



St. Mary's
CHURCH OF ENGLAND HIGH SCHOOL

St Mary's CE High School Sixth Form & Leadership Centre

Subject Specific Transition Enrichment Opportunities

Applied Science



Something to think about...

What are the following and how are practicals in these areas of science carried out? Titration, Calorimetry, Colorimetry and Chromatography.



Something to read about...

Bridging the gap work book.

<https://fluencycdn2.fluencycms.co.uk/FileCluster/CanonsHighSchoolRedesign/MainFolder/bridging/BTEC-Applied-Science-Bridging-Work.pdf>

<https://www.nature.com/>

<https://www.newscientist.com/>

<https://www.sciencemag.org/category/biology#>

<https://thebiologist.rsb.org.uk/biologist>



Something to listen to...

About BTEC Applied Science and the future <https://www.youtube.com/watch?v=VJ8TxgPnCfM>

Art



Something to think about...

What is the importance of art in society today?



Something to read about...

Tate Galleries: Tate Modern, Tate Britain, Tate Liverpool, Tate St Ives (www.tate.org.uk), The Yorkshire Sculpture Park (www.ysp.org.uk), The Royal Academy of Arts (www.royalacademy.org.uk) and the Saatchi gallery www.saatchiart.com



Something to listen to...

Art Matters podcasts (www.artuk.org) created by Ferren Gibson exploring the interesting ways art meets popular culture and non-traditional art topics. Recent podcasts include: Art and Tattoos, Art References in Recent Hip Hop, Hair Trends Throughout Art History.

Biology



Something to think about...

What does it mean to be alive? Should we take more action to protect the Biodiversity on our planet? How far should Biologists go in the manipulation of an organisms genome?



Something to read about...

Oxford University Press transition pack

http://fdslive.oup.com/www.oup.com/oxed/secondary/science/Science_A_Level_Transition_Pack_Biology.pdf

@AngiePeahen booklet

https://drive.google.com/file/d/1LYML4s69nB3b_HzQ764SEQJyemZ8WV50/view

PiXL booklet

<https://drive.google.com/file/d/1Oyhy2TVbyAOZ8o9QJFm6m4SxRLMhYmJX/view>

Free CGP e-book

[https://www.amazon.co.uk/Head-Start-level-Biology-Level-ebook/dp/B00VE2NIOI/ref=msx_wsirn_v1_3/259-0922743-](https://www.amazon.co.uk/Head-Start-level-Biology-Level-ebook/dp/B00VE2NIOI/ref=msx_wsirn_v1_3/259-0922743-4799544%3F_encoding=UTF8&pd_rd_i=B00VE2NIOI&pd_rd_r=0b9dbecd-8c91-43ed-8cb7-)

[4799544%3F_encoding=UTF8&pd_rd_i=B00VE2NIOI&pd_rd_r=0b9dbecd-8c91-43ed-8cb7-](https://www.amazon.co.uk/Head-Start-level-Biology-Level-ebook/dp/B00VE2NIOI/ref=msx_wsirn_v1_3/259-0922743-4799544%3F_encoding=UTF8&pd_rd_i=B00VE2NIOI&pd_rd_r=0b9dbecd-8c91-43ed-8cb7-)

[95c3137282ef&pd_rd_w=XxLER&pd_rd_wg=adPAb&pf_rd_p=2c73497e-0658-4f6d-8f3c-06c50c0881ec&pf_rd_r=XM9XCBYH1TH593V5E0S9&psc=1&refRID=XM9XCBYH1TH593V5E0S9](https://www.youtube.com/watch?v=95c3137282ef&pd_rd_w=XxLER&pd_rd_wg=adPAb&pf_rd_p=2c73497e-0658-4f6d-8f3c-06c50c0881ec&pf_rd_r=XM9XCBYH1TH593V5E0S9&psc=1&refRID=XM9XCBYH1TH593V5E0S9)

Shelley Parry's enrichment from Y11 to Y12.

