St Joseph's College

Year 9 Curriculum Overview

- Spring and Summer Term 2017

ART

1. Research Claes Oldenburg.

2. Draw sections of Claes Oldenburg sculptures and write a paragraph describing his work.

3. Make a resource board of images of objects you could make into a Claes Oldenburg inspired sculpture.

4. Collect materials and found objects to help you make your sculpture

5. Finish a design sheet of sculpture ideas.

6. Make a detailed, close-up observational drawing of an everyday object.

7. Evaluate your finished sculpture.

8. Research street art. Is it art?

9. Make a design for a piece of street art inspired by Banksy.

10. Research Barbara Kruger.

11. Make a design for a piece of artwork with a statement to make (inspired by Barbara Kruger).

12. Research local street art.

**Extension Tasks**

Visit a local gallery or museum to look at the work of artists and makers. Keep a record of your visit in your workbook. How does the work make you feel? How has the artist made the work? Etc.

Design & Technology.

During year 9 students will study, food, product design and textiles on a carrousel system.

In textiles students will design and make a pair of tie-dye shorts. They will learn about pattern construction for clothing and apply this knowledge by adapting their shorts pattern. In addition, textiles students will carry out a wide range of practical activities, including using sewing, embellishment and manipulation textile techniques.

In textiles students will complete three extended study tasks. These will be:

- Fashion designer research task

- Inspiration moodboard

- Illustration display sheet

In food, students will study ‘Foods from around the world’ producing a range of exciting and cultural meals. This will include developing a high level of food safety and hygiene skills and knowledge of ingredient function. They will apply this understanding when developing and adapting recipes. Towards the end of the project pupils will design and make their own fusion food. They will be assessed throughout the project on their communication and practical work.

Extended study tasks will be: A research task – ‘Foods from around the world.’ In groups pupils will research their chosen cuisine and present their findings with sample recipes from that culture.

Food Blog – Pupils will write articles about their dishes to be displayed on the food website.

Fusion food – Pupils will research fusion food and design a fusion pizza that will be made in class.

In product design students will design and create a fully functional toy mechanism based on Mr Potato Head. Pupils will have the opportunity to expand their knowledge and understanding of the subject area, whilst increasing their confidence within a practical environment. Pupils will use a variety of tools, materials and equipment, allowing them to explore and expand their creativity.

**Extended study tasks** will include a research and communication project, where pupils will explore existing designers and their inventions. Pupils must present their findings in a creative way which includes suggestions on how to improve existing products.

English

In English Year 9 pupils will undertake a curriculum geared to prepare them for the AQA GCSE courses that they will begin in Year 10.  At the end of each half-term pupils will sit either a formal Controlled Assessment in examination conditions or an assessed home learning, answering a question that either targets specific reading or writing skills related to the half term’s work.

Themes covered in Year 9 will include ‘A Christmas Carol’; ‘Macbeth’; media, non-fiction and language and creative writing, which will all become part of the new GCSE courses.   Pupils will all gain experience in the drama studio too.

The opportunities for independent and extension tasks are extremely wide ranging.  As well as extended reading around the era of when set texts are written (e.g. Shakespeare, 19th Century…), pupils require the skill to analyse a wide range of texts and therefore reading any text to consider the purpose of the text; the proposed audience of the text and the writer’s use of language would be worthwhile.  This reading could be in the form of novels, plays, poetry or any non-fiction texts such as newspapers, websites or leaflets.  In short, this is practice at examining a text and questioning why the writer has used particular words or presentational features, and to what extent are they effective?

Similarly, any independent writing would be a worthwhile practice too.  Pupils are required to write in a number of forms, such as persuasively or informatively.  Additionally, any practice of the writing skills such as punctuation or sentence types could be undertaken, with a view to using each specific skill to create a particular desired effect in their writing.

Recommended website: [www.bbc.co.uk/bitesize/ks3/english/](http://www.bbc.co.uk/bitesize/ks3/english/)

Geography

**The Geography of Health**

Pupils will need to answer these questions using information, evidence and sources from in the lesson and from home.

The key questions for this topic are:

How is health measured? Is there a global pattern of health?

How are geography and health related?

What is Malaria?

What is coronary heart disease?

How does food affect health?

How do TNCs affect health?

Is there a pattern of health in the UK?

Why does health vary so much in London?

How can health be improved in the UK?

