Year 11 Autumn Term 1 (September – October 2024)

Holderness Academy Curriculum Vision

Holderness Academy's curriculum vision is to inspire and empower young people to make a positive difference today, ready for tomorrow.

We will achieve this by:

- Creating a **curriculum accessible to all**: *Regardless of ability or socioeconomic background.*
- Developing the **Holderness Learner**: *Fostering respect, aspiration, resilience, and kindness.*
- Providing **real-world experiences***: Linking learning to practical applications*.
- **Enriching the curriculum**: *Offering extra-curricular activities and community engagement.*

The design of our curriculum seeks to equip our learners with the knowledge, skills, and values needed to succeed in life, both personally and professionally.

Curriculum Time Breakdown

Our curriculum covers the requirements of the national curriculum, a link to this document can be found below:
Secondary national curriculum (publishing.service.gov.uk)

Curriculum Area	Subject	GCSEs Awarded	Hours per Fortnight
Core	**English** (GCSE English Language and GCSE English Literature)	2	10
	Maths GCSE	1	9
	Combined Science	2	10
Humanities	**Geography or History**	1	6
GCSE Option 2	**Option choice subjects** • Art • ASDAN • Business • Food Technology	1	6
GCSE Option 3	• BTEC First Award ICT • Food Technology • 3D Product Design • GCSE Physical Education • GCSE Philosophy and Ethics • Health and Social Care • Sociology • **Spanish**	1	6
ARRK	**ARRK Lessons** (British Values and RSE Framework)	-	1
Performance	**Core Physical Education**	-	2
Total timetabled lessons over a fortnight (Week A and Week B)		**8 GCSEs**	**50**

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Curriculum Overview

Core Subjects – All learners

English

GCSE Language:

Reading 19th century fiction (Paper 1)

• Understand, summarise, analyse and evaluate a range of 19th century fiction texts (including literary non-fiction). **Imaginative Writing (Paper 1)**

• Communicate clearly, effectively, and imaginatively, selecting and adapting tone, style and register for different forms, purposes and audiences.

• Organise information and ideas, using structural and grammatical features to support coherence and cohesion of texts.

• Use a range of vocabulary and sentence structures for clarity, purpose and effect, with accurate spelling and punctuation.

GCSE Literature

A Christmas Carol – Charles Dickens (Paper 2)

Read, understand and respond to ACC Students should be able to:

- Maintain a critical style and develop an informed personal response.
- Use textual references, including quotations, to support and illustrate interpretations.

Analyse the language, form and structure used by a writer to create meanings and effects, using relevant subject terminology where appropriate.

Mathematics

Foundation

Quadratic Equations and Graphs

Calculate the circumference of a circle.
Solve problems involving the circumference of a circle.
Calculate the circumference and radius of a circle.
Write error intervals for rounded and truncated values.
Work out the area of a circle.
Work out the radius or diameter of a circle.
Solve problems involving the area of a circle.
Give answers in terms of π.
Understand and use maths language for circles and perimeters.
Work out areas and perimeters of sectors of circles.
Solve problems involving areas and perimeters of 2D shapes.
Work out the volume and surface area of cylinders.
Work out the volume of a pyramid.
Work out the surface area of a pyramid.
Work out the volume of a cone.
Work out the surface area of a cone.
Work out the volume and surface area of a sphere.
Work out the volume and surface area of composite solids.

Perimeter, Area and Volume 2

Higher

Circle Theorems

Solve problems involving angles, triangles and circles.
Understand and use facts about chords and their distance from the centre of a circle.
Solve problems involving chords and radii.
Understand and use facts about tangents at a point and from a point.
Solve angle and length problems involving circles and tangents.
Understand, prove and use facts about angles subtended at the centre and the circumference of circles.
Understand, prove and use facts about the angle in a semicircle.
Understand, prove and use facts about angles subtended at the circumference of a circle.
Understand, prove and use facts about cyclic quadrilaterals.
Prove the alternate segment theorem.
Solve angle problems using circle theorems.
Find the equation of the tangent to a circle at a given point.

