



SUBJECT PREPARATION 2026

**Guidance to help you prepare for your
subjects in September**



ART & DESIGN

Must

Develop a body of photographs and drawings that will assist you during different stages of the Transition Unit that will be explored in Year 12. This includes:

- Using a red cabbage / pomegranate / onion / pineapple – slice in half and place onto a board. Group one half of the sliced objects together and keep the others separate - over three weeks photograph the stages of decomposition. Ensure that your photographs capture the decay and that they are photographed at the same distance and angle. Take photographs at least twice a week. Students are to develop a body of drawings (two A4 pages) that record these changes (cropped sections / whole objects) capturing the changes in texture / shape and form. Prior to starting this please ensure that you speak to your parents or carers and negotiate the best place to do this.
- Using your garden as a starting point take photographs of sections of your garden at different stages of the day (change in lighting) / or during this period of seasonal change which captures the change in the environment over a period of two weeks. Photographs should also include close-ups of areas which have been selected. Students are to develop two A4 pages of drawings that explore these changes.

Should

- Students to use the concept of ‘family meal’ as the starting point to transition (process of change). This could focus on food preparation / meals on a plate / table which are eaten and used/ dishes being cleaned. Photographs are to record the sequence / process (for example a plate of food which is being eaten – don’t focus on the person but the objects) and then develop drawings that record this process. You may want to consider overlaying images / splicing and then drawing this.
- Using your family unit during this period of time, take photographs of people’s faces and hands that capture youth through to the elderly. Photographs to be from a range of vantage points and also include close-ups of facial features.

Could

- Using cutlery or bottles, set up compositions that show:
 - a. Solidarity / Isolation / Bullying / Vulnerability / RiskBefore photographing, place the objects on white paper and avoid complex backgrounds. Use a lamp to even spotlight the objects. Students are to draw these objects and focus on surface, shadows and high lights.

All photographs are to be saved and have these available for the different workshops conducted during the Transition Unit – you will be able to load these into your OneDrive. All drawings to be submitted at the beginning of the academic year. Please contact Mr Ashman (D.Ashman@littleover.derby.sch.uk) for guidance if you are unsure of how to proceed with any of these tasks.

BIOLOGY

Must

- Download **and** review the specification www.aqa.org.uk (Biology – 7401).
- Be able to recall the mechanisms behind how molecules move.

Be confident about :

- Standard form and converting between powers
- The events of the cardiac cycle
- Prokaryotic and eukaryotic differences
- Gross structure of DNA

Should

- Research the structure of **glucose, amino acids and lipids**.
- Be able to recall the basic structure of the heart.
- Learn the structures of alpha and beta glucose
- Be able to draw a 1,4 glycosidic bond
- Be able to draw an amino acid and join 2 together using a peptide bond

Could

- Research post - 'A' level options.
- Research diseases and conditions that affect the functioning of the heart.



BUSINESS



Must

- Watch the news daily especially BBC Breakfast News
- Read quality newspapers and visit newspaper websites frequently
- Find a couple of YouTube channels that suit your way of learning e.g. Taking the Biz, Bizconsesh, Tutor2u, Business As Usual

Should

- Watch programmes that reflect on business activity in different industries e.g. Simon Reeve, Panorama, Dispatches
- Revise calculations - eg % change
- Use the internet to become aware of global trends
- Keep up to date with business data – company profits, unemployment figures etc
- Be aware of the UK government's policies

Could

- Look through GCE Business websites e.g. Tutor2u
- Begin to think ahead to university options
- Look through past examination papers, mark schemes and examiners' reports on www.edexcel.com

CHEMISTRY

Must

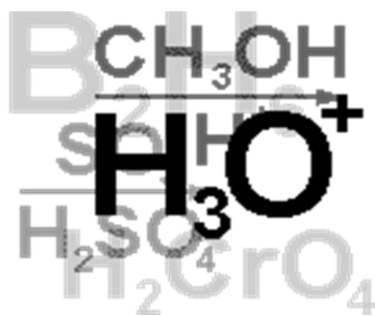
- Review the atomic structure, quantitative and organic topics from GCSE.
- Practise rearranging equations and converting units.