**Opportunities for home learning, extension tasks or independent learning include:**

Pupils are encouraged to take a more active role in looking at global health issues. Pupils could keep up to date with news reports about Ebola and what governments and the World Health Organisation (WHO) are doing to combat the spread of the disease.

Pupils could also look at the geography of health at a more national and regional scale.

You could have conversations about all the different factors that affect health and how this is related to geography (wealth, development, environmental conditions, climate, etc.)

**Useful websites:**

<http://www.who.int/en/>

<http://www.bbc.co.uk/bitesize/higher/geography/interactions/developmentandhealth/revision/1/>

<http://www.geographyalltheway.com/ib_geography/ib-food-health/health.htm>

<http://ibis.geog.ubc.ca/courses/geob479/notes/lecture5.html>

History

Students will be assessed throughout Year 9 using GCSE-style questions that assess both their source skills and their ability to use evidence in a well-structured argument.

The source assessments will focus on the following topics:

1. Jack the Ripper and social conditions in Victorian England.
2. The Titanic and early twentieth century society.
3. The First World War and the experience of British soldiers.

Essay-writing assessments will focus on the following topics:

1. The reasons for Hitler becoming leader of Germany.
2. The impact of Nazi rule on the German people.

These assessments will be completed in time for students to use them as a guide in deciding whether or not to continue with History as a GCSE option.

All students will have a progress tracker in their exercise book that will allow them and you, their parents, to monitor their progress throughout the year and reflect on what they should to improve.

In the first half term, students will study Jack the Ripper and the Titanic as above. At the end of each topic, students will be given an assessment that examines their ability to judge the utility of sources of evidence.

**Opportunities for home learning, extension tasks or independent learning include:**

1. Practice questions testing the skills required for each end of topic assessment.
2. Planning tasks to develop written structure.
3. Creative tasks such as designing posters or newspaper articles about the Jack the Ripper case.

Whilst the above home learning will be common to all students, individual teachers may set additional home learning as they see fit to meet the needs of their classes or individual students.

Websites such as BBC Bitesize, History on the Net and Spartacus schoolnet provide useful, easily accessible extra reading material for students that want to further their study. Likewise, local museums such as the Potteries Museum and Art Gallery, the Etruria Industrial Museum and the Gladstone Pottery Museum, whilst not covering any Year 9 course content, are nonetheless excellent ways of broadening your child’s wider historical understanding, particularly of local history.

Assessments this term will focus on interpretation. Students will be debating General Haig's leadership at the Battle of the Somme using a range of historical sources.

Students will also study the Holocaust. There are copies of both Anne Frank's diary and the Boy in the Striped Pyjamas in the library. We encourage students to read these.

Computer Science Spring Term

VB.NET Programming

Lesson 1 – Why Progam

Lesson 2 – Programming basics

Lesson 3 – Variables and Selection

Lesson 4, 5, 6 – Final challenge

This gives learners a basic understanding of programming terminology with a practical element in VB.NET. Through a series of six lessons learners will be introduced to the basic programming terminology for instance data types and selection. Learners will be given the building blocks to extend their programming skills by adding to existing programs or extending their knowledge through websites such as Codeacademy.

ICT Design

Design will be a six week project where learners can use ICT to develop near professional quality documentation. Learners will cover key ICT skills such as designing a logo, desktop publishing to produce documentation for a given scenario. The focus here will be the application of what they have previously learned about end users and good design techniques to produce a set of business like documents suitable for the given scenario.

Computer Science- Summer Term

VB.NET programming pt2

Learners will further their experience and skills in VB.NET in preparation for its use on the AQA GCSE Computer Science course. As well as revisiting some of the previous unit’s content there will be an element of independent study built into this unit for learners to start thinking about developing programs for themselves. Students will further develop their experience in:

* Variables
* Input/Output
* Iteration (For loops, Do loops)
* Selection (If Statements)
* File reading/writing

Mathematics

During the first term all year 9 students will cover the following topics:

1. Perimeter, area and volume of prisms
2. 2D representations of 3D shapes
3. Sequences
4. Calculating with fractions and decimals
5. Co-ordinates and linear graphs
6. Factors and multiples
7. Calculating with percentages
8. Equations and inequalities
9. Data collection and the Data Handling Cycle.

Students will be given a mixture of written home learning and mymaths tasks throughout each topic.

