Airedale Academy
Ambition · Bravery · Respect

Year 9 Curriculum

Faculty	**ADT**
Head of Faculty	**Mr P Clark**
HoF Email	**pclark@airedaleacademy.com**
Faculty Staff	**N Amos, H O'Neill & E Cazals**

Subject Name	Art
Subject Lead	Mr N Amos
Subject Lead email	namos@airedaleacademy.com
Periods per week	1
Core / Option	Core

Overview

In Year 9 Art pupils will expand upon basic skills and develop new ones through a series of linked projects. The projects students will study in Year 9 will be aimed at building on their previous knowledge and skills and preparing them for possibility of taking Art at Key Stage 4. The units studied will be more focused on contextual studies, personal development and other aspects of the Art GCSE. At the end of Year 9 students will have the opportunity to choose an artist to study and develop their own ideas based on that artists work.

Units Studied

Observational drawing – still life and portraiture
Studying the work of artists such as: Georgia O'Keeffe, Chuck Close and other artists as part of a personal study.
Ceramics (slab pots)
Painting skills and techniques
Graphics
Mixed Media
Personal Study

Assessment

Pupils will be continuously assessed throughout each project through questioning, formative assessment and peer assessment. At the end of each project students will achieve a final grade for that unit of study. Year 9 will also be assessed through a series of PPE's which will take place at regular intervals throughout the year.

Other Information

The Art Department is open after school on certain days for each year group to come and explore their ideas and develop their skills.

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Year 9 Curriculum

Faculty	**ADT**
Head of Faculty	**Mr P Clark**
HoF Email	**pclark@airedaleacademy.com**
Faculty Staff	**P Clark, T Fulford, H O'Neill, L Hoyland, J Podlewski, E Cazals & E Shaw.**

Subject Name	Engineering Design / Food and Nutrition
Periods per week	1
Core / Option	Core

Overview

Engineering & Design

Continuing the development of design communication skills students will be introduced to CAD. Students will work both in 2D and 3D on 2D Design and all 3D model in Autodesk Inventor.

Students will be challenged to use all their communication skills to present Engineering Drawings by hand and also using CAD.

Students will also be introduced to the iterative and collaborate Design process.

Successful designs may be manufactured. Students will also have the opportunity to manufacture products in 3D.

Food & Nutrition

In Food and Nutrition students establish a range of skills in the Food Technology suite expanding their range of cooking techniques and skills to produce a range of more complex dishes developing them into menus for specific nutritional needs.

Units Studied

n/a

Assessment

Pupils will be assessed through class based assessments of both written and practical aspects.

Other Information

n/a

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Year 9 Curriculum

Faculty	**Performing Arts**
Head of Faculty	**Mr G Woodfine**
HoF Email	**gwoodfine@airedaleacademy.com**
Faculty Staff	**R Kelly & R Nickerson**

Subject Name	Dance
Periods per week	1
Core / Option	Mini - Option

Overview

Dance is a practical based subject.

Units Studied

Term 1: Dance technique
An insight into 3 different styles learning repertoire from 3 different practitioners to develop a piece for performance.

Term 2: The performing arts world
Research based tasks into different areas of dance – Choreographer, dancer, costume and set design and music.

Term 3: Choreography unit
Choreographic approaches and workshops put into practical rehearsals for performance to an audience.

Assessment

Half Termly - Through videoed/ live performances, log books and pupil progression diaries

Other Information

- Lots of extra curriculum activities on offer.
- Opportunities for live performances and theatre trips.
- Whole school productions and visitor workshops.

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Year 9 Curriculum

Faculty	**English**
Head of Faculty	**Miss A Blaikie**
HoF Email	**ablaikie@airedaleacademy.com**
Faculty Staff	**A Blaikie, J Richmond, G Skyner, K Wilson, S Heath, N Ennis, F Galtrey, S Lowe, J Wilson and K Sissons**

Subject Name	English Literature
Periods per week	2
Core / Option	Core

Overview

Teaching at Key Stage 3 is centred around the National Curriculum. Students will have acquired some ability to use the fundamental elements of English (reading, writing and spoken communication). The curriculum will provide opportunities for students to communicate, compose and comprehend through a variety of tasks.

Units Studied

Autumn Term – History of Literature

This scheme allows students be exposed to more challenging literature including classic, medieval and canonical pieces from history. The broad nature of this scheme allows students to explore key moments in history through literature. Students will use skills from across the English curriculum from reading inference, to both creative and transactional writing.

Spring Term – Poetic Voices

Students will continue to develop their knowledge of poetic techniques and an understanding of writer's purpose. This collection of poetry has been selected to represent a range of voices across English poetry and encourage students to explore messages and views being shared through literature. Students will work on analysis of poetry as well as using poetry in conjunction with other texts types to create both analytical and transactional writing pieces.

Summer Term – Prose Study

Students will read 21st century prose that has been selected to challenge and stretch literature skills that have been developed throughout Key Stage 3 . Learning here will incorporate character, theme and plot knowledge as well as language analysis. Development of these fundamental elements of literature will be enhanced through empathy based writing tasks.

Assessment

Students will be assessed formatively throughout schemes through the use of questioning, a range of tasks and regular marking of books using the three week department policy through a range of different feedback styles.

Throughout the year, students will be assessed following the whole school assessment calendar. This will include both a reading comprehension and writing task, which will be assessed and moderated in department. These grades will be communicated to parents formally.