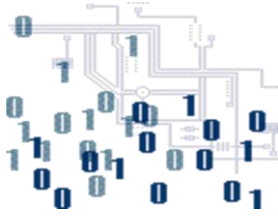
Should

- Read over the content from the Chemistry GCSE specification that you did not cover if you did the trilogy course.
- Download and read the specification to become familiar with what you will be learning. Go to www.aqa.org.uk and follow the links to A Level Chemistry (7404).

Could

- Research the range of careers open to students studying A level and degree level Chemistry.
- Find out about the work of Avogadro and Linus Pauling within Chemistry.
- Complete the following MOOCs:
 - Basic Analytical Chemistry
 - Batteries, Fuel Cells, and their Role in Modern Society
 - The Chemistry of Life





COMPUTER SCIENCE

Must

- Visit the website www.bbc.co.uk/click at least once a week and read the current articles.
- Visit the website www.theregister.co.uk at least once a week and read at least **3** stories.

Should

- Find out as much as possible about the programming language Python (www.python.org). This could include installing the software and attempting to write simple programs.
- Attempt online programme course, up to but not including regular expressions - <https://developers.google.com/edu/python>

Could

- Each week choose **1** story from each site and write a word processed summary (keep them in a log).
- Use www.wikipedia.org to follow up the meaning of specialist terms.





D&M

PRODUCT DESIGN

Must

- Practice various product design and fashion sketching techniques. There are lots of videos on You Tube including crating, perspective, exploded view, rendering and fashion illustration.
- Research past design movements and how they influenced future designers and products.

Should

- Watch Grand Designs (More 4) and Click (iPlayer).
- Research the latest material and manufacturing technologies used in product design.
- Look at how products around the house are made — what materials, why those?
- Visit the Design Museum web-site www.designmuseum.org.

Could

- Research and have an understanding of sustainable design.
- Research and find out how the Dyson vacuum cleaner was developed

ECONOMICS



Must

- Watch the news daily especially BBC Breakfast News
- Read quality newspapers and visit newspaper websites frequently including the FT
- Watch documentaries such as Newsnight, Dispatches and Panorama when relevant

Should

- Learn definitions of Economics terms
- Watch programmes that report on economic activity in different industries and/or communities
- Revise calculations - eg % change
- Use the internet and view sites about the G7, G8 and G20
- Keep up to date with Interest Rates/Exchange Rates, Inflation and Unemployment Figures
- Be aware of the contents of the UK government's budget

Could

- Look through GCE Economics textbooks
- Begin to think ahead to university options
- Look through past examination papers and the A level specification on www.edexcel.com
- Join a student Economics forum on the internet and familiarise with Tutor2U
- Read back issues of The Economist
- Watch Youtube EconPlusdal clips

ENGLISH LANGUAGE

Must

- Conduct an investigation into the strategies used by advertisers. How do they position their audience to want to buy their products? Bring your findings to your first Unit 1 lesson. Do this by:
 - Find three print adverts aiming to sell a similar product, such as hair products. Try to select adverts with different audiences – such as by gender, lifestyle and age – and found in different publications.
 - Consider the ways in which linguistic and visual devices are employed to persuade. Also consider relevant contextual factors, such as celebrity endorsement, scientific backing or hobbies and interests alluded to.
 - Present your work suitably. You could create a table, Venn diagram, make notes on each advert or simply annotate.