Students may find the following websites helpful for support, extension work or independent study

[www.mymaths.co.uk](http://www.mymaths.co.uk)

[www.bbc.co.uk/bitesize/gcse/maths](http://www.bbc.co.uk/bitesize/gcse/maths)

[www.studymaths.co.uk](http://www.studymaths.co.uk)

**­­­­­­­­­­­­­­­­­­­­**Modern Foreign Languages

**French**

During the first half of the spring term year nine students will study the perfect tense (le passé-composé) of regular and irregular **ER**, **IR** and **RE** verbs. Students will learn about the perfect tense with both auxiliaries – **avoir** (to have) and **être** (to be). Students will consolidate and extend their use of negative phrases – including **ne… pas, ne…jamais** etc.

Topics that will be studied include:

* Free time activities
* TV programmes / film genres and extended opinions
* Using the past tense to talk about a past weekend.

Opportunities for home learning, extension tasks or independent learning include:

* Learn pre-learnt vocabulary and find new topic-based vocabulary items.
* Learn and apply verb patterns
* Research the names of French TV programmes / film titles in French.
* Write about a week’s TV viewing and rate the programmes.
* Write a diary entry about a previous weekend/holiday, including a range of vocabulary and opinions.
* Reading comprehension activities.
* Grammar based activities.

Modern Foreign Languages continued

**Spanish**

During the first half of the spring term year nine students will strengthen their knowledge of adjectival agreement and will learn how to use the comparative (más and menos). Students will also use the verb **estar** (to be) to talk about directions and locations. Students will learn how to ask and answer increasingly complex questions and will learn the verb **querer** (to want).

Topics that will be studied include:

* Description of a town - adjectival agreement and the comparative.
* What there is and isn’t in a town – places in town.
* Asking for and giving directions.
* Making and responding to invitations.
* The weather and the seasons.

Opportunities for home learning, extension tasks or independent learning include:

* Learn and apply verb patterns
* Learn pre-learnt vocabulary and find new topic-based vocabulary items.
* Write an informative text about a town/city from a Spanish speaking country of choice.
* Write about the weather over a week-long period.
* Write and present a weather forecast.
* Reading comprehension activities.
* Grammar based activities.

Learning vocabulary as it is covered in class is an essential ingredient in language learning and parents are encouraged to practise and “test” vocabulary with pupils whenever possible rather than just for a formal assessment.

**USEFUL WEBSITES AND RADIO STATIONS FOR MFL STUDENTS**

**FRENCH & SPANISH: Online Audio Dictionary** <http://french.about.com/od/vocabulary/a/audiodictionary.htm> (French) OR <http://spanish.about.com/od/vocabulary/a/audiodictionary.htm> (Spanish) - look up individual words for pronunciation guidance and meaning

**FRENCH & SPANISH: Word Reference** **– Online Dictionary** <http://www.wordreference.com> – A fantastic online dictionary with a ‘verb conjugation’ tool that is very useful

**FRENCH & SPANISH: MYLO** [www.hellomylo.com](http://www.hellomylo.com) – Use the ‘I need the basics’ activities to revise key topic areas (and build your confidence!). The ‘I’d like a challenge’ activities are GCSE Level. The listening activities all have transcripts, but try doing them without reading these first.

**FRENCH & SPANISH: BBC Bitesize** - <http://www.bbc.co.uk/schools/gcsebitesize/> - GCSE-style Listening and Reading questions that you can mark online. Stick to the ‘foundation’ activities. The grammar section is useful for those annoying little words (try *Pronouns* and *When, where and how much*)

**FRENCH & SPANISH: Languages online** <http://www.languagesonline.org.uk> - A variety of exercises in both languages.

Modern Foreign Languages continued

**FRENCH & SPANISH: Ashcombe** - [www.ashcombe.surrey.sch.uk](http://www.ashcombe.surrey.sch.uk) A great website with loads of focussed exercises in both languages.

**FRENCH & SPANISH:** [www.studystack.com](http://www.studystack.com) Good for vocab revision

**FRENCH: Zut!** <http://www.zut.org.uk/beginner/year9.html>- This site is available for free apart from weekdays from 10am – 4pm. Listening and Reading exercises divided into topic areas.

**USEFUL WEBSITES AND RADIO STATIONS FOR MFL STUDENTS contd..**

**FRENCH: Really useful French** <http://atschool.eduweb.co.uk/haberg/index.htm> - Site is broken down into individual topic areas (scroll down to access these).