Other Information

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Year 9 Curriculum

Faculty	**English**
Head of Faculty	**Miss A Blaikie**
HoF Email	**ablaikie@airedaleacademy.com**
Faculty Staff	**A Blaikie, J Richmond, G Skyner, K Wilson, S Heath, N Ennis, F Galtrey, S Lowe, J Wilson and K Sissons**

Subject Name	English Language
Periods per week	3
Core / Option	Core

Overview

Teaching at Key Stage 3 is centred on the National Curriculum. Students will have acquired some ability to use the fundamental elements of English (reading, writing and spoken communication). The curriculum will provide opportunities for students to communicate, compose and comprehend through a variety of tasks.

Units Studied

Autumn Term 1 – 'Dystopian Fiction'
This scheme gives students the opportunity to explore and develop reading comprehension and analysis skills using modern texts as well as using these texts as a writing stimulus. Exploration of narrative techniques, building tension and creative writing will allow students to understand and cultivate the analytical skills.

Autumn Term 2 – War and Conflict
Students will explore fiction and non-fiction texts related to war and. Different creative and imaginative texts will be explored and opportunities will be given for students to engage in their own original writing using a range of imagery and linguistic devices. Students will also apply persuasive writing skills from Year 8. In addition, transactional texts, such as leaflets, speeches and articles, will be explored and analysed.

Spring Term 1 – World Affairs
Developing a knowledge and understanding of current world events and cultures will be explored in this scheme, allowing students to explore context, alternative values and new perspectives. Comprehension and language analysis will be developed and practised. Students will explore a range of contemporary non-fiction texts, exploring how information is presented and its impact, as well as applying these techniques to their own transactional writing.

Spring 2 – Society and Class in Drama
Students will be exposed to a range of extracts which will build upon their knowledge of theatre, performance and drama with a focus on 20th century society through a range of plays.

Summer Term – Childhood
Preparing students for the demands of the reading analysis needed for non-fiction texts as part of the component 2 Language exam, both 19th and 21st century extracts will be studied and compared. This scheme allows students to analyse and apply reading analysis skills, deepening understanding and application of the skills needed in the exams. There will also be the opportunity to explore narrative and transactional writing as part of this scheme.

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Year 9 Curriculum

Assessment

Students will be assessed formatively throughout schemes through the use of questioning, a range of tasks and regular marking of books using the three week department policy through a range of different feedback styles.

Throughout the year, students will be assessed following the whole school assessment calendar. This will include both a reading comprehension and writing task, which will be assessed and moderated in department. These grades will be communicated to parents formally.

Other Information

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Year 9 Curriculum

Faculty	**Humanities**
Head of Faculty	**Mrs K Causier**
HoF Email	**kcausier@airedaleacademy.com**
Faculty Staff	**K Causier, S Chambers & S Le Gall**

Subject Name	French
Periods per week	2
Core / Option	Option
Qualification	AQA GCSE French
Weblink	http://www.aqa.org.uk/subjects/languages/gcse/french-8658

Overview

The GCSE will cover 4 skill areas of Listening, Speaking, Reading and Writing. Each of the skill areas will be examined in a final linear exam. Each skill is worth 25% and students will take Foundation or Higher level.

Units Studied

Core content

Students study all of the following themes on which the assessments are based.

Theme 1: Identity and culture

Theme 2: Local, national, international and global areas of interest

Theme 3: Current and future study and employment

Assessment

GCSE French has a Foundation Tier (grades 1–5) and a Higher Tier (grades 4–9). Students must take all four question papers at the same tier. All question papers must be taken in the same series.

Students are encouraged to invest in the following revision booklet located at:
https://www.amazon.co.uk/GCSE-French-AQA-Revision-Guide/dp/1847622852

Other Information

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Year 9 Curriculum

Faculty	**Humanities**
Head of Faculty	**Mrs K Causier**
HoF Email	**kcausier@airedaleacademy.com**
Faculty Staff	**R Duddridge, K Elliot & O Robinson**

Subject Name	Geography
Periods per week	2
Core / Option	Core
Qualification	AQA GCSE Geography
Weblink	www.aqa.org.uk/GeogA

Overview

What will I study?
Over the three year GCSE course you will cover lots of interesting topics.

Living with the physical environment
Discover more about the challenge of natural hazards and the living world, physical landscapes of the United Kingdom and human interaction with them. This unit develops an understanding of the tectonic, geomorphological, biological and meteorological processes and features in different environments. It provides you with the knowledge about the need for management strategies governed by sustainability and consideration of the direct and indirect effects of human interaction with the Earth and the atmosphere.

Challenges in the human environment
This unit is concerned with human processes, systems and outcomes and how these change both spatially and temporally. You will develop an understanding of the factors that produce a diverse variety of human environments; the dynamic nature of these environments that change over time and place; the need for sustainable management; and the areas of current and future challenge and opportunity for these environments.

Units Studied

River Landscapes - Pupils will study a range of fluvial landforms and processes. Pupils will also look at flooding in both a HIC and an LIC.

Living World – Studying the biomes that exist across the globe. Focussing on rainforest environments pupils will study plant adaptation as well as impacts of deforestation. We will also study hot deserts and how people survive and live in them.