- Conduct some initial research into the topic of Child Language development; this is Unit 2 of your A Level studies. Bring this to your first Unit 2 lesson. Do this by:
 - Watching a range of children's TV programmes targeted at children aged 0-8 years of age. You could start by watching CBeebies.
 - Make notes on what you see under the following headings:
 - How do adults alter their speech to speak to children?
 - What are the main features of children's speech? Consider their grammar, length of utterance, mistakes, use of mono/polysyllabic words etc.
 - What strategies do TV producers use to engage and communicate with children? Consider non-verbal strategies, the differences across the age range 0-8, repetition, speech speed and tone etc.
 - If you have a relative aged 0-8, record any observations on their speech and/or writing.

Should

- Read a variety of fiction and non-fiction texts.
 - Fiction: poetry, plays, short stories, fables, novels etc
 - Non-fiction: articles, autobiographies, adverts, blogs, social media, letters etc
 - Bring a record of what you have read and be prepared to discuss what you have read over the summer in small groups.

- Gain familiarity with and find examples of the terms lexis, semantics, phonetics, phonology, pragmatics, graphology and discourse, as well as grammatical terminology such as nouns, prepositions and articles.

Could

- Read a selection of children's books or stories and look for language patterns.
- Spot and record SPaG errors you find in public places.





ENGLISH LITERATURE

Must

- Read *Frankenstein* by Mary Shelley by the eighth week of the course in your own time.
 - In your lesson during the second week of the course, you must have read Walton's Letters and up to Chapter 4.
 - In your lesson during the eighth week of the course, you must have read the whole novel.
 - It is our advice that you read this novel over the summer holidays.
- Research the dramatic genre of tragedy, its conventions and concepts. Be ready to present your findings to a small group.
 - Consider:
 1. Common characters (e.g. villain)
 2. Common settings (e.g. royal court)
 3. Common plot features (e.g. resolution)

Should

- Join the public library and research the literature section (could borrow *Frankenstein*). In particular, look for collections of 21st Century poetry in preparation for Unit 1 of your AS course.
- Read a selection of novels, poems, plays or short stories from 'Year 12 Recommended Reading List'. Many of these are available as free ebooks.
- Read the review and book section of a broadsheet newspaper.
- Watch a film version of a Shakespearean tragedy. Use the following to access the National Theatre catalogue for free:
 - https://www.dramaonlinelibrary.com/video?docid=do-9781350928671&tocid=do-9781350928671_6286750134001
 - **Username: 7Xv%1Vy!**
 - **Password: 8Go'3Qc.**

Could

- See a performance of a Shakespeare play and a contemporary play.
- Write a review of a literary text or an imaginative story.
- Read a novel by Margaret Atwood, such as *The Blind Assassin* or *Oryx and Crake*.
- Read another 19th Century novel from the Gothic genre or that explores science, such as *Strange Case of Dr Jekyll and Mr Hyde* by Robert Louis Stevenson.

Year 12 English Literature Recommended Reading List

Take a look at the myriad suggestions for interesting and illuminating summer reading. The fiction texts below are only a suggestion.

If you visit the Edexcel webpage for English Literature, you will find some interesting suggestions provided by lecturers. Search for 'Holiday reading Inspiration' where lecturers explain their interest in a range of novels and plays. These texts are all named on the Edexcel English Literature specification

Some texts named on the Edexcel English Literature specification:

Poetry

<i>A Minor Role</i> , UA Fanthorpe	<i>From the Journal of a Disappointed Man</i> , Andrew Motion
<i>Chainsaw Versus the Pampas Grass</i> , Simon Armitage	<i>The Gun</i> , Vicky Feather
<i>Song</i> , George Szirtes	

Drama

<i>A Streetcar Named Desire</i> , Tennessee Williams	<i>The Importance of Being Earnest</i> , Oscar Wilde
<i>Waiting for Godot</i> , Samuel Beckett	<i>Hamlet</i> , William Shakespeare
<i>King Lear</i> , William Shakespeare	<i>Othello</i> , William Shakespeare

