditions <p>Students will have explored the features of health and wellbeing improvement plans. They will understand the importance of a person-centred approach that takes into account an individual's needs, wishes and circumstances.</p> <p>Students will learn about physiological and lifestyle Indicators: blood pressure, peak flow and BMI measurements. They will also interpret information regarding smoking, alcohol consumption and lifestyle choices.</p>
<p style="text-align: center;">Child Development</p>	<p>Component 3 Synoptic Exam Unit</p> <p>Students will investigate how a child learns and develops and adapt activities to support the inclusion of all children in play for learning and development</p> <p>A01 Student will be learning about adaptations that may need to be made to activities for children in order to support learning and development, promote inclusion and be aware of the role of the adult in managing safe environments</p> <p>A02 Students will be required to demonstrate understanding of the types of adaptations that may need to be made to activities due to a child's individual circumstances and environmental risks and hazards that may impact children's learning and development</p>
<p style="text-align: center;">Business</p>	<p>Unit 4 business Operations</p> <p>Student will learn how a business operates day to day including:</p> <ul style="list-style-type: none"> • Production • Production process • Quality of goods and services • The sales process • Customer service • Consumer Law • Business location • Working with suppliers <p>Student will revise and prepare for the CET mock exams, students will revise</p> <ul style="list-style-type: none"> • Unit 1 Business activity • Unit 2 Marketing • Unit 3 Human resources

Ethics	<p>Term 1 - 'Who am I?'</p> <p>This unit is all about discovering more about who we are, what we think and how we might fit in our society today. In a world more polarised than ever, it is increasingly important to ensure that each young person has considered who they are and what they believe.</p> <p>We look at the following things:</p> <ul style="list-style-type: none">• Who am I and what is my personality type?• Who am I and what do I believe politically?• Who am I and what do I believe about God?• Who am I and what do I believe about Life after death?• Who am I and is my online persona Me?
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