Natural Hazards –Focus upon earthquakes, there causes and the impact that they have on both HICs and LICs.

Weather Hazards – Looking at the formation of tropical storms and the impact that they have. In addition we will look at the potential impacts of climate change and global warming.

Fieldwork – A field study in a coastal area, using a wide variety of data collection methods

- Distinctive landforms result from different processes.
- Rising sea level will have important consequences for people living in the coastal zone.
- Coastal erosion can lead to cliff collapse. This causes problems for people and the environment.
- There is discussion about how the coast should be managed. There is debate about the costs and benefits of 'hard' and 'soft' engineering.
- Coastal areas provide a unique environment and habitat. There is a need for conservation and this leads to conflict with other land uses.

Population Change – The key ideas studied are:

- Over time the global population increases and the population structures of different countries change.
- A range of strategies has been tried by countries experiencing rapid population growth.
- An ageing population impacts on the future development of a country.
- Population movements impact on both the source regions of migrants and the receiving countries.

Tourism – The key ideas studied are:

- The global growth of tourism has seen the exploitation of a range of different environments for holiday makers.
- Effective management strategies are the key to the continuing prosperity of tourist areas in the UK.
- Mass tourism has advantages for an area but strategies need to be in place to reduce the likelihood of long-term damage.
- Extreme environments are susceptible to environmental damage from the development of tourism.
- Sustainability requires the development of ecotourism.

Assessment

You'll have three written exams. Papers 1 and 2 are 1 hour 30 minutes long and together, they contribute to 70% of your final mark. Paper 3 is 1 hour 15 minutes and contributes to the final 30% of your GCSE grade.

Other Information

Where will GCSE Geography take you?
In GCSE Geography you will learn how today's world was shaped and understand the challenges we face in the future. You'll also examine the Earth's natural resources and the increasing battles between the man-made and natural world. This knowledge, paired with your essential curiosity, will give you the sought-after transferable skills for success in further education and the workplace.

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Year 9 Curriculum

Faculty	**Humanities**
Head of Faculty	**Mrs K Causier**
HoF Email	**kcausier@airedaleacademy.com**
Faculty Staff	**L Snaith, H Tordoff and C Hannam**

Subject Name	GCSE History
Periods per week	2
Core / Option	Core
Qualification	Edexcel GCSE History
Weblink	https://qualifications.pearson.com/en/qualifications/edexcel-gcses/history-2016.html

Overview

History sparks pupils' curiosity and imagination, moving and inspiring them with the dilemmas, choices and beliefs of people in the past. It helps pupils develop their own identities through an understanding of history at personal, local, national and international levels. It helps them to ask and answer questions of the present by engaging with the past. Pupils find out about the history of their community, Britain, Europe and the world. They develop a chronological overview that enables them to make connections within and across different periods and societies.

Units Studied

Term One:

Medicine Through Time, c.1250 – 1700

- Medieval Medicine
- Renaissance Medicine

Term Two:

Medicine Through Time, 1700 – Present

- Industrial Revolution Medicine
- Modern Medicine

Term Three:

Medicine on the British Western Front in WWI

- Trench warfare
- The Medical Line
- New medical technologies

Throughout the three terms students are able to develop their source analysis and analytical skills through a variety of activities. They explore criteria for making judgements about the historical significance of events, people and changes. They investigate historical problems and issues, asking and beginning to refine their own questions.

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Year 9 Curriculum

Assessment

Students will be assessed on a termly basis using a combination of end of unit tests and assessed pieces of writing. Students will be assessed on their historical knowledge and ability to interpret, analyse and evaluate historical evidence.

They will be assessed in accordance with the Edexcel exam questions.

Final Assessments to be taken in Year 11:

Paper 1 – Medicine Through Time and WWI medical depth study = 30% of overall GCSE

Paper 2 – Early Elizabethan England, 1558-1588; Superpower Relations and the Cold War 1941-1991 = 40% of overall GCSE

Paper 3 – Weimar and Nazi Germany, 1918 – 1939 = 30% of overall GCSE

Other Information

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Year 9 Curriculum

Faculty	**Business & ICT**
Head of Faculty	**Mr L Wharin**
HoF Email	**lwharin@airedaleacademy.com**
Faculty Staff	**L Robinson & S Dakin**

Subject Name	ICT
Periods per week	2
Core / Option	Core

Overview

During Y9 students will study elements of Media, IT and Computing in their IT curriculum. This will give students the opportunity to study a variety of ICT pathways moving forward. The students will develop a number of skills including problem solving and design based skills.

Units Studied

Media

- Graphics design - during this topic students will create an adapt their own digital graphics for publishing products
- Video editing - students will be given the opportunity to film and edit their own video. They will also learn about how meaning is created to communicate messages in films
- Web design - Students will learn how to create a website from scratch including designing and creating their own interactive features

IT- Information Technology

- Spreadsheets - During this topic students will learn how to create and analyse spreadsheets in real life situations
- User interfaces - Students will study the different types of user interface before creating their own and will also consider how these are used in the real world

Computer Science

- Programming - Students will work on their problem solving skills and continue to develop their skills using Python
- Computer threats - Students will look at dangers of using the internet and potential threats when using a computer
  Modern world computing - Students will learn about new technologies that have been introduced to make communication more efficient

Assessment

Formal assessment every half term.