<https://docs.google.com/document/d/1rBmC4H0mjeAuvjS9BS4NoLfb65EIR8UgxXF6IM1itT0/edit>



Something to listen to...

The Natural Selection podcast <https://naturalselectionpodcast.weebly.com/about-the-podcast.html>

Infinite Monkey Cage podcast <https://www.bbc.co.uk/programmes/b00snr0w/episodes/downloads>

Horizon documentaries available on the BBC iPlayer

<https://www.bbc.co.uk/iplayer/episodes/b006mgxf/horizon>

Business Studies



Something to think about...

Do businesses have a moral obligation to a wider group of people than just their shareholders/owners? To what extent does globalisation take wealth from the middle class of the western countries and transfer it to the middle classes of newly industrialising countries?



Something to read about...

<https://www.bbc.co.uk/news/business> constantly updates. Pick any stories that interest you, just read and do it often.

'The Undercover Economist' by Tim Harford is an easy read. The book (or audiobook) is broken into chapters and you don't need to read the lot in one go.



Something to listen to...

Making fashion sustainable <https://www.bbc.co.uk/programmes/m000dgcn>

Is the UK up for sale? <https://www.bbc.co.uk/programmes/m000d8t4>

Could Carbon offsetting save the world's forests?

<https://www.bbc.co.uk/programmes/m000h0w2>

And of course DRAGON'S DEN and THE APPRENTICE (although both are more a TV show than a business really!)

Chemistry



Something to think about...

Will humans ever be able to synthesise chemicals in the same way nature can? How should Chemistry shape the sustainable development of our planet? Will we ever design the perfect drug? How would life be different without Chemistry?



Something to read about...

Royal Society of Chemistry website <https://www.rsc.org/>

New Scientist magazine <https://www.newscientist.com/>

SENECA Learning - enrol on the OCR A-level Chemistry course

<https://www.senecalearning.com/>

A-level Chemistry Revision site <http://www.a-levelchemistry.co.uk/>



Something to listen to...

Royal Society for Chemistry Podcast <https://www.chemistryworld.com/podcasts>

Periodic table podcast <https://www.rsc.org/periodic-table/podcast>

Entropy (Order and Disorder) Energy

<https://www.youtube.com/watch?v=b7iuFIKmkN4&feature=youtu.be>

Secrets of the Super Elements [https://www.youtube.com/watch?v=o-](https://www.youtube.com/watch?v=o-aPwGflqIA&feature=youtu.be)

[aPwGflqIA&feature=youtu.be](https://www.youtube.com/watch?v=o-aPwGflqIA&feature=youtu.be)

Drama



Something to think about...

Why are some people confident and others not? Why has performance been one of the most popular forms of entertainment since records began? Why do we still congregate in theatres like the Ancient Greeks did? How can the theatrical world compete with the world of television and film?



Something to read about...

Any play ever written! The more knowledge the better. Try to vary the styles/genres and playwrights that you explore.



Something to listen to...

The Theatre Audience Podcast – sharing thoughts on different performances, interpretations and approaches to roles:

<https://www.buzzsprout.com/568735>

Frantic Assembly's digital library <https://www.franticassembly.co.uk/>

Watch Shakespeare's chilling Scottish tragedy Macbeth realised by Emmy-winning magician Teller (of Penn & Teller); a startling, supernatural show brimming with magic, mayhem, and madness. <https://www.youtube.com/watch?v=1OU0cuGuPSk&feature=youtu.be>

Economics



Something to think about...

Compare the theory developed by Adam Smith in "The Wealth of Nations" with Karl Marx's theory about the stages of economic development also known as "historical materialism."



Something to read about...

Brick by Brick: How LEGO Rewrote the Rules of Innovation and Conquered the Global Toy Industry

The Economics of Football, Stephen Dobson

European Union Economics, Theo Hitris



Something to listen to...

Too much maths too little history, LSE Lecture <https://goo.gl/fPrAox>

English Literature



Something to think about...

