EPQ

Student Guide

Everything you need to know and do to succeed in your EPQ

Contents

1. Qualification details

Exam board (AQA) details:

The Extended Project is a Level 3 qualification first assessed in November 2008. Students may choose to take the Extended Project Qualification as an extension from studies for any other qualifications at Level 3 (GCE, BTEC, NVQ, other academic or vocational qualifications including Modern Apprenticeships)

The Extended Project will develop and extend from one or more of the student's study areas and/or from an area of personal interest or activity outside their main programme of study. It will be based on a topic chosen by the student(s) and agreed as appropriate by the centre.

Delivery of the Extended Project Qualification in centres will involve some teaching of the necessary skills, supervision and assessment of the student's progress. It will involve extended autonomous work by the student.

Key features of the coursework:

It will require in total 120 guided learning hours. Students are required, with appropriate supervision, to:

- choose an area of interest
- draft a title and aims of the project for formal approval by the centre
- plan, research and carry out the project
- deliver a presentation to a non specialist audience
- provide evidence of all stages of project development and production for assessment

Qualification details

Exam board (AQA) weightings:

	Assessment Objectives	Weighting
AO1	**Manage** Identify, design, plan and carry out a project, applying a range of skills, strategies and methods to achieve objectives	20%
AO2	**Use Resources** Research, critically select, organise and use information, and select and use a range of resources. Analyse data, apply relevantly and demonstrate understanding of any links, connections and complexities of the topic.	20%
AO3	**Develop and Realise** Select and use a range of skills, including, where appropriate, new technologies and problem-solving, to take decisions critically and achieve planned outcomes	40%
AO4	**Review** Evaluate all aspects of the extended project, including outcomes in relation to stated objectives and own learning and performance. Select and use a range of communication skills and media to present evidenced project outcome and conclusions in an appropriate format.	20%

2. Reflective writing

Reflecting on our work

Your first job is to start writing **500 words a week** about what you've done on your EPQ: start with the taught sessions. Your medium is your choice.

Word – create subheadings for every week of your project
OneNote – create a tab for each week of your project
Diary – hand write a short overview of what you've done on each day that you work on your project
Notebook (physical) – add the date and ideas or actions each time you work on your project
Notes (app) – either type or make voice notes to document your thoughts, ideas and actions each time you work on your project

Rationale

- In order to effectively **manage (AO1)** and **realise (AO3)** your project, you will need to be regularly reflecting on and evaluating:
  - what you've done
  - what you need to do next
  - why you're doing what you're doing
- Monica Esslin-Peard has conducted research into reflective writing and has proven that humans naturally progress from descriptive and narrative writing to analytical and critical writing the more they write about their experiences. That means you're practising how to write your essay.
- In order **reach conclusions, reflect on and evaluate your project** and **personal performance (AO4)** after a full calendar year, you will need to refer to thoughts and notes earlier in the process.

3. Choosing a focus

The student will:

- identify, design, plan and complete an individual project, applying a range of organisational skills and strategies to meet agreed objectives
- obtain, critically select and use information from a range of sources; analyse data, apply it relevantly and demonstrate understanding of any appropriate linkages, connections and complexities of the topic
- select and use a range of skills, solve problems, take decisions critically, creatively and flexibly, to achieve planned outcomes
- select and use a range of communication skills and media to present evidenced outcomes and conclusions in an appropriate format
- evaluate outcomes both in relation to agreed objectives and own learning and performance.

There are two routes to create an EPQ: essay or artefact

Dissertation
A research project with a clear aim or purpose which culminates in an approximately 5000 word written report.

Artefact

- a physical outcome such as a short film, art or musical piece, a play or a piece of set design, an event such as a fashion show or a musical evening
- There is almost no limit to what can constitute an artefact, as long as it has research at its core, is appropriate for the intended audience and it has a clear aim or purpose.
- While the written report is shorter it should still be no fewer than 1000 words.

Choosing a focus

Finding a point of interest

- Research something that you already **have an interest in** and therefore have some basic knowledge and general understanding of: don't try to teach yourself something you've never engaged with before. Equally, don't just report on something you already know a lot about!
- Explore something that is **inspired by your current or future studies** – be aware that you cannot choose something that you get explicitly taught in any of your subject areas e.g. stem cell research is taught in Biology and examples of environmental developments are taught in Geography
- The exam board wants **depth** more than breadth: they want to see you exploring all angles of a concept and **reaching an informed conclusion**

Creating a question

- Your question has to have specific **aims and objectives**: you should be able to explore a concept and reach a research-informed conclusion.

Your question should guide you towards **evaluation, analysis** and **critical engagement** with research.

Using phrases like **"to what extent..."** or **"which of X, Y or Z had the highest impact on A..."** are one way to ensure this.

Choosing a focus

Focus selection flow chart

It can feel really challenging trying to find an area of focus so try following these steps to help make those first steps.

Have you got a specific career or university course aspiration?

Y

How could you explore an area of this that A-levels don't cover?

Have other people written about this area enabling research to be engaged with?

Is the area something that you will still be interesting a year from now?

N

Which subject/s at A-level interest you the most?

Can you explore an area of this subject not covered or combine two interests?

OR are you <u>not</u> taking a subject at A-Level but want to demonstrate this area of interest or skill?

Remember, whatever you choose you should be able to **dig deep** into the topic and **evaluate** and **analyse** one specific area. It must also facilitate you learning a **new skill** or gaining **new knowledge**

ProjectQ:
Record of Initial Ideas

Exploring your first thoughts

Every stage of the process needs to be **documented** – one of the four assessment objectives is 'decision making' so any ideas that you have and the thoughts you have around those, should be written down and your rationale for pursuing (or not) one route over another should be laid out clearly for anyone to understand.

TASK

On ProjectQ, complete your Record of Initial Ideas to explore and explain your focus ideas. Ask yourself:

- → Does it allow you to discuss two sides of an argument?
  OR
- → Does it allow you to compare or contrast something?
- → Does it allow you to engage with research (other peoples' writings) to reach conclusions?
- → Does it allow you to discuss your subject at an appropriate level, ie A-level
- → Does it go beyond your A-level studies? How?

and include thoughts on these in your commentary.

Your question should guide you towards **evaluation, analysis** and **critical engagement** with research.

Using phrases like **"to what extent..."** or **"which of X, Y or Z had the highest impact on A..."** are one way to ensure this.

4. Phrasing the question

Exploring your first thoughts