Other Information

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Year 9 Curriculum

Faculty	**Maths**
Head of Faculty	**Mrs L Thompson**
HoF Email	**lthompson@airedaleacademy.com**
Faculty Staff	**L Thompson, S Moore, S Kemp, M Arbon, M Robinson, L Greaves, M Aramburu, K Durant, J Hough and H Rotherforth**

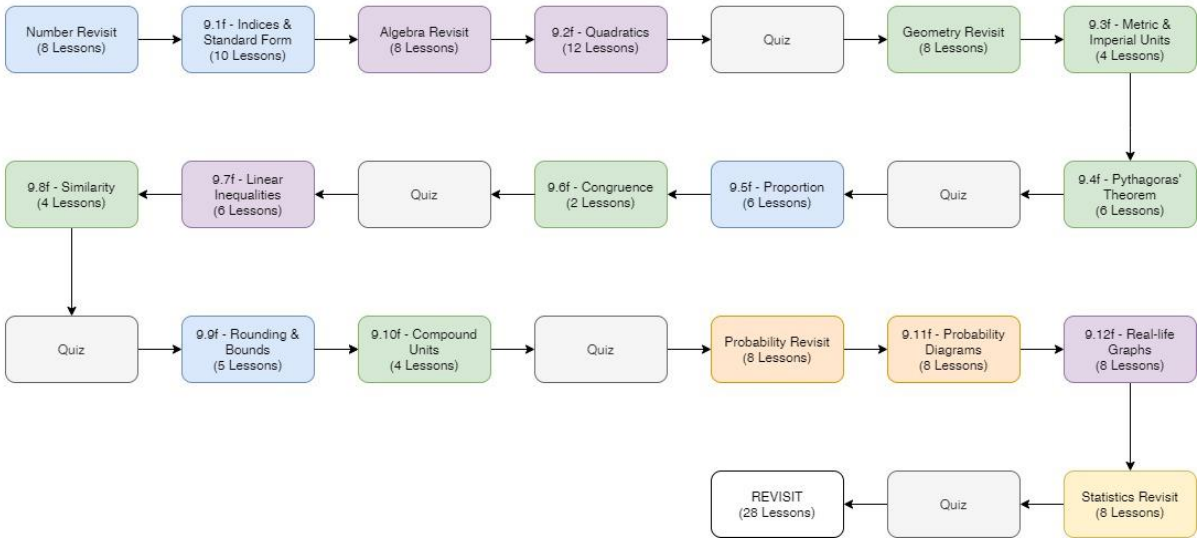
Subject Name	GCSE Maths
Periods per week	4
Core / Option	Core
Qualification	GCSE Maths
Weblink	https://www.ocr.org.uk/qualifications/gcse/mathematics-j560-from-2015/

Overview

During year 9 pupils will be taught mathematics from the areas of number; algebra; geometry and measures; statistics; probability.

Units Studied

Year 9 Foundation



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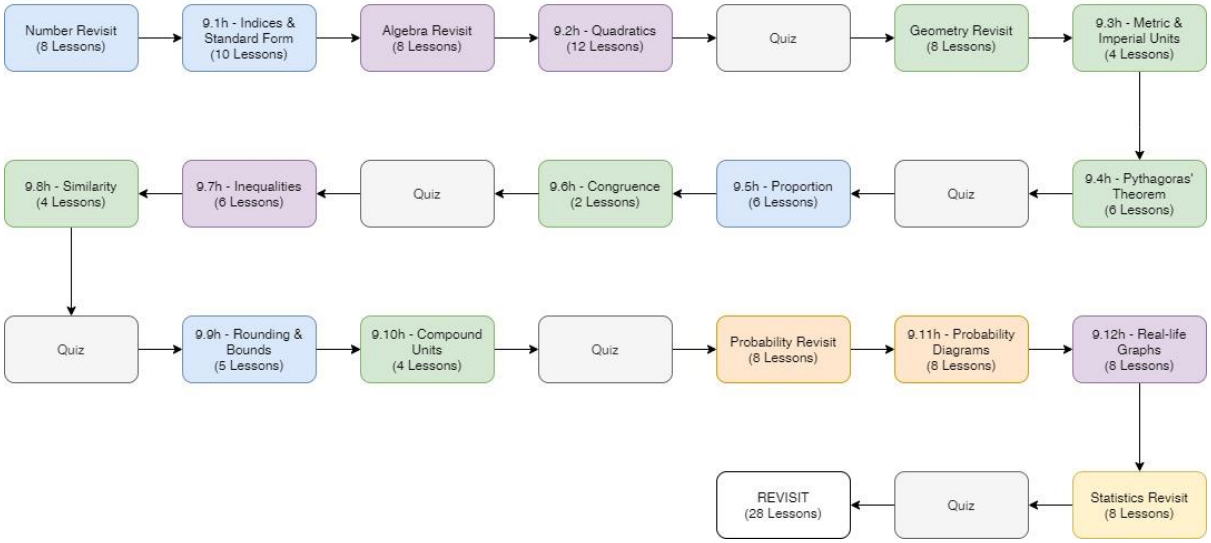
Year 9 Curriculum

Year 9 Higher



Assessment

In quizzes students are expected to demonstrate their learning from all of the units that have been delivered since the last quiz took place.