**FRENCH: French revision** <http://www.frenchrevision.co.uk/> - The Intermediate section contains core GCSE vocabulary and some sample exercises.

**SPANISH: Spanish revision** <http://www.spanishrevision.co.uk/> - The Intermediate section contains core GCSE vocabulary and some sample exercises.

**SPANISH: Spanish revision and games** [www.espanolextra.com](http://www.espanolextra.com) Username: jpotts1 / Password: jpspanish - Revision and games.

**SPANISH: ¡Oye!** <http://oye.languageskills.co.uk/index.html> - This site is available for free apart from weekdays from 10am – 4pm. Listening and Reading exercises divided into topic areas.

**Plus, coming soon:** We are in the process of subscribing to [www.linguascope.com](http://www.linguascope.com) which is a fun and interactive website for both French and Spanish.

**FRENCH AND SPANISH RADIO:**

It would also be great if students took the opportunity to listen to some French / Spanish radio. Here’s a brief list of a few radio stations / websites by way of an introduction:

***French Radio:***

* **NRJ** [www.nrj.fr](http://www.nrj.fr) – Pop and chart music with some talking – possibly best to have on in the background
* **Le Mouv** <http://www.lemouv.fr/> - French equivalent of Radio 1. Podcasts also available at <http://www.lemouv.fr/podcasts>
* **Radio France** <http://www.radiofrance.fr/> - a variety of stations a bit like the BBC. Try **France Info** for news (don’t expect to understand everything though!)
* <http://www.listenlive.eu/france.html> - a list of all French radio stations streaming online.

***Spanish Radio:***

* **Activa FM** <http://www.activafm.es/> – Pop and chart music with some talking – possibly best to have on in the background
* **Rac105** <http://www.rac105.cat/radio> - Spanish rock and pop station.
* **RTVE** <http://www.rtve.es/radio/> - Spanish news / info / features
* [www.listenlive.eu/spain.html](http://www.listenlive.eu/spain.html) - a list of all Spanish radio stations streaming online.

Music

Rather than follow theme based topics this year, students will focus on improving and refining their musical skills. Students will gain an understanding of what it means to be a musician through a variety of performance and composition activities. They will focus both on improving individual musical abilities and on working as part of a group. Music staff will devise practical and listening tasks to support this.

Students will participate in performance tasks on their own instruments, on keyboards and through singing. Listening activities will be used to help students recognize and understand the elements which make up a high quality performance.

Students will compose as individuals and within a group. They may use ICT to notate the work as appropriate. Listening tasks will also give students the opportunity to analyse the process of composition and understand how to create and structure an effective piece of music. This in turn should inform progress in practical tasks. Through listening students will also revise and study areas of music theory including use of musical vocabulary and recognition of instruments.

Opportunities for home learning tasks include:

1. Students will research the life and career of notable popular music composers.

2. Students will be asked to listen to extracts of music and give a written response which uses subject specific vocabulary.

3. Students will revise theory topics covered in lessons.

4. Students will be asked to further their musical vocabulary to aid analytical tasks.

5. Students will be encouraged to reflect on their practical classwork and set targets for improvement or extension work.

6. Students will be asked to practice individual parts.

7. Students will be asked to plan areas of their practical classwork as individuals and in small groups to aid progress in lessons.

8. Students will be asked to plan elements of their compositions and encouraged to try out ideas in advance of lessons.

Whilst the above tasks will be common to all students, individual teachers may set additional home learning as they see fit to meet the needs of their classes or individual students.

Extension Tasks:

1. Listen to a piece of popular music analytically. Consider how the songwriter has created the work. Which resources have been used (voices and instruments)? What is the structure of the song? Is it in a major or minor key? Does it use a repeated chord pattern? How does the songwriter modulate? Is the meaning of the lyrics reflected in the musical choices made?

Music continued

2. Listen to a piece of music in a style you are unfamiliar with (e.g. jazz music, music from South Africa). Listen analytically and ask how does it differ from popular music?

3. Listen to a piece of Classical music from any era – preferably a piece by a composer you are unfamiliar with. How has the composer combined sound to create this work? What could you take from this piece and use in your own composition?

4. Using youtube, watch a live performance by one of your favourite artists? What makes it an effective performance?

5. Watch live performances by two professional soloists in contrasting styles (e.g. one Classical musician and a rap performance). What is effective about the performances? Although the music may sound different, which common performance skills can you see in both artists?