More Algebra

Change the subject of a formula where the power or root of the subject appears.
Change the subject of a formula where the subject appears twice.
Add and subtract algebraic fractions.

	Multiply and divide mixed numbers and fractions. To know and use the laws of indices. Write large numbers in standard form. Convert numbers from standard form into ordinary numbers. Write small numbers in standard form. Convert numbers from standard form with negative powers into ordinary numbers. To multiply and divide numbers in standard form. To add and subtract numbers in standard form. **Fractions, Indices and Standard Form** Understand similarity. Use similarity to solve angle problems. Find the scale factor of an enlargement. Use similarity to solve problems. Determine when two shapes are definitely not (or may not be) similar. Understand the similarity of regular polygons. Calculate perimeters of similar shapes. Recognise congruent shapes. Use congruence to work out unknown angles. Use congruence to work out unknown sides and angles in triangles and shapes made of triangles. Add vectors. Find the resultant of two vectors. Subtract vectors. Find multiples of a vector. Identify two column vectors that are parallel. Solve problems using vectors. **Congruence, Similarity and Vectors** Draw and interpret graphs of cubic functions. Draw and interpret graphs of y=1/x Draw and interpret non-linear graphs to solve problems. Solve simultaneous equations by drawing a graph. Write and solve simultaneous equations. Solve simultaneous equations algebraically. Change the subject of a formula. Identify expressions, equations, formulae and identities. Prove results using algebra.	Multiply and divide algebraic fractions. Change the subject of a formula involving fractions where all the variables are in the denominators. Simplify algebraic fractions. Add and subtract more complex algebraic fractions. Multiply and divide more complex algebraic fractions. Prove a result using algebra. Simplify expressions involving surds. Expand expressions involving surds. Rationalise the denominator of a fraction. Solve equations that involve algebraic fractions. Use function notation. Find composite functions. Find inverse functions. **Vectors and Geometric Proof** Understand and use vector notation. Work out the magnitude of a vector. Calculate using vectors and represent the solutions graphically. Identify when vectors are parallel. Calculate the resultant of two vectors. Prove lines are parallel. Prove points are collinear. Solve geometric problems in two dimensions using vector methods, including where vectors are divided in a given ratio. Apply vector methods for simple geometric proofs. **Proportion and Graphs** Write and use equations to solve problems involving direct proportion. Write and use equations to solve problems involving direct proportion. Solve problems involving square and cubic proportionality. Write and use equations to solve problems involving inverse proportion. Use and recognise graphs showing inverse proportion. Recognise graphs of exponential functions. Calculate the gradient of a tangent at a point. Estimate the area under a non-linear graph. Understand the relationship between translating a graph and the change in its function notation. Understand the effect reflecting a curve in one of the axes has on its function form.
	Biology	

Core

Combined Science And Separate Science

B8 Photosynthesis (Organisms)

- Recall the word and symbol equation for photosynthesis.
- Describe photosynthesis as an endothermic reaction.
- Explain the effects of light intensity, carbon dioxide concentration, temperature and amount of chlorophyll on the rate of photosynthesis.
- Interpret graphs showing how these variables affect the rate of photosynthesis.
- Investigate the effect of light intensity on rate of photosynthesis in an aquatic plant.

Skill Required practical:

- Investigating the effect of light intensity on the rate of photosynthesis.

B9 Respiration (Organisms)

- Recall the word and symbol equations for aerobic and anaerobic respiration.
- Describe respiration as an exothermic reaction and explain the importance of energy in cells.
- Describe the differences between aerobic and anaerobic respiration.
- Describe how the body reacts to an increased demand for energy.
- Define the term metabolism and give examples of metabolic reactions.

B10 The Nervous System

- State the role of the nervous system.
- Explain how the nervous system is adapted to its functions.
- Sequence the series of events which leads to a reaction to a change in your surroundings (normal and reflex).
- Explain the importance of reflexes.
- Carry out an investigation into factors that affect human reaction times.