Students are expected to take PRIDE in their work. We will expect to see:

- Underlined learning objective and date
- Worked examples with any additional notes
- Numbered questions
- Clear method with all workings out shown
- Students marking work and responding to feedback in purple pen

Homework will be set on www.hegartymaths.com and students who wish to undertake further independent study use this platform for that too. Students having issues accessing HegartyMaths should speak to their maths teacher.

Other Information

Students should come to lesson equipped with: black/blue pen, purple pen, pencil, ruler, and a scientific calculator (we recommend the Casio fx83-GTX).

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Year 9 Curriculum

Faculty	**Performing Arts**
Head of Faculty	**Mr G Woodfine**
HoF Email	**gwoodfine@airedaleacademy.com**
Faculty Staff	**G Woodfine**

Subject Name	Music
Periods per week	1
Core / Option	Core

Overview

Intent – The National Curriculum for music aims to ensure that all pupils perform, listen to, review and evaluate music, sing with confidence, create and compose music and understand and explore how music is created, produced and communicated.

Implementation - Our curriculum ensures students study a wide range of music, including that of the great composers, through composition, listening and performance opportunities. Students learn to perform and compose on a variety of instruments and are encouraged to sing with confidence. Musical vocabulary is consistently so that students are able to appraise articulately.

Impact – We aim to develop self confident, creative and proud musicians who are able to compose, perform and listen with increasing discrimination to a wide genre of music.

Units Studied

These units bring together knowledge gained in years 7 and 8 whilst also providing a solid foundation for BTEC.

UNIT 1: The Blues - This project focuses on typical devices used in blues music with a focus on walking bass, 7th chords and improvisation. There is an emphasis on covering a song in a blues style.

UNIT 2 – Cover Song -This project uses the topics we have previously studied across KS3 to compose a cover song using musical devices, instrumentation and the elements of music associated with a specific genre.

UNIT 3 – Remix - This project uses the technology topics we have previously studied across KS3 to compose a cover song using musical devices, instrumentation and the elements of music associated with a specific genre. It also brings together our understanding of technology and production techniques.

UNIT 4 – Professional Music Industry Skills -This project transitions into BTEC by exploring the professional skills required in the music industry with a focus on improving composition or performance skills.

Assessment

Each topic has an interim and final assessment. Assessment will focus on a composition or performance alongside a listening or knowledge based quiz.

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Year 9 Curriculum

Other Information

At Airedale we have a thriving extra-curricular programme that will further students development in music. In addition, students can take extra-lessons on a variety of instruments.

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Year 9 Curriculum

Faculty	**Performing Arts**
Head of Faculty	**Mr G Woodfine**
HoF Email	**gwoodfine@airedaleacademy.com**
Faculty Staff	**Mrs. J Boner and Mrs. T Bell**

Subject Name	Drama
Periods per week	1
Core / Option	Mini-Option

Overview

Drama is a practical based subject

Units Studied

Term 1 - Devising and performance
To practically explore drama skills and study ways of creating for performance

Term 2 - Page to stage
Analysing extracts from script to understand the directors' intentions.

Term 3 - Exploring Practitioners
Develop understanding of key features used by different practitioners

Other Information

- Extra-curricular opportunities
- Theatre trips and visits
- Whole school production opportunities

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Year 9 Curriculum

Faculty	**Performing Arts**
Head of Faculty	**Mr G Woodfine**
HoF Email	**gwoodfine@airedaleacademy.com**
Faculty Staff	**Miss J Annakin and Mrs. R Nickerson**

Subject Name	Musical Theatre
Periods per week	1
Core / Option	Mini-Option

Overview

Musical Theatre is a practical based subject

Units Studied

Term 1- Developing skills
Integration of Dance, singing and acting through practical workshops.

Term 2- History of Musical Theatre
Exploring and developing an understanding of roles and responsibilities in Performing arts.

Term 3- Work in Role
Practical exploration of working in a role to devise a performance.

Other Information

- Extra-curricular opportunities
- Theatre trips and visits
- Whole school production opportunities

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Year 9 Curriculum

Faculty	**PE, Health & Wellbeing**
Head of Faculty	**Mr R Singleton**
HoF Email	**rsingleton@airedaleacademy.com**
Faculty Staff	**K Ball, R Singleton, E Phelan, M Dye, E Harrap and D Lowe**

Subject Name	PE
Subject Lead	Mrs K Ball
Subject Lead email	kball@airedaleacademy.com
Periods per week	2
Core / Option	Core

Overview

The Physical Education curriculum at Airedale Academy enables all pupils to enjoy and succeed in many kinds of physical activity. Students will develop a wide range of skills and the ability to use tactics, strategies and compositional ideas to perform successfully. They will develop the confidence to take part in different physical activities and learn about the value of healthy, active lifestyles. Physical Education helps students to discover what they like to do and what their aptitudes are at school, and how and where to get involved in physical activity helps them make informed choices about lifelong physical activity.

Units Studied

Students are encouraged to take on different roles and responsibilities, including leadership, coaching and officiating. Lessons are taught through game orientated activities to develop students 'tactical ability and knowledge of rules. Lessons explore exciting new sports from around the world and give students the opportunity to enhance their engagement with the new concepts, processes and techniques.

