



Ark Charter
Academy

Autumn Term

Sixth Form

Parent Information Booklet

This booklet contains details of the curriculum that your child will be studying in the summer term in each subject. It also gives information regarding how the curriculum links to SMSC (social, moral, spiritual and cultural) and our Christian values of Justice, Respect and Courage.

Please contact a.johnson@charteracademy.org.uk if you have any other queries about the curriculum.



Curriculum covered this term:

Year 13:

In the Autumn Term, year 13 students will be continuing their studies in preparation for their summer exams. The next text to be covered in lessons is Othello by William Shakespeare; this text will appear on their A Level drama paper which is worth 30% of their overall final grade. Students will also cover the pre-1900 poetry unit which focuses on the Romantic Movement. A drama mock exam will be sat at the end of the first half term and a poetry mock exam will be sat at the end of the second half term.

Alongside this, students will also be completing and finalising their coursework which they started last year; this component of the course is worth 20% of their final overall grade.

SMSC links:

Year 13:

Social: In their study of poetry and plays, students will explore the ways in which other cultures and societies work and the effect that this can have on individuals.

Moral: Students will analyse the dilemmas many characters face in the plays and the collection of poems. They will explore the motivations of particular characters and certain moral issues both verbally and in their writing. Students will develop their confidence in creating and expressing their thoughts and feelings and responding to the thoughts and feelings of others.

Spiritual: In the study of poetry, pupils will be encouraged to use their imagination and creativity in their learning, as well as a willingness to reflect on their experiences. In their study of a modern classic, students will have ample opportunity to take part in group discussions on themes, actions, consequences and ethics.

Cultural: Students will be studying literary heritage poems and texts and the unit develops students' cultural capital.

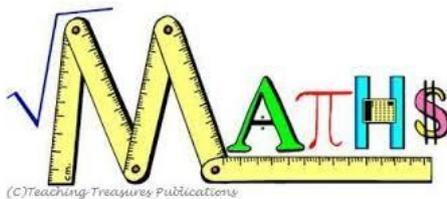
Christian Values links:

Year 13:

Justice: In this unit achievement will be celebrated through peer marking which expresses thankfulness, and by sharing objectives and criteria in the assessment process with the students, there is transparency, fairness and Integrity in our judgements.

Respect: Students will develop skills in speaking and listening during class discussions about various texts, creating an environment of trust, for ideas to be expressed and received with compassion

Courage: In their study of literature, students will recognise that taking a moral stand or tackling a challenge will require courage.



A LEVEL MATHS

Students have already taken the first 3 modules for A level Maths (C1, C2, S1) and so this year they will be taking the following modules: C3, C4 and M1. Students will be expected to be up to date with all of the Maths covered in C1 and C2 during year 12. There will be an exam on both C1 and C2 in the first week back so students will be expected to have done some revision during the summer break.

Topics to be covered for C3:

- Review of differentiation and partial fractions covered in the summer term.
- Functions including exponential and log functions.
- Numerical methods
- Transformation of graphs
- Trigonometry:
 - Further trigonometric identities and their applications.

Topics for C4:

- Partial fractions.
- Coordinate geometry (parametric equations)
- The binomial expansion.

To be covered in the spring term:

- Differentiation (Functions given parametrically, the exponential function)
- Vectors (scalar product, the vector equation of a straight line)
- Methods of integration: Partial fractions, standard patterns, Integration by parts, integration by substitution)

Topics for M1:

- Mathematical modelling in Mechanics
- Kinematics of a moving particle
- Dynamics of a moving particle

To be covered in the spring term:

- Statics of a particle
- Moments
- Vectors

Resources:

- Text books: One for each module. We are covering all the content included in these text books.
- Past papers and mark schemes: Students receive copies from past papers. They should work on the papers and mark them before handing them to their teachers. They can be found on <http://qualifications.pearson.com/en/support/support-topics/exams/past-papers>.
- Exam solutions – This is a website where students can work through the topics taught in lessons and look at how to approach different exam questions. <https://www.examsolutions.net/a-level-maths/edexcel/>

SMSC links:

They will have the opportunity to:

- Sustain their self-esteem in the learning experience
- Develop their capacity for critical and independent thought
- Foster their emotional life and express their feelings
- Listen and respond appropriately to the views of others
- Gain the confidence to cope with setbacks and learn from mistakes
- Take initiative and act responsibly with consideration for others
- Display a sense of belonging and an increasing willingness to participate

Christian Values links:

Justice

- All students will be encouraged to help create an inclusive environment where all opinions and ideas are treated equally
- Peer marking will play an ever increasing role for students to understand achievement

Courage

- Students will be encouraged to not be afraid to make mistakes
- Students will always be encouraged to challenge themselves to harder or star questions
- Students will be encouraged to stay motivated, even when they find things challenging and to have the courage to explore and discover new ways to solve the problem

Respect

- Respect the teacher and other students by listening carefully to all discussions
- Respect other students' opinions when working in pairs and groups



Biology

In Y13 A2 biology, students will build upon the understanding of biochemistry, cellular biology, genetics and population science they have developed throughout year 12. Each topic will challenge them to deepen their appreciation for the complexities of life and its place on our planet.

Students will also cultivate the revision and examination techniques they have begun to show in their AS course, to ensure that they have a robust grasp of the demands of the specification and how to show the examiner what they know.

Y13 Autumn Term

Energy transfers in & between organisms

Photosynthesis, Respiration, Energy & ecosystems, Nutrient Cycles

Organisms respond to changes in their internal and external environments

Stimuli (internal and external) are detected and lead to a response, coordination of the nervous system, skeletal muscles – contraction, innervation & effectors, homeostasis

Y13 Spring Term

Genetics, populations, evolution & ecosystems

Inheritance, populations, evolution & speciation, populations in ecosystems

Control of gene expression

DNA sequence alteration changes protein structure, control of gene expression, genome projects, gene technologies in industry and medicine

Y13 Summer Term

Revision

Revision of every aspect of AS & A2 Biology, including exam technique

SMSC links:

Students will have the opportunity to:

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- Develop their capacity for critical and independent thought
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- Listen and respond appropriately to the views of others
- Gain the confidence to cope with setbacks and learn from mistakes

- Take initiative and act responsibly with consideration for others
- Display a sense of belonging and an increasing willingness to participate

Christian Values links:

Justice: In these units achievement will be celebrated by encouraging all students to participate by creating an inclusive environment, listening and watching student's work, peer marking and by sharing objectives and criteria in the assessment process with the students. Regular feedback will be given throughout the term both through peer assessment and teacher feedback in student books.

Respect: Students will develop skills in listening during class discussions about various scientific theories, creating an environment of trust. Students will be encouraged to form their own opinions and respect those of others.

Courage: By listening and discussing scientists students will understand that that scientists can take a moral stand and contribute to historical or moral issues and that this requires courage. The students will develop courage by sharing their ideas in front of others.



Chemistry

In Y13 A2 chemistry, students will build upon the understanding of the inorganic, physical and organic chemistry they have developed throughout year 12. Each topic will challenge them to deepen their appreciation for the how the chemistry of the world around us enables everything to function.

Students will also cultivate the revision and examination techniques they have begun to show in their AS course, to ensure that they have a robust grasp of the demands of the specification and how to show the examiner what they know.

Y13 Autumn Term

Physical Chemistry

Chemical equilibria and Le Chatelier's principle, thermodynamics, rate equations, equilibrium constant for homogeneous systems, acids & bases

Y13 Spring Term

Organic Chemistry

Optical isomerism, aldehydes & ketones, carboxylic acids & their derivatives, aromatic chemistry, amines, polymers, amino acids, proteins & DNA

Physical Chemistry

Electrode potentials & electrochemical cells

Inorganic Chemistry

Transition metals, reactions of ions in aqueous solutions, properties of period 3 elements & their oxides

Y13 Summer Term

Organic Chemistry

Nuclear magnetic resonance spectroscopy (NMR), Chromatography, organic synthesis

Revision

Revision of every aspect of AS & A2 Chemistry, including exam technique

SMSC links:

Students will have the opportunity to:

- Sustain their self-esteem in the learning experience

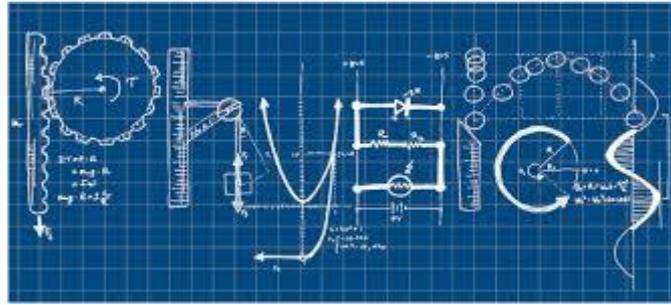
- Develop their capacity for critical and independent thought
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Courage: By listening and discussing scientists students will understand that that scientists can take a moral stand and contribute to historical or moral issues and that this requires courage. The students will develop courage by sharing their ideas in front of others.



Physics

In Y13 A2 physics, students will build upon the understanding of mechanics, materials, electricity, waves, particles, radiation and measurement they have developed throughout year 12. Each topic will challenge them to deepen their appreciation for the how the physics of the universe enables everything to happen.

Students will also cultivate the revision and examination techniques they have begun to show in their AS course, to ensure that they have a robust grasp of the demands of the specification and how to show the examiner what they know.

Y13 Autumn Term

Further mechanics & thermal physics

Periodic motion

Fields & their consequences

Fields, gravitational fields, electric fields, capacitance

Y13 Spring Term

Further mechanics & thermal physics

Thermal physics, radioactivity

Options unit

To be determined between student and teacher

Y13 Summer Term

Revision

Revision of every aspect of AS & A2 Physics, including exam technique

SMSC links:

Students will have the opportunity to:

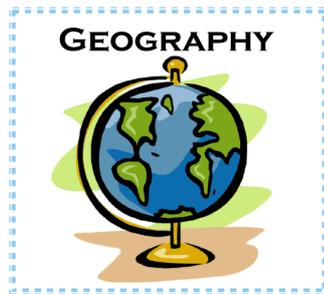
- Sustain their self-esteem in the learning experience
- Develop their capacity for critical and independent thought
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Curriculum content for this term:

Throughout the autumn term, students in year 13 will be getting ready for and building towards completing the coursework part of the A-Level course. There will be a strong focus on Unit 1 where students will be exploring a physical geography topic based on interests. This whole term will be dedicated to exploring the understanding and knowledge required to complete the coursework and build upon this from last year.

SMSC links:

Year 13

Social: The students will have a range of opportunities to extend their understanding of different topics relating to how humans impact upon the physical environment and how society has an identity relating to this.

Moral: Students will be able to understand from the topics they are revising and have learnt about the moral issues that Geography encompasses.

Spiritual: There are opportunities in the specification that allow students to link their experiences of life in Portsmouth to the rest of the world. This link provides them with an understanding of spirituality.

Cultural: Students are encouraged throughout the course to understand and engage with how the culture of a place might be impacted by certain decisions.

Christian Values links:

Year 13

Justice: Students are required to think critically about the world around them, and specifically about Portsmouth.

Courage: Throughout the summer term, we as a staff body will be encouraging the students to be courageous in their actions on the lead up to their coursework.

Respect: Students will gain a sense of respect throughout their lessons for both the environment and people they are studying.



Curriculum content this term:

Year 13

Students will be completing their coursework during autumn one and two. This counts for 20% of their overall A Level and is on the topic of the Holocaust. Pupils will learn about the three key historical schools of thought surrounding the origins of the Holocaust and how far the event was pre-planned. They will complete independent research around this topic and produce an essay, complete with references and a full bibliography.

SMSC links:

Year 13

Social: The students will look into the impact that the Holocaust had on the perpetrators and the victims.

Moral: Students will discuss the moral implications surrounding the Holocaust and understand the atrocities caused by mass genocide.

Spiritual: Students will reflect on the loss of life during this event.

Cultural: Students will develop an understanding of different cultures and how they were affected during the Holocaust.