Skill Required practical:

- Investigating factors that affect reaction times.

B14 Variation (Inheritance)

- Describe variation and its causes and describe the effects of mutations.
- Describe the process of evolution and speciation.
- Describe the process of selective breeding and identify some characteristics that are selected for and against.
- Describe genetic engineering and its uses including GM crops.

B4 Transport in Plants and Animals (Organisms)

- Describe the composition of blood.
- Describe the structure of the heart and blood vessels.
- Explain how the blood vessels are adapted to their functions.
- Explain how plants are adapted to transport substances.
- Explain the process of transpiration and factors that affect its rate.

Chemistry

C7 Energy Changes (Energy)

- Describe energy changes in reaction in terms of exothermic and endothermic reactions.
- Define the term activation energy.
- Use reaction profiles to represent energy changes in exothermic and endothermic reactions.
- Describe energy changes in bond making and breaking.
- Calculate energy changes in reactions using beyond enthalpy calculations.

C8 Rates (Reactions)

- Use the particle model to describe how the rate of a reaction can be altered.
- Describe and explain how surface area, temperature, concentration, gas pressure and catalysts can affect the rate of a reaction.
- Describe reversible reactions in terms of reactants and products.
- Define the term equilibrium in terms of rates of reaction.
- Explain factors that can affect the position of equilibrium.

Physics

P7 Radioactivity (Energy)

- Define radioactivity in terms of decay of unstable nuclei.
- Describe types of radiation in terms of particles, charges, ionisation power and penetration.
- Use balanced equations to represent the decay of nuclei by emitting α, β and γ radiation.
- Define and explain the term half-life of a radioactive sample.
- Describe the dangers and safety measure associated with using radioactive materials.

P8 Balanced Forces (Forces)

- Describe quantities as vector or scalar.
- Describe the effect of forces on objects.
- Describe the effect of balanced and unbalanced forces.
- Represent forces using scale diagrams.
- Apply Newton's 3rd law.

Skill Required practical:

Centre of mass.

P9 Motion (Forces)

- Calculate velocity and acceleration.
- Describe journeys using a distance-time graph.
- Use gradients to describe and calculate velocities.
- Describe journeys using a velocity-time graph.
- Use velocity-time graphs to calculate acceleration and total distance travelled, use tangents and gradients to calculate acceleration.

P10 Forces & Motion (Forces)

- Use Newton's Laws to describe the effect of forces on objects.
- Describe how forces affect the motion and speed of an object.
- Describe how thinking distance and breaking distance affect the overall stopping distance of a car.
- Apply equations to calculate the momentum of objects.
- Apply Hooke's Law to describe the effect of stretching or compressing an elastic object.

Core Physical Education

Health & Fitness

Students will understand the importance of maintaining a good level of physical health and fitness.

Activity & Social Health

Students will develop an understanding of why social health is important to their day to day lives.

Short-Term Effects of Exercise

	Students will gain an understanding of the short-term effects of exercise are and how they affect our body (24-36 hours). **Aerobic & Anaerobic Exercise** Students will have an understanding of aerobic and anaerobic exercise.
ARRK Lessons Core Values **Aspirational** **Resilient** **Respectful** **Kind**	**Health and Wellbeing** • Organ and Blood Donation. • Teenage pregnancy and choices. • Abortion laws (Morals and ethics). • Parenthood and Teenagers. • Testicular and prostate cancer. • Cervical cancer and screening. • Love and abuse.