Sporting areas including;

- Invasion games - football, rugby, netball, basketball, tchoukball, handball, american football, unihockey
- Net and wall activities – badminton, table tennis, tennis, volleyball
- Striking and fielding sports – rounders, baseball, table tennis, cricket
- Physical Challenge – athletics, orienteering
- Artistic performance– trampolining, gymnastics
- Health and Fitness – circuits, weights, fitness suite, cross country, method of training, bikes

Assessment

Assessment is frequent throughout lessons in the form of Q&A and through performance. At the end of each unit, students are given the opportunity to demonstrate their overall skills and capabilities in that activity. Attitude to learning grades are also given to students in line with the school policy.

Other Information

Extra-curricular activities provide great opportunities for students to participate in an Airedale

Academy team. A varied extra-curricular programme allows different opportunities for students to become involved in physical activity with the option of specific coaching to improve performance and maintain participation. Enrichment opportunities such as educational trips, Inter-School sporting events and coaching courses are also offered. Airedale Academy is proud to have a designed a comfortable and smart PE kit that students wear with pride in all lessons.

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Year 9 Curriculum

Faculty	**Science**
Head of Faculty	**Mr S Miller**
HoF Email	**smiller@airedaleacademy.com**
Faculty Staff	S Miller, M Sanderson, M Matthewman, J Milner, A Howse, T Wadsworth, J Halman, E Walker, D Cox

Subject Name	Science
Periods per week	5
Core / Option	Core

Overview

Students follow the "10 Big Ideas" themes throughout Y7 to Y9

		COMPONENTS			
	BIG IDEA	PART 1		PART 2	
		Complexity of topic increases →			
COMPOSITES	Electromagnets	Resistance & current	Voltage	Magnetism	Electromagnetism
	Matter	Particle model	Separating mixtures	Periodic table	Elements
	Organisms	Movement	Cells	Breathing	Digestion
	Forces	Speed	Gravity	Contact forces	Pressure
	Reactions	Metals/non-metals	Acids and alkalis	Chemical energy	Types of reaction
	Genes	Variation	Human reproduction	Evolution	Inheritance
	Energy	Energy costs	Energy transfer	Work	Heating & cooling
	Earth	Earth structure	Universe	Climate	Earth resources
	Waves	Sound	Light	Wave effects	Wave properties
	Ecosystem	Interdependence	Plant reproduction	Respiration	Photosynthesis

Units Studied

Year 9	Energy Part 2	Earth Part 2	Waves Part 2	Genes Part 2	**Start of GCSEs or Entry Level**

Energy

Topic	NC statements to be covered
Work Pt 2	• work done and energy changes on deformation • comparing the starting with the final conditions of a system and describing increases and decreases in the amounts of energy associated with movements, temperatures, changes in positions in a field, in elastic distortions and in chemical compositions • using physical processes and mechanisms, rather than energy, to explain the intermediate steps that bring about such changes • apply mathematical concepts and calculate results

Heating and cooling Pt 2	• internal energy stored in materials • energy changes on changes of state (qualitative) • conservation of material and of mass, and reversibility, in melting, freezing, evaporation, sublimation, condensation, dissolving • changes with temperature in motion and spacing of particles • similarities and differences, including density differences, between solids, liquids and gases • Brownian motion in gases • make predictions using scientific knowledge and understanding – conservation of mass

Earth

Topic	NC statements to be covered
Climate Pt 2	• the composition of the atmosphere • the production of carbon dioxide by human activity and the impact on climate • present reasoned explanations, including explaining data in relation to predictions and hypotheses – data on climate change
Earth resources Pt 2	• Earth as a source of limited resources and the efficacy of recycling • properties of ceramics, polymers and composites (qualitative) • the order of metals and carbon in the reactivity series • the use of carbon in obtaining metals from metal oxides • interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions - reactivity data and experiment

Waves

Topic	NC statements to be covered
Wave effects Pt 2	• waves on water as undulations which travel through water with transverse motion; these waves can be reflected, and add or cancel – superposition
Wave properties Pt 2	• the transmission of light through materials: absorption, diffuse scattering and specular reflection at a surface • use of ray model to explain imaging in mirrors, the pinhole camera, the refraction of light and action of convex lens in focusing (qualitative); the human eye • light transferring energy from source to absorber, leading to chemical and electrical effects; photosensitive material in the retina and in cameras

Genes

Topic	NC statements to be covered

Evolution Pt 2	• the variation between species and between individuals of the same species meaning some organisms compete more successfully, which can drive natural selection • changes in the environment which may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction • understand that scientific methods and theories develop as earlier explanations are modified to take account of new evidence and ideas, together with the importance of publishing results and peer review
Inheritance Pt 2	• heredity as the process by which genetic information is transmitted from one generation to the next • a simple model of chromosomes, genes and DNA in heredity, including the part played by Watson, Crick, Wilkins and Franklin in the development of the DNA model

Assessment

For each Big Idea, students will complete:

- one 'response time' – which will include feedback provided using the whole class feedback proforma. Students will be expected to response to feedback provided using DOT marking.
- one multiple-choice, end of topic test

Homework is set weekly using Educake and will consist of approximately 9-15 questions.

In addition, students will also undertake written papers in line with the academy's assessment calendar.

Other Information

The Science Faculty holds regular revision sessions after school. Ask your teacher for more information.