6. Using youtube, find an amateur performance in any style. What advice would you give the performer to develop their performance skills?

7. Prepare a performance piece in a group or as a soloist for an assembly.

8. Practice sight-reading on your instrument.

9. Join an extra-curricular ensemble.

10. Volunteer to take part in music for a mass.

Physical Education.

**Practical Tasks in PE**

Pupils will be looking at a range of ‘Problem Solving’ activities this term. Pupils will be asked to take part in various outdoor adventurous activities and will look at the 3 Cs. Consideration, cooperation and communication. Pupils will be asked to adopt roles such as leaders, coaches and participants.

Also during this term pupils will look to accurately replicate skills and outwit opponents on the badminton courts, where they will learn the rules and some of the more advanced techniques in badminton. They will look to rally both cooperatively and competitively.

Finally pupils will get the opportunity to develop and show their creative sides whilst accurately replicating movements in gymnastics, dance and trampolining.

**Practical Tasks in Games**

In games lessons pupils will continue to work maximally and look to outwit opponents in a range of team invasion games.

Pupils will also undertake a ‘Sport Education’ unit where they will be expected to adopt roles such as official, leader and coach. Each team will accrue points throughout the lessons which relate to having the correct kit or displaying good teamwork etc.

**Extension tasks – Independent Study in PE**

Learn and remember the 5 health related fitness components using the phrase **F**izzy **C**ola **M**ake**s** **Me** **B**ur**p** to help you. Can you find a definition for each component of fitness.

**F**lexibility, **C**ardiovascular Fitness, **M**uscular **S**trength, **M**uscular **E**ndurance, **B**ody Com**p**osition

Physical Education continued

Learn and remember the 6 skill related fitness components using the phrase **ABC**’s **R**eally **S**imple **P**rocessto help you. Can you find a definition for each component of fitness.

**A**gility, **B**alance, **C**oordination, **R**eaction Time, **S**peed and **P**ower.

Finally can you research and name a fitness test for each skill and health related component of fitness. Write down how you do each test and compare your personal levels of fitness.

**Find Out More: Useful Websites**

<http://adventure.nationalgeographic.com/adventure/>[h ttp://sportsillustrated.cnn.com/](http://sportsillustrated.cnn.com/)

<http://sports.espn.go.com/espnmag/index> <http://espn.go.com/>

<http://www.runnersworld.com/>, <http://www.guardiannews.com/>

<http://www.bbc.co.uk/sport/0/> <http://www.thetimes.co.uk/tto/news/>

<http://www.skysports.com/>

RE

All year 9 students will follow two topics during the Spring term – ‘*Am I responsible for others?*’ and ‘*Who influences my ideas about love, sex and relationships*?’ These are two of five themes each year which in turn centre around five ultimate or significant questions for our time. The units provide the broad pedagogical approach and guide for progression and content for the delivery of the Curriculum Directory.

**Am I responsible for others?**

The BIG question: Do I have a responsibility for others?

Why do some people care when others don’t?

What is injustice?

Why did Jesus consider justice important?

Why are actions louder than words?

What did St Paul say about Justice?

Why was Archbishop Oscar Romero murdered?

Should people be responsible for others?

Should I care?

**Opportunities for home learning, extension tasks or independent learning include:**

Research and write about examples of people who have shown great responsibility and others who have not. For example the case of Kitty Genovese or the Milgram Experiment (Lots of information on these cases can be found through [www.google.com](http://www.google.com) via the internet). Explain the reasons why people may be willing to stand by and allow people to suffer and what motivates others to show amazing responsibility

RE continued

Choose an example of injustice and design a two sided flyer – on the one side outlining the issue, on the other explaining how people could get involved and help.

Research the Toy Box Charity. The web site has lots of useful information: [www.toyboxcharity.org.uk](http://www.toyboxcharity.org.uk)

Research and write about St. Paul’s teaching on injustice.

Complete a fact file on Oscar Romero. Explain how he struggled for justice.

**Who influences my views about love, sex and relationships?**

Who influences me?

How are my views on sex and other relationships influenced?

What does the Bible say about sex and relationships?

How are Catholics and other Christians influenced about their view on sex?

What is love?

Why do Christians believe love and sex should always go together?

Why follow Christian teaching when it’s a lot easier not to?

How is Catholic teaching different to ideas in the rest of society?