Option Subjects Overview

Humanities

Geography	**Physical Landscapes of the UK: Rivers – 8 weeks** • The shapes of river valleys change as rivers flow downstream. • Distinctive fluvial landforms result from different physical processes. • Different management strategies can be used to protect river landscapes from the effects of flooding. An example of flood management scheme in the UK – River Tees. • The physical processes that happen in rivers. • The land formations that are caused by rivers. Different methods that humans use to manage the risks posed by rivers.
History	**Weimar and Nazi Germany 1918-1939** Revolution of 1918, Treaty of Versailles, Problems in Weimar Germany, Hyperinflation, Munich Putsch, Wall Street Crash, Gustav Stresemann, Rise of the Nazi Party, Hitler's personality, Himmler and the Police State, Goebbels and propaganda, Berlin 1936 Olympic Games, Policies towards Women, Hitler Youth, Strength Through Joy, Lives of German Jews, Opposition to the Nazi Party. • Identify how Germany emerged from the First World War focussing on social, political, and economic factors. • Explain the impact of the Treaty of Versailles. • Explain the rise of the Nazi Party. • Analyse what life like in Nazi Germany with a focus on key groups such as women, working class, young people, and minority groups. • Identify different opposition groups in Nazi Germany.
Philosophy and Ethics	**Paper 2 Section 1: Muslim Beliefs** History of Islam • Six Beliefs & Five Roots and their importance for Sunni & Shi'a Muslims. • Allah – His qualities of Tawhid, Immanence, Omnipotence, Beneficence, Mercy & Fairness. Where these are seen in the Qur'an. • Risalah. • Holy Books – the authority of the Qur'an, as well as the Tawrat, Injil & Zabur. • Malaikah – their nature, evidence, their importance within Muslims' lives. • Al-Qadr – predestination. • Akhirah – beliefs about Paradise & Hell.

MFL

Spanish	**10.1 Grammar Recovery Unit** • Retrieval of Advance Negative Structures (***no/nunca/ni/tampoco/ya no).*** • Present tense with high frequency regular and irregular verbs. • Perfect and Imperfect Tense. • Near and Simple Future. • Direct and Indirect Object Pronouns. **11.1 Jobs and Ambitions** • Consolidation of the future and conditional tense to discuss future career plans. • Consolidation of the perfect tense to discuss previous work experience. • Use of '***s***i' with the future tense to discuss future job preferences.
3D Product Design	**Major Project:** Term 4: Developing final ideas and realising intentions in a final piece. **Refining Work** • Technique samples • Refined studies • Analysis of studies **Final Piece Design** • Mock-up studies • Process of making • Final piece plan **Final Piece** • Final process • Final evaluation **Project Organisation** • Portfolio theme • Presentation methods Students will be considering ways to develop their ideas in personal and meaningful ways. This can begin with inspiration from contextual studies and learning how other artists/designers have developed similar ideas and concepts. Students will then combine and refine successful areas of their project into meaningful ideas to develop into potential outcomes. Throughout Y11 students will learn about new artists/designers and develop their knowledge of the meaning behind many works of art/design.

Design Technology

Engineering

R038 – Principles of Engineering Design
This unit provides the opportunity for students to develop their understanding of the requirements of design briefs and design specifications for the development of new products.
Topics/Skills covered in the R038 unit include:

- Influences on engineering product design, i.e., market pull and technology push, British and international standards, legislation, planned obsolescence, sustainable design, design for the circular economy. Including British standards, health and safety and risk assessment, 6Rs

R040 – Design, Evaluation and Modelling
This unit will enable students to perform effective product analysis. It requires students to apply practical skills to produce a prototype product or model using craft-based modelling materials alongside computer-controlled or rapid-prototyping processes.
Topics/skills covered in the R040 unit include:

- Carry out a product disassembly using manufacturers manuals and appropriate tools and instruments.
- Analyse the disassembled product including components and their functions, assembly methods, materials, production methods and maintenance considerations

Textiles

Major Project:
Term 4: Developing final ideas and realising intentions in a final piece.

Refining Work

- Technique samples
- Developed designs
- Analysis of designs

Final Piece Design

- Adapting an existing pattern
- Making a toile
- Final Design
- Process of making
- Final piece plan

Final Piece

- Final outcome
- Final evaluation

Project Organisation

- Portfolio theme
- Presentation methods

Students will be considering ways to develop their ideas in personal and meaningful ways. This can begin with inspiration from contextual studies and learning how other artists have developed similar ideas and concepts.