Why do different writers use different forms, such as poetry, novels and drama? How might our reaction to a text differ from that of the audience at the time when it was written? (context of production vs reception). How might Shakespearean texts look now if he had been writing in the 21st century? What themes in literature are eternal and capture the essence of humanity?



Something to read about...

Visit the British Library Online and read some of the articles about literature across the ages.

<https://www.bl.uk/discovering-literature>

**Something to listen to...**

For as long as schools are closed, Audible is streaming free novels to listen to. Extend your subject knowledge by listening to a range of literary texts. Explore texts from across various centuries. <https://stories.audible.com/start-listen>

The BBC's 'The Verb' is a podcast hosted by poet Ian McMillan, with guests including poets, authors, dramatists, comedians, journalists and artists. Secondly, Radio 4 have 'In Our Time' with Melvyn Bragg where he covers many topics with a group of expert guests each week.

English Language

**Something to think about...**

Why is the use of language an emotive subject? Think about how you feel about new words and phrases that are introduced to the English language. Do you think that the English language is dying out due to the new forms of language such as text speak; e-language and slang.

**Something to read about...**

Articles on language from the Guardian's Mind your language section
<https://www.theguardian.com/media/mind-your-language>

**Something to listen to...**

Anything on Tube that is to do with the Linguist David Crystal

Geography

**Something to think about...**

What will our future world look like? Is sustainable development achievable? How can we manage the risk and impacts of future global pandemics?

**Something to read about...**

Published in the UK since 1935, Geographical is the official magazine of the Royal Geographical Society. <https://geographical.co.uk/>

Wider Reading in Geography <https://www.internetgeography.net/wider-reading-in-geography/>

**Something to listen to...**

Royal Geographical Society; Ask the Experts podcast <https://www.rgs.org/schools/teaching-resources/ask-the-expert-podcasts/>

The Ignorance Project TED talk <https://www.gapminder.org/ignorance/>

Climate change TED talks <https://www.ted.com/topics/climate+change>

History

**Something to think about...**

Is knowledge of the past ever certain? Why do accounts of the same historical event differ? What determines how historians select evidence and interpret events? What problems are posed for the study of history by changes in language and culture over time?



Something to read about...

Check out <https://www.historyextra.com/> for lots of interesting articles



Something to listen to...

'You're Dead to Me' is the history podcast for people who don't like history... and those who do. Greg Jenner brings together the best names in comedy and history to learn and laugh about the past on BBC Sounds.

<https://www.bbc.co.uk/programmes/p07mdbhg/episodes/downloads>

ICT



Something to think about...

Is it possible to create a program that can look at the code of any other program and decide if that other program will ever stop running?



Something to read about...

Algorithms to Live By: The Computer Science of Human Decisions A fascinating exploration of how computer algorithms can be applied to our everyday lives.

How Google works by Eric Schmidt and Jonathan Rosenberg How Google Works shines a light on the hiring and operating processes of Google, which have enabled it to come up with great products continuously and stay visionary over the past 17 years.



Something to listen to...

The 'Infinite Monkey Cage' has lots of fascinating insights on Tech topics from AI to big data (<https://www.bbc.co.uk/programmes/b00snr0w/episodes/downloads>)

Law



Something to think about...

Should laws be moral? Is it justifiable for us to break the law if it is against our moral beliefs? Who has the right to decide?



Something to read about...

The case of Ladele v Islington Borough Council is about a woman who refused to carry out her job under the law because it conflicted with her religious beliefs. Read what happened in her case: <http://www.bailii.org/ew/cases/EWCA/Civ/2009/1357.html>



Something to listen to...

The Philosopher's Arms was a series by BBC radio which explored different philosophical questions – listen to this episode on morality and the law and when it might be ok to break the law - <https://www.bbc.co.uk/sounds/play/b01m5jkl>

Maths



Something to think about...

Does mathematics need language to be understood? Is mathematics in fact its own language? Did the human race invent mathematics or was it present in nature waiting to be discovered?