Why do Catholics disagree with the way sex is presented in the media?

Which groups in society have the best ideas about love, sex and relationships?

**Opportunities for home learning, extension tasks or independent learning include:**

Look at examples of media advertising, magazines and other sources and consider the messages that advertisers are trying to convey. Assess in what ways people are influenced by these messages and whether or not they are negative or positive.

Complete research on an image/advert/ pop video etc and write about how this item could influence or is designed to influence.

Research and write about biblical and Church teaching on sexual relationships.

Write a comparison between the Christian ideal of love to the portrayal of love in the contemporary media

RE Summer Term

All year 9 students will follow two topics the summer term – ‘*What happens when you die?*’ and ‘*Beliefs and Teachings – Catholic Christianity*’. The units provide the broad pedagogical approach and guide for progression and content for the delivery of the Curriculum Directory.

**What happens when you die?**

The BIG question:What happens when you die?

What is heaven?

What is Hell?

RE continued

What do some non-Christians believe about life after death?

What do Catholics and other Christians believe about life after death?

What has Jesus got to do with eternal life?

What does the Kingdom of God have to do with eternal life?

Why is Jesus’ death and Resurrection so important?

How do Christians celebrate eternal life?

Why is Sunday important?

What difference can believing in Jesus make?

What do you think happens when you die?

**Opportunities for home learning, extension tasks or independent learning include:**

Research and write about examples of people sacrificed their lives because of Jesus’ example and belief in the resurrection. For example the case of Ernest Gordon a prisoner of war in Japanese prison camp; Maximilian Kolb (Lots of information on these cases can be found through [www.google.com](http://www.google.com) via the internet).

Research and write about different notions of heaven from the more clichéd views to ideas expounded by Thomas Aquinas in his idea of a ‘beatific vision’ or CS Lewis in ‘The great divorce’.

Use the bible to find biblical examples which explain Christian beliefs about heaven. Read the Parables of the Kingdom. Research different religious beliefs about life after death and complete a leaflet outlining these beliefs

Research on the athlete Eric Liddle and outline his story

**N10 – Catholic Christianity Beliefs and Teachings / Practices (AQA GCSE)**

**Beliefs and teachings**

•One God as a Trinity of persons: Father, Son and Holy Spirit, as expressed in the Nicene Creed; the scriptural origins of this belief and its development in the Council of Nicaea.

•Creation: Biblical accounts of creation (Genesis 1 and 2) and their significance for an understanding of the nature of God, the dignity of human beings and of humanity’s relationship with creation. Different Christian beliefs about creation.

• Incarnation: the belief in Jesus as incarnate Son, divine Word, both fully God and fully human and the scriptural origins of this belief.

•Redemption: the significance of the life, death, resurrection and ascension of Jesus for Catholic beliefs about salvation and grace.

•Beliefs about life after death: resurrection, judgement, heaven, hell and purgatory.

**Practices - The work of the Church**

•Catholic beliefs about the essential duty to ‘love our neighbour’ in concrete ways locally, nationally and globally and how these beliefs are reflected in:

•Catholic social teaching including Gaudium et Spes paragraph 26

•Catholic teaching on justice, peace and reconciliation

•The work of Catholic agencies including CAFOD, Trocaire, Missio.

•The meaning and significance of mission and evangelism for Catholics today, globally and in Great Britain, both nationally and locally.

•The aims and importance of the Society of Saint Vincent de Paul (SVP).

•The aims and importance of either the Corrymeela community or Pax Christi.

RE continued

**Opportunities for home learning, extension tasks or independent learning include:**

Research about the work of the following Catholic organisations and complete an A3 information gathering sheet: CAFOD, Trocaire, Missio, SVP and Pax Christi.

Use the internet and other sources to find information for each of the charities named:

CAFOD - www.cafod.org.uk

TROCAIRE - www.trocaire.org

MISSIO - www.missio.org.uk

SOCIETY OF SAINT VINCENT DE PAUL (SVP) - [www.svp.org.uk](http://www.svp.org.uk)

PAX CHRISTI - www.paxchristi.org.uk

**QUESTIONS**

What does this organisation do?

Why do they do this work?

When do they do this work?

Where do they do this work?

How do they do this work?

Whilst the above tasks will be common to all students, individual teachers may set additional home learning as they see fit to meet the needs of their classes or individual students.