Christian Values links:

Year 13

Justice: Justice will be discussed in relation to various topics. One area will be through the Nuremberg Trials and how the perpetrators of the Holocaust faced justice.

Respect: Students will look at the importance of respecting all human beings regardless of race.

Courage: Students will have the courage to share their views with the class. They will also learn about the courage of key individuals who stood up and fought against the Holocaust.



MUSIC

Curriculum content this term:

In Autumn 1 students will continue to study Edexcel Alevel set works from the anthology: Berlioz *Symphonie Fantastique*, and Herrmann *Psycho*.

They will also listen to a variety of baroque, classical and romantic music to identify elements of music from the period such as sonata form, dissonance, variations in dynamics, ornaments and harmony/tonality

The students will also do an individual and ensemble performance and their own composition based on harmonising a Bach Chorale.

In Summer 2 students will study another A Level set work from the set works anthology. The Beatles: *Revolver*.

They will listen to a variety of vocal music from religious and secular choral music to rock music. They will learn to identify elements of music such as the different SATB voices, arias, recitative, lied, various song forms, R+B, a cappella, falsetto, riffing, blues, disco and rock.

The students will continue with an ensemble and individual performance and their own composition based on harmonising Bach Chorales.

SMSC links:

Social: In their listening work pupils will be encouraged to reflect on the historical context of the music and how music can convey a variety of messages to a wide audience.

Moral: Students will analyse the context many musicians were composing and performing in to help understand the motivation of music and musicians. Students will develop their confidence in creating and expressing their thoughts and feelings and responding to the opinions of others in their class and as a performer of music.

Spiritual: Students will be encouraged to use imagination and creativity in their composition task, as well as a willingness to reflect on their and others work.

Cultural: All the music we listen to and perform has been influenced by cultural and historical issues. This work will develop students' understanding of other cultures and traditions and will help them to develop their composing work to include wider cultural influences.

Christian Values links:

Justice: In this unit achievement will be celebrated by encouraging all students to participate by creating an inclusive environment, listening and watching student's work, peer marking and by sharing objectives and criteria in the assessment process with the students. Regular feedback will be given throughout the term.

Respect: Students will develop skills in listening during class discussions about various pieces of music, creating an environment of trust. Students will be encouraged to make comments about music and generate ideas for their own compositions.

Courage: By listening and discussing different music students will understand that that musicians can take a moral stand and contribute to historical or moral issues and that this requires courage. The students will develop courage by performing in front of others.



Curriculum Content This Term	
<p>Autumn 1: During the first half of the Autumn term, students will be looking at a unit called <i>International Business</i>. This unit requires students to apply some of their existing knowledge to larger multi-national companies and understand the implications of business growth.</p>	<p>Autumn 2: During the second half of the Autumn term, students will mainly be studying a unit called <i>Principles of Management</i>. In this unit they will look at a number of leadership styles and motivation theories used in the workplace.</p>
<p>More information about this course can be found by searching online for "BTEC level 3 extended diploma in Business" where the structure of the course is detailed as well as supporting documents such as revision materials and mock exams.</p>	

SMSC Links	
<p>Social: Students will look at motivation in the workplace and what motivates them at home and in school.</p>	<p>Moral: Students will look at the relationships between managers and employees in the workplace and the affects this has on various stakeholders.</p>
<p>Spiritual: Students are required to think creatively during elements of business studies. For example, to develop a marketing campaign or how to make a job application stand out.</p>	<p>Cultural: Students study the working environment and how to manage employees and their motivation.</p>

Christian Values Links:	
<p>Courage: Students are required to be courageous at numerous points in Business Studies. There will be opportunities to present to others as well as demonstrate leadership skills during a variety of group activities.</p>	
<p>Justice: During the numerous opportunities to work in groups, students will be required to make decisions that have been agreed by all. This will follow discussion of the impact of these decisions on a number of key stakeholders.</p>	
<p>Respect: Students will be aware of respect in a formal and everyday sense. Firstly, students are require to practise respect in lessons by working without prejudice and valuing the input of any member of the group. They also study the formalities of hierarchy in the workplace and the importance of respect for their colleagues.</p>	