Prose

<i>Atonement</i> , Ian McEwan	<i>The Color Purple</i> , Alice Walker
<i>The Handmaid's Tale</i> , Margaret Atwood	<i>Heart of Darkness</i> , Joseph Conrad
<i>A Passage to India</i> , EM Forster	<i>The Murder Room</i> , PD James
<i>Frankenstein</i> , Mary Shelley	<i>A Thousand Splendid Suns</i> , Khaled Hosseini

Other Worthwhile Reading, recommended by LCS English staff:

The War of the Worlds, H.G. Wells

Nineteen Eighty-Four, George Orwell

Enduring Love and Atonement by Ian McEwan

The Catcher in the Rye by J.D. Salinger

The Kite Runner by Khalid Hosseini

Jane Eyre by Charlotte Bronte

Wide Sargasso Sea by Jean Rhys

Any poems by Lord Tennyson

Any poems by Thomas Hardy

Mean Time and Rapture by Carol Ann Duffy

The Rime of the Ancient Mariner by Samuel Taylor Coleridge

To Kill a Mockingbird by Harper Lee

Lord of the Flies by William Golding

Northanger Abbey by Jane Austen

Any of the Sherlock Holmes stories by Arthur Conan Doyle

Rebecca by Daphne de Maurier

The World's Wife by Carol Ann Duffy

Sir Gawain and the Green Knight and *Book of Matches* by Simon Armitage

EPQ

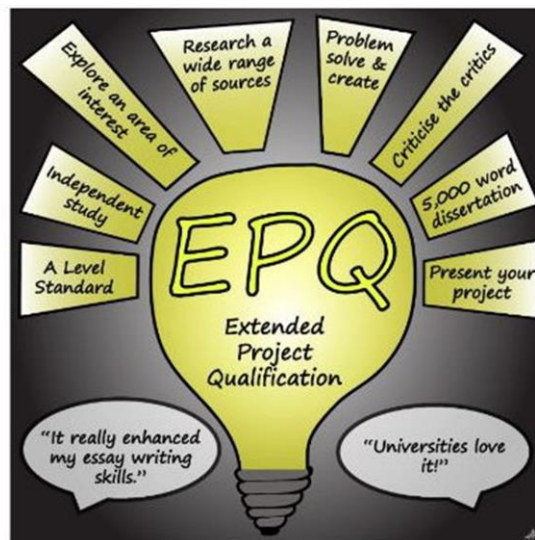
Must

Do some research into areas that you might be interested in completing an EPQ on. You could look for a TED Talk here <https://www.ted.com/talks> or find a good quality book or documentary.

Should

Complete the University of Bath EPQ Mooc, found here <https://www.futurelearn.com/courses/epq-success>

(Please do not pay for the course - you can complete it for free over 3 weeks)



GEOGRAPHY

1. Produce a collection of news articles, include the following topics if possible: -
 - Football Hooliganism
 - McDonalds
 - Role of the Government within the UK
 - Poverty within the UK
 - Birmingham/West Midlands
 - Plastic in our Oceans
 - 21st Century Piracy
 - Migration across Oceans
2. Research Geography Fieldwork Apps, download one, use it and produce a review e.g. Snap2map
3. Find examples of media in which 'Places' are represented such as Film, Music, Art, Photography, Literature, Graffiti and Blogs.
E.g. The Italian Job – Turin, Lowry – Salford, Dickens – Hope Town.
4. Use the following websites to brush up on Geography Skills and place knowledge
 - a. Onemilliontweetmap.com
 - b. Storymaps.arcgis.com/en/
 - c. [//acqicn.org/city/all/](http://acqicn.org/city/all/)
 - d. <https://www.sporcle.com/games/g/world>
5. Watch the following films and documentaries.
 - a. National Geographic (get free trail of Disney +)– Drain the Oceans, Continent 7 – Antarctica, Sea of Hope, Journey to Shark Eden.
 - b. Deepwater Horizon
 - c. Captain Phillips
 - d. Any Blue Planet.
6. Relevant MOOCs – all are free and on demand so you can work at your own pace.
 - a. Monitoring Volcanoes and Magma Movements – The University of Iceland
<https://www.edx.org/course/monitoring-volcanoes-and-magma-movements>
 - b. One Planet One Ocean -
<https://www.edx.org/course/one-planet-one-ocean>
 - c. Tsunamis and Storm Surges
<https://www.edx.org/course/tsunamis-and-storm-surges-introduction-to-coastal>