SCIENCE

Biology:

All students will follow this pathway

1. Adaptation for survival (chapter 4 B1 AQA biology text book) (NOW COMPLETED)

2. Energy in biomass (chapter 5 ) (NOW COMPLETED)

3. Keeping healthy (chapter 1 )

4. Medicine and drugs (chapter 3)

These to be completed by the time students take assessment to determine which route they will follow for remainder of Science GCSE (i.e. around Easter time).

In the spring and first part of the summer term 2015, students will complete the units “Keeping healthy” and Medicine and drugs”.

Common home learning will involve : produce a cartoon of how the body’s immune system works and a practical assessment of the energy content of foodstuffs. Students will have two assessment tests, for which past paper questions will be given as home learning to prepare them.This topic is unusually very well covered on the BBC website and in newspapers, and students may wish to use such material to help them understand the workings of their own bodies, as they study the topics.

Biology continued

There are a range of television programs, such as Horizon, which are broadcast from time to time, and can be useful to supplement students’ understanding of these topics. Students may wish to look at recent articles on the spread of virus such as the Zika virus or how malaria is spread. They could also look at the conditions in refugee camps which is very topical at the moment, and try to explain how diseases could be spread"

Chemistry

All students will be studying the following topics during Term 2:

Chemical Changes – This will cover:

* reactivity series
* oxidation and reduction
* metal extraction
* ionic equations

Acids – This will cover:

* reactions of acids with metals
* salt formation
* pH
* neutralisation
* electrolysis

Crude oil – This will cover:

* alkanes
* alkenes
* nomenclature
* fractional distillation
* hydrocarbon properties
* cracking
* combustion
* addition reactions
* fuels / renewable

Taking it further

Useful websites for Chemistry GCSE are as follows:
<http://www.my-gcsescience.com/>
<http://www.bbc.co.uk/schools/gcsebitesize>
<http://www.docbrown.info/page20/AQAscichemc12.htm>
Although each student will be given a periodic table to stick in their exercise books, it will benefit their understanding of such an abstract topic if they have one at home and attempt to learn as many of the first 20 elements as possible.

Chemistry continued

Within the ‘fuels’ topics, students often hold varying levels of knowledge of renewable fuels and there is opportunity for the students to discuss and share with others their interests. ‘The New Scientist’ and ‘Chemistry in Industry’ are monthly magazines (subscription necessary) which often have up to date information about the ‘new’ technologies concerning renewable energy and the advancement in technology related to this vast and interesting area of chemistry.
We encourage the students to bring in to school articles of interest on this topic.

Physics

Physics is the study of everything and how it moves, energy and communication. We currently follow the new AQA specification and exams. Students will progress topic by topic building on prior knowledge. For all students studying physics a good understanding of mathematics and the correct integration of key terminology will go a long way towards success.

**Year 9 (all students)**

Students will cover basic aspects of all 8 main topics in physics; this will provide the foundation for years 10 and 11.

1. **Forces**

Students will discover vectors and scalars, study Newton’s famous laws and apply them to different mechanical situations.

1. **Energy**

A study of the conservation of energy, types of energy and efficiency of different appliances. As well as looking at the nation’s electricity supply, now and in the future making sure demand can be met both in terms of power and environmental.

1. **Waves**

A small topic on recapping waves properties like frequency and wave speed, plus the two different types of waves.

1. **Electricity**

An in depth study of electricity on a circuit level. Studying the relationship between current and potential difference as well as learning about different electrical components such as LDR’s.

1. **Magnetism and electromagnetism**

An introduction for magnetic fields and electromagnets. In Y11 students will cover quite intricate calculations of magnetic density and flux. This is where it all starts.

1. **Particle model of matter**

Students will learn on an atomic level what happens with the changes of state and movement of the particles. This provides a basic understanding for ideal gases and kinetic theory later on in there science studies.

Physics continued

1. **Atomic structure**

The science of radiation and nuclear physics all started with the plum pudding model and how it was disproved by Rutherford. Students will learn a bit of history in order to better understand the modern atom.

To help understand all the science above we suggest;

<http://www.bbc.co.uk/education/subjects/zpm6fg8> (bbc bite size AQA physics)

<http://www.aqa.org.uk/subjects/science/gcse/physics-8463> (AQA web site where you can find past papers, specification and mark schemes)

even watching programs like “wonders of the solar system” can help keep students engaged in a subject where the topics are so diverse.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_