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Year 9 Curriculum

Faculty	**Science**
Head of Faculty	**Mr S Miller**
HoF Email	**smiller@airedaleacademy.com**
Faculty Staff	S Miller, M Sanderson, M Matthewman, J Milner, A Howse, T Wadsworth, J Halman, E Walker, D Cox

Subject Name	Entry Level Science
Periods per week	5
Core / Option	Core

Overview

Students study 6 components and will be awarded level 1, 2 or 3 for either Single or Dual Award Entry Level Certificate.

Units Studied

The six components meet the Programme of Study Key Stage 4 requirements.

Biology

1. Component 1- Biology: The human body
2. Component 2 - Biology: Environment, evolution and inheritance

Chemistry

3. Component 3 - Chemistry: Elements, mixtures and compounds
4. Component 4 - Chemistry: Chemistry in our world

Physics

5. Component 5 - Physics: Energy, forces and the structure of matter
6. Component 6 - Physics: Electricity, magnetism and waves

Assessments

For each component students will complete:

- one 'response time' – which will include feedback provided using the whole class feedback proforma. Students will be expected to response to feedback provided using DOT marking.
- one 'Teacher-Devised Assessment'
- one 'Externally-Set Assignment'

Homework is set weekly using Educake and will consist of approximately 9-15 questions.

In addition, students will also undertake written papers in line with the academy's assessment calendar.

Other Information

The Science Faculty holds regular revision sessions after school. Ask your teacher for more information.

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Year 9 Curriculum

Faculty	**Science**
Head of Faculty	**Mr S Miller**
HoF Email	**smiller@airedaleacademy.com**
Faculty Staff	S Miller, M Sanderson, M Matthewman, J Milner, A Howse, T Wadsworth, J Halman, E Walker, D Cox

Subject Name	GCSE Combined Science (Trilogy)
Periods per week	5
Core / Option	Core
Qualification	AQA GCSE in Combined Science: Trilogy
Weblink	http://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-8464

Overview

Students will gain 2 GCSEs through this route. The course is made up of 24 units covering the key concepts in Biology, Chemistry and Physics.

Units Studied

Biology Topics

1: Cell biology

In this topic, students will learn about: eukaryotes and prokaryotes, animal and plants cells, cell specialisation, cell differentiation, microscopy, chromosomes, mitosis and the cell cycle, stem cells, diffusion, osmosis and active transport.

2: Organisation

In this topic, students will learn about: organisational hierarchy, the human digestive system, the heart and blood vessels, blood, coronary heart disease: a non-communicable disease, health issues, the effect of lifestyle on some non-communicable diseases, cancer, plant tissues and organs and plant organ systems.

3: Infection and response

In this topic, students will learn about: communicable diseases, viral diseases, bacterial diseases, fungal diseases, protist diseases, human defence systems, vaccinations, antibiotics and painkillers, discovery and development of drugs.

4: Bioenergetics

In this topic, students will learn about: the photosynthetic reaction, rates of photosynthesis, uses of glucose from photosynthesis, aerobic and anaerobic respiration, response to exercise and metabolism.

5: Homeostasis and response

In this topic, students will learn about: the structure and function of the nervous system, the human endocrine system, controlling blood glucose concentration, maintaining water and nitrogen balance in the body, hormones in human reproduction and contraception

6: Inheritance, variation and evolution

In this topic, students will learn about: sexual and asexual reproduction, meiosis, DNA and the genome, genetic inheritance, inherited disorders, sex determination, variation, evolution, selective breeding, genetic engineering, evidence of evolution, fossils, extinction, resistant bacteria and classification.

7: Ecology

In this topic, students will learn about: communities, abiotic factors, biotic factors, adaptations, levels of organisation, how material are cycled, biodiversity, waste management, land use, deforestation, global warming and maintaining biodiversity

8: Key ideas in Biology

The complex and diverse phenomena of the natural world can be described in terms of a small number of key ideas in biology. These key ideas are of universal application, and we have embedded them throughout the subject content. They underpin many aspects of the science assessment.

Chemistry Topics

9: Atomic structure and the periodic table

In this topic, students will learn about: atoms, elements and compounds, mixtures, scientific models of the atom, relative electrical charges of subatomic particles, size and mass of atoms, electronic structure, the periodic table, development of the periodic table, metals and non-metals, group 0, group 1 and group 7 elements.

10: Bonding, structure and the properties of matter

In this topic, students will learn about: chemical bonds, ionic bonding, ionic compounds, covalent bonding, metallic bonding, the three states of matter, the state symbols, properties of ionic compounds, polymers, giant covalent structures, properties of metals and alloys, metals as conductors, diamond, graphite, grapheme and fullerenes.

11: Quantitative chemistry

In this topic, students will learn about: conservation of mass and balanced chemical equations, relative formula mass, mass changes when a reactant or product is a gas, moles, amounts of substances in equations, uses moles to balance equations, limiting reactants and concentration of solutions.

12: Chemical changes

In this topic, students will learn about: metal oxides, the reactivity series, extraction of metals and reduction, oxidation and reduction in terms of electrons, reactions of acids with metals, neutralisation of acids and salt production, soluble salts, the pH scale and neutralisation, strong and weak acids, the process of electrolysis, electrolysis of molten ionic compounds, using electrolysis to extract metals, electrolysis of aqueous solutions and representation of reactions at electrodes as half equations.

13: Energy changes

In this topic, students will learn about: energy transfer during exothermic and endothermic reactions, reaction profiles and the energy change of reactions.