Students will then combine and refine successful areas of their project into meaningful ideas to develop into potential outcomes.

Throughout Y11 students will learn about new textile artists and designers and develop their knowledge of the meaning behind many works of textile art and design.

Food Technology	**Non-Examination Assessment 1** The NEA 1 Food Investigation Task allows students to investigate the working characteristics, functions and chemical properties of ingredients. This task is a written report of 1500-2000 words and contributes 15% towards final GCSE grade. They will produce a report which will include research into 'how ingredients work and why'. • Students will gain an awareness of different types of research. Whilst doing this, they will also develop analytical skills when deciding which pieces of research are 'the most important'. • Students will use a range of resources to conduct their research, whilst evaluating the usefulness of each. • Students will analyse their research and then use this to plan their practical investigation. • There is a focus on students using a range of appropriate testing methods, e.g., annotated photographs, labelled diagrams, tables, charts, sensory testing methods, viscosity tests. • Students will analyse and interpret the results of the investigative work, developing links to the research and data. • Students will show how their findings in a classroom setting can be applied to a wider scale kitchen or commercial setting. • Exam question practise.
Art	**Major Project:** Term 4: Developing final ideas and realising intentions in a final piece. **Refining Work** • Technique samples • Refined studies • Analysis of studies **Final Piece Design** • Mock-up studies • Process of making • Final piece plan **Final Piece** • Final process • Final evaluation **Project Organisation** • Portfolio theme • Presentation methods Students will be considering ways to develop their ideas in personal and meaningful ways. This can begin with inspiration from contextual studies, and learning how other artists have developed similar ideas and concepts. Students will then combine and refine successful areas of their project into meaningful ideas to develop into potential outcomes. Throughout Y11 students will learn about new artists and develop their knowledge of the meaning behind many works of art.

Physical Education GCSE

Coursework

Overview section e.g. components of fitness and core skills completion
Assessment e.g. Strengths and weakness analysis
Movement Analysis e.g. different types of joints and open and closed continuum

Health and Social Care

Health conditions

Learners will look at common lifelong factors that affect our health and care needs

Arthritis Cardiovascular conditions Coronary heart disease Cerebral vascular Accidents	Diabetes (type 2) Dementia Obesity	Asthma Chronic obstructive pulmonary disease COPD	Sensory impairments Physical impairments Learning disabilities

Learners will look at common lifelong health Diseases Health services available:

Primary Care	**Secondary Care**	**Tertiary Care**	**Multidisciplinary team working**
GP surgeries Dental care Out-of-hours services Telephone services Accident and Emergency Departments	Specialist medical care that includes: Rheumatology Respiratory medicine Cardiology Endocrinology	Specialist medical care that includes: Oncology Transplant services Physiotherapy Speech and language Therapy Occupational Therapy Dietetics	How services work together, including referrals between services

Business and IT

	Unit 5 Business Growth This content area focuses on business and enterprise growth that an enterprise will need to understand if it wants to continue to grow in the future. **Pupils will learn about:** • Internal & External growth. • Economies and diseconomies of scale. • The challenge of growth. **Unit 6 Finance** This content area focuses on how a business enterprise can gain its funding using a range of different methods. **Pupils will learn about:** • Business & enterprise funding. • Financial terms, documents and tools. • Interaction between the different stakeholders? Does their involvement have any conflicts with the business?
Information Technology	**How can IT create effective digital working practices?** • Types of ad hoc networks • Security and performance issues and availability with ad hoc networks • Features and using of the cloud including synchronisation, availability and scalability • Online applications, collaboration tools, choosing cloud platform services, how cloud and traditional services are used together, collaboration tools, communication tools, scheduling and planning, selecting appropriate communication channels.
Computer Science	**This term students will revisit topics from Paper 1 in order to prepare for the exam.** **Key topics include:** • Von Neumann Architecture. • The CPU. • Fetch-decode-execute cycle. • Factors affecting the performance of the CPU. • Main memory. • Secondary storage devices.