Something to read about...

Simon Singh is an author, journalist and TV producer, specialising in science and mathematics. Visit his website and read his blog covering everything from The Simpsons to moonwalking with Einstein. <https://simonsingh.net/>

An article in the New Scientist that shows how maths has been used recently regarding the coronavirus outbreak:

<https://www.newscientist.com/article/2233386-coronavirus-how-maths-is-helping-to-answer-crucial-covid-19-questions/>

“HEGARTYMATHS” on YouTube – try lessons on simplifying, rationalising and laws of indices



Something to listen to...

‘The Secrets of Mathematics’ is a series of podcasts from Oxford lecturers exploring the applications of mathematics, from medicine to economics and beyond.

<https://podcasts.ox.ac.uk/series/secrets-mathematics>

MFL



Something to think about...

How does language reflect our identity? How and why do languages evolve? What do we lose when a language dies out?

Why are traditions and festivals important to maintain a strong culture?



Something to read about...

French:

- Linguascope online shop: “Lectures facilitées, troisième niveau” La Spiga Languages series – wide choice of titles, with exercises.
- Guy de Maupassant, best short stories, (Dual language book – edition Dover www.doverpublications.com isbn 13:978-0-486-28918-2)
- Public libraries usually have a range of novels in both French and or in translation.
- www.livrespourtous.com – choose and read online contemporary novels, bandes dessinées, graphic novels. Free website.

Spanish

- An excellent resource for revision is the electronic magazine “Tecla” (<http://www.mecd.gob.es/reinounido/publicaciones-materiales/material-didactico.html#materialreino-unido3>)
- www.bbc.co.uk/languages/spanish/news
- The best place to start is the BBC’s languages web-pages. Choose the “Reportajes” link to find articles from the former “Semanao Internet” with a variety of reading exercises.



Something to listen to...

French

- <https://onethinginafrenchday.podbean.com/>
- <http://www.rfi.fr/fr/podcasts/grand-reportage/>

Spanish

- <http://ssl4you.blogspot.com/>
- <http://andale-profe.blogspot.com/>

Physics



Something to think about...

Is our universe infinite? If it is already infinite, how can it be getting any bigger? And is there really only one?



Something to read about....

A great starting point is the Physics Review magazine. Lots of articles on the application of physics from Mapping Earth's Gravity

(https://www.hoddereducation.co.uk/media/Documents/magazine-extras/Physics/PhysRev%2029_1/PhysicsReview29_1_poster.pdf) to the physics of

measurements and building film props

(https://www.hoddereducation.co.uk/media/Documents/Magazines/Physics_Review_sample-1.pdf).

If you want to try out some of the challenges real physicists tackle using the physics you'll learn in Y12 & Y13, look at the NASA π day challenges

<https://www.jpl.nasa.gov/edu/nasapidaychallenge>



Something to listen to...

'The Infinite Monkey Cage' is a light-hearted podcast available on BBC Sounds covering all things physics <https://www.bbc.co.uk/programmes/b00snr0w>

'Sixty Symbols' is a great series of (60!) videos on the symbols of physics and astronomy

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

Product Design



Something to think about...

As product designers, we play an important role in shaping our future. The products we create have the power to transform how societies think, feel and behave. We must be conscious of the social and ethical responsibility that we have; we can proactively drive positive change within our communities.



Something to read about...

We rarely think about the design of the objects we use everyday. The fact is you're not supposed to; these everyday objects have been meticulously designed to work so well that you never have to notice them - that's what good design is all about. Take a look at 'The 50 Most Iconic Designs of Everyday Objects' <https://www.complex.com/style/2013/02/the-50-most-iconic-designs-of-everyday-objects/>



Something to listen to...

Could things be better? How? In this funny, breezy talk (search for the secret of design Ted talk), the man behind the iPod and shares some of his tips for noticing and driving change.

Also, Philippe Starck (search for Design & Destiny Ted talk) reaches for the very roots of the question "Why design?" <https://www.ted.com/>

Psychology



Something to think about...