14: The rate and extent of chemical change

In this topic, students will learn about: calculating rates of reactions, factors which affect the rates of chemical reactions, collision theory and activation energy, factors that increase the rate of reaction, catalysts, reversible reactions, energy changes and reversible reactions, equilibrium, and the effect of changing different conditions.

15: Organic chemistry

In this topic, students will learn about: crude oil, hydrocarbons and alkanes, fractional distillation and petrochemicals, properties of hydrocarbons, cracking and alkenes.

16: Chemical analysis

In this topic students will learn about: pure substances, formulations, chromatography, tests for hydrogen, oxygen, carbon dioxide and chlorine.

17: Chemistry of the atmosphere

In this topic, students will learn about: the proportions of different gases in the atmosphere, the Earth's early atmosphere, how oxygen increased, how carbon dioxide decreased, human activities which contribute to an increase in greenhouse gases in the atmosphere, global climate change, the

carbon footprint and its reduction, atmosphere pollutants from fuels and properties and effects of atmospheric pollutants.

18: Using resources

In this topic, students will learn about: using the Earth's resources and sustainable development, portable water, waste water treatment, alternative methods of extracting metals, life cycle assessment and ways of reducing the use of resources.

19: Key ideas in Chemistry

The complex and diverse phenomena of the natural world can be described in terms of a small number of key ideas in biology. These key ideas are of universal application, and we have embedded them throughout the subject content. They underpin many aspects of the science assessment.

Physics Topics

20: Energy

In this topic, students will learn about: energy stores and systems, changes in energy, energy changes in systems, work, power, energy transfers in a system, efficiency and national and global energy resources.

21: Electricity

In this topic, students will learn about: standard circuit diagram symbols, electrical charge and current, current, resistance and potential difference, resistors, direct and alternating current, mains electricity, powder, energy transfers in everyday appliances and the National Grid

22: Particle model of matter

In this topic, students will learn about: density of materials, changes of state, internal energy, temperature changes in a system and specific heat capacity, changes of heat and specific latent heat and particle motion in gases

23: Atomic structure

In this topic, students will learn about: the structure of the atom, mass number, atomic number and isotopes, the development of the model of the atom, radioactive decay and nuclear decay, nuclear equations, half-lives and the random nature of radioactive decay and radioactive contamination.

24: Forces

In this topic, students will learn about: scalar and vector quantities, contact and non-contact forces, gravity, resultant forces, work done and energy transfer, forces and elasticity, describing motion along a line, forces, accelerations and Newton's Law of motion, forces and braking.

25: Waves

In this topic, students will learn about: transverse and longitudinal waves, properties of waves, type of electromagnetic waves, uses and applications of electromagnetic waves,

26: Magnetism and Electromagnetism

In this topic, students will learn about: poles of a magnet, magnetic fields, electromagnetism, Fleming's left-hand rule and electric motors.

27: Key ideas in Physics

The complex and diverse phenomena of the natural world can be described in terms of a small number of key ideas in biology. These key ideas are of universal application, and we have embedded them throughout the subject content. They underpin many aspects of the science assessment.

Assessments

For each topic, students will complete:

- one 'response time' – which will include feedback provided using the whole class feedback proforma. Students will be expected to response to feedback provided using DOT marking.
- one multiple-choice, end of topic test

Homework is set weekly using Educake and will consist of approximately 9-15 questions.

In addition, students will also undertake written papers in line with the academy's assessment calendar.

For the external exams, the following applies:

6 assessments in Year 11, all 1hr 15 minutes each:

Biology Paper 1: Topics 1-4

Biology Paper 2: Topics 5-7

Chemistry Paper 1: Topics 8-12

Chemistry Paper 2: Topics 13-17

Physics Paper 1: Topics 18-23

Physics Paper 2: Topics 24-26

Students are also required to carry out 21 'required practicals', which will be examined in the two external tests.

Year 9 Curriculum

This course is double weighted, so students will be graded on a seventeen-point scale, ranging from 1-1 (lowest) to 9-9 (highest)

Other Information

The Science Faculty holds regular revision sessions after school. Ask your teacher for more information. A range of revision guides are on sale. See Mr Miller for more details.

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Year 9 Curriculum

Faculty	**PE, Health & Wellbeing**
Head of Faculty	**Mr R Singleton**
HoF Email	**rsingleton@airedaleacademy.com**
Faculty Staff	**Various**

Subject Name	Student Wellbeing
Subject Lead	Mrs J Coleyshaw
Subject Lead email	jcoleyshaw@airedaleacademy.com
Periods per week	Form Time
Core / Option	Core

Overview

Student Wellbeing allows students to develop their personal skills as well as their understanding of the wider world outside of school and how they can keep themselves safe from harm. It gives pupils the opportunity to learn about topics they would not learn about in conventional lessons within set lessons and also through guest speakers.

Units Studied

Student wellbeing is split into six different topics of learning each with a different teaching focus throughout the year pupils will look at risk and keeping themselves safe, finance and career pathways, sex and relationships, identity society and equality, citizenship and health and wellbeing. Within each of these areas pupils will do different activities including discussions, debates, group work and individual research tasks.

Assessment

Pupils will assess themselves at the beginning and the end of each of the topics of work against set knowledge based criteria, they will also reflect on their own learning throughout each unit of work to see how their attitudes, thoughts and opinions of different topics have changed.

Other Information