GERMAN



Must

- Download and review the guide to the course on Moodle
- Revise grammar, especially tenses and cases by using online grammar exercises on conjugemos, moodle, klar.co.uk and make notes from your GCSE class work.
- Research material on East and West Germany, the division and reunification and be prepared to discuss this in September.
- Complete grammar activity booklet available, please email d.piper@littleover.derby.sch.uk

Should

- Watch/Read some German each week
- Use Tagesschau to keep up to date with the news in German. Why not make notes of new words. The transcript for each news item is written below the video
- Read German newspapers (online <http://www.bild.t-online.de/> or <http://www.welt.de/>, www.spiegel.de and make a note of useful vocabulary.
- Use memrise website to revise and learn new vocabulary for the A level course.
- Make a note of grammar you had trouble with from GCSE including any questions – these can be addressed in September.

Could

- Use <https://www.goethe.de/en/spr/ueb.html> to practice German for free online and/or using apps for Iphone and Android which improve language skills.
- Make a summary in German of news articles you've read and any news programs you have watched.
- Watch DVDs in German.
- Listen to music in German

HISTORY

Must

- Research and complete the core section of 'The First Crusade Project'. The project brief and resources are <https://bit.ly/lcsalevelprep2022>
- The password to open the PDFs is davis2020.
- Create an Angevins project: Write an introduction about the events, in the early 1100s, before Henry II's reign. Some more details can be found on the brief in the same folder as above.

Should

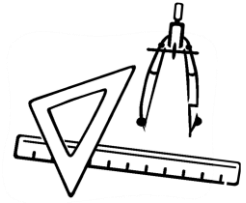
- Complete the stretch section of 'The First Crusade Project'.
- Complete a personality profile on the following key individuals: Thomas Becket, Henry II, Louis VII (King of France), Philip Augustus, Eleanor of Aquitaine and Richard I (Richard the Lionheart). Add these to your Angevins project.
- Research the feudal system and make a key facts page for your Angevins project about how it worked in England. You want to focus on oaths, vassals, scutage, paying homage and what people were granted and owed.
- Research the key features of the Anarchy (1135-53) and the impact it had on England, for example Baronial power increased. Add this to your Angevins project.

Could

- Read Thomas Asbridge, The First Crusade: A New History. This is available in the LCS Library.
- Read any of the book on the Angevins available in the LCS Library.



MATHEMATICS



The topics found at the links below are all from the higher GCSE course which is essential knowledge

For A-level Maths. Use Mathswatch or corbettmaths.com to make sure your understanding is secure on all areas of higher GCSE content.

Must

- Revise and have a sound understanding of the content for the Higher Mathematics GCSE. This will be assumed knowledge from the start of the A Level course.
- Be ready to upgrade to an A-level ready graphical scientific calculator (Casio CG100) These can be purchased from school at cost price from the start of year 12 and this will be significantly cheaper than other options (students in receipt of the bursary will be able to use this to purchase a CG100).
- Work through the Transition to A level Mathematics: Essential Skills course on the AMSP website, available via this link: <https://amsp.org.uk/teachers/11-16-maths/transition-to-level-3-maths/essential-skills/>

OR

- Complete the Sparx Maths GCSE to A-Level Transition Booklet, available via this link: <https://sparxmaths.com/resources/transition-booklet-alevel>

Could

- Read one of these great Maths books:

The Simpsons and their Mathematical Secrets	- Simon Singh
Fermat's last theorem	- Simon Singh
Why do busses come in threes	- Rob Eastaway
Humble Pi	- Matt Parker
The man who loved only numbers	- Paul Hoffman
The music of the primes	- Marcus Du Sautoy

MEDIA STUDIES

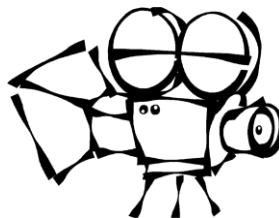
Must

- Explore the Guardian website and read through the Media section (<http://www.theguardian.com/media>). Make notes on any current issues/debates.
- Begin collecting images/representations/articles from across the media that you consider to be of interest to the group in order to make a whole class collage – any feedback in the Media about current ‘reality TV programmes’ (e.g. Love Island, The Kardashians, Too hot to handle, Real Housewives franchise) may stimulate debate etc.
- Collect any relevant material about the impact of New Technologies on the Media, such as the interactive element of broadcasting (red button, twitter feeds etc).
- Collate a range of advertising and Marketing materials. You could collect material for one brand across different platforms, i.e Nike across print, emedia, social media and write an analysis of similarities and differences across each platform, i.e font, colour palette, celebrity endorsement. In addition, collate a range of print adverts and make a list of key conventions. You could do this for cookies, adverts on websites, billboards etc.
- Watch a range of music videos from different genres. Collate a set of features and conventions for different genres, i.e Rock, RnB, country, rap, pop etc.

Should

On any one day read at least 3 different newspapers.

- Watch one documentary.
- Read and keep at least two copies of the Guardian or the Independent Media supplement (both are published on Tuesdays).



PE

Must

- In one sport play as much sport as possible especially competitively. If you are an athlete, tennis player or cricketer speak to PE staff regarding filming ahead of the summer.
- **Complete the work booklet handed out at induction day in preparation for September**
- Research the history of the sport you participate in the most.



Should

- Read the sport sections of quality newspapers, but not just match results.
- Collect match analysis from a sport of your choice from the media, TV, newspapers and magazines.
- Collect any articles you read from a Newspaper, there will be plenty due to the Commonwealth Games!
- Attend a range of extra- curricular clubs either in or out of school.

Could

- Buy subject revision guides and start to read them.

PHYSICS



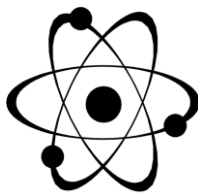
Newton

Must

- Revise and have a sound understanding of the content for Physics and Maths GCSE. This will be assumed from the start of the A Level course
- Sign up and complete the 'Intro to Physics Mooc' via udacity. This is a self-paced course designed to be taken over 8 weeks
- Sign up to Isaac Physics and complete the A Level Transition Exercises https://isaacphysics.org/assignment/gcse_alevel_transition_skills
- Be able to confidently rearrange equations and use basic trigonometry (Sine, Cosine and Tangent)
- Have a scientific calculator and be able to use its GCSE maths functions correctly.
- Make sure you understand and can use Standard Form to express big and small numbers.
- Learn the SI prefixes from femto to Tera.

Should

- Read at least one scientific magazine or journal, or look on the internet to find out about recent developments in physics.





POLITICS



1. Watch the '[Politics Unboringed](#)' video as an introduction to UK politics.
2. Write a detailed definition of DEMOCRACY – do it without looking it up first and then do some research and write an updated definition using the research you have done.
3. Do some research into the main UK political parties and produce a summary page (mind map or something similar) that sums up what each Party stands for (you should do one for The Conservative Party, The Labour Party, The Liberal Democrats and The Green Party).
4. Take the online '[Who should I vote for](#)' test from the 2024 general election to find out which Party you have most in common with.
5. Read and analyse the graphs, maps and charts about the 2024 election result on the [BBC website](#). Pick 2 of the maps or charts that you find interesting and explain what they show and why they are interesting.
6. Find a politics related article from a newspaper – summarise the main points of the article and assess whether or not you believe it is balanced or biased. Extension – find an article on the same topic from a different newspaper and compare the way they are written.
7. Complete the '[MP for a week](#)' activity as a member of the governing party and a member of the opposition. Make some notes about what you learn and find interesting.
8. Download the '[How It Works](#)' booklet (click the link, scroll down to the bottom of the page to find the pdf file) read it and highlight key points – make a note of any questions that you have about things you read.
9. Watch the videos introducing you to the '[House of Commons](#)', '[House of Lords](#)' and '[How Laws Are Made](#)'.
10. Watch the short [video about the UK constitution](#) – make a note of key points and questions that you have about the video.
11. Over the summer try listening to the following podcasts - [For The Many](#) and [The Rest Is Politics](#)
12. Keep watching the news and try to watch programmes like 'Question Time' and 'The Andrew Marr Show' to keep up to date with what's happening in UK politics. Discuss politics with your friends and family – get used to talking about it!



PSYCHOLOGY

MUST:

Watch the TED Talk '9 Myths about Psychology Debunked': [9 Myths](#)

SHOULD

Sign up for and complete the free Tutor2U online introduction to AQA A Level Psychology course: [Tutor2U](#)

COULD

Pick a variety of the TED Talks, podcasts or books from the lists below to widen your knowledge of psychology.

TED Talks

Know thyself with a brain scanner
How reliable is your memory
What's so funny about mental illness?
Battling bad science
Should you trust unanimous decisions?
Is anatomy destiny?

Books

Girl, interrupted
A Beautiful Mind
Human Traces
The Shock of the Fall
The Boy with the Topknot
It's a bit more complicated than that
HumanKind

Podcasts list here: [Podcast](#)



RELIGIOUS STUDIES

(Religion (Islam), Philosophy and Ethics)

Must

- Be aware of developments in contemporary debates about ethical issues by watching the news, reading newspaper articles, researching on the internet, watching documentaries off BBC iplayer, ITVx, Youtube etc (e.g Tonight, Panorama, Dispatches). Issues include:
 - **Embryo research, cloning, abortion, euthanasia, capital punishment, vivisection, blood sports, factory farming meat**
- Examine several contemporary examples of events described as miracles using the internet and expressing a reasoned opinion about the validity of the claim.

Should

- Spend time reflecting upon and exploring your own opinion about the ethics of an issue affecting contemporary society (listed above) and prepare a persuasive defence of your viewpoint.
- Use the rsrevision.com website to begin researching the philosophical and ethical theories studied.

Could

- Watch Youtube videos explaining the Design, Ontological and Cosmological arguments for the existence of God and consider how persuasive they are as evidence that God is real.



SOCIOLOGY

Must

Consume good quality news on a regular basis. This could be via mainstream TV (BBC, Channel 4), a reputable newspaper (Independent, Times, Guardian) or their website. Look out particularly for articles about the topics we study in Sociology A Level – Culture and Identity, Education, Belief and Crime and Deviance.

Should

Watch the video clip on YouTube: What is Sociology? Crash Course Sociology
<https://www.youtube.com/watch?v=YnCJU6PaCio> and make notes on what you understand about Sociology.

Could

Expose yourself to some broader ways of looking at society –

Other sources of information/ways to develop your sociological understanding:

- 'Thinking allowed' Radio 4 podcast
- 'The Guilty Feminist' podcast
- Panorama

Extra reading: Such as

- Gang Leader for a Day by Sudhir Venkatesh or the chapter on this in Freakonomics by Levitt and Dubner
- Watching the English: The Hidden Rules of English Behaviour by Kate Fox
- Chavs: The Demonization of the Working Class by Owen Jones
- Natives by Akala
- Why I'm No Longer Talking to White People About Race by Reni Eddo-Lodge
- We Should All Be Feminists by Chimamanda Ngozi Adichie
- Invisible Women by Caroline Criado Perez