Is free will a myth? Would you be a good eyewitness to a crime?



Something to read about...

Simply Psychology (<https://www.simplypsychology.org/>), Research digest

(<https://digest.bps.org.uk/>) and Psychology Review magazines available via Hodder

Education (<https://www.hoddereducation.co.uk/magazines/magazines-extras/psychology-review-extras>)



Something to listen to...

'PsychCrunch' The British Psychological Society research digest podcast

<https://digest.bps.org.uk/podcast/>

As level Psychology - <https://www.youtube.com/watch?v=JOFmzxkwOwI> and <https://www.youtube.com/watch?v=vo4pMVb0R6M>

Religious Studies



Something to think about...

“Is all that we see and seem just a dream within a dream?”
“Are religious teachings just a manmade way to control society?”



Something to read about...

Ethical issues in the news – such as the treatment of Muslims in India, Human Rights issues in Saudi Arabia,
William Paley, ‘The Watch and the Watchmaker’
<https://faculty.arts.ubc.ca/rjohns/paley.pdf>



Something to listen to...

The Moral Maze – pick the subjects that interest you, to develop an understanding of how to debate in an ethical and philosophical manner. <https://www.bbc.co.uk/programmes/b006qk11/episodes/player>
To watch...
Unthinkable (2010)

Sociology



Something to think about...

Why are coronavirus rates higher in deprived areas? <https://www.theguardian.com/uk-news/2020/may/01/covid-19-coronavirus-newham-london-uk-worst-affected-area>
How might coronavirus change the world around us?
<https://phys.org/news/2020-04-sociologist-coronavirus-world.html>
What roles have the different institutions (family, school, media, government, NHS) in society played during the coronavirus?
What evidence is there in societies of people coming together / pulling apart during the pandemic (consensus vs conflict)?
How has the class divide in the UK been evident in people’s experiences of Covid-19



Something to read about...

‘Gang Leader for a Day’ – Sudhir Venkatesh; ‘Why I am No Longer Talking to White People about Race’ – Reni Eddo-Lodge; ‘Eve Was Shamed – How British Justice is Failing Women’ – Helena Kennedy



Something to listen to...

‘Thinking Allowed’ with Laurie Taylor (Radio 4 programme)
<https://www.bbc.co.uk/programmes/b006qy05/episodes/player>

Sports Studies



Something to think about...

Technology in Sport; cheating or evolution? Should a performer use dynamic or static stretching before competition? Should global events such as the Olympics include all countries regardless of political issues?



Something to read about...

YouGov is a Sports Research company with lots of interesting, thought provoking articles <https://sport.yougov.com/>. Also check out UK Sport for everything Team GB <https://www.uk sport.gov.uk/>.

Good Books: 'How Bad Do You Want It? Mastering the Psychology of Mind Over Muscle' by Matt Fitzgerald and 'Bounce: the Science of Success' by Matthew Syed.



Something to listen to...

Podcasts discussing topical sports talking points: 'Sportsworld' (<https://www.bbc.co.uk/programmes/p002w5vq/episodes/downloads>) and 'Flintoff, Savage and the Ping Pong Guy' (<https://www.bbc.co.uk/programmes/b08fr7t1/episodes/downloads>)

Textiles



Something to think about...

How sustainable and ethical is the textiles and fashion industry? How can technology help or inspire the fashion and textiles industry? Why is the textiles industry so important? How do world events have an impact on textiles, fashion and costume?



Something to read about...

Fashionopolis- The Price of Fast Fashion by Dana Thomas

<https://fashionandtextiles.springeropen.com/articles>

<https://www.textileartist.org/category/articles> Both sites have a variety of textiles and fashion articles



Something to listen to...

'Business of Fashion' Podcasts available on Spotify with podcasts ranging from sustainability to designers and their runway styles, to retail.

<https://www.bbc.co.uk/sounds/play/p0376rbg> - High Tech Textiles looks at new materials and e-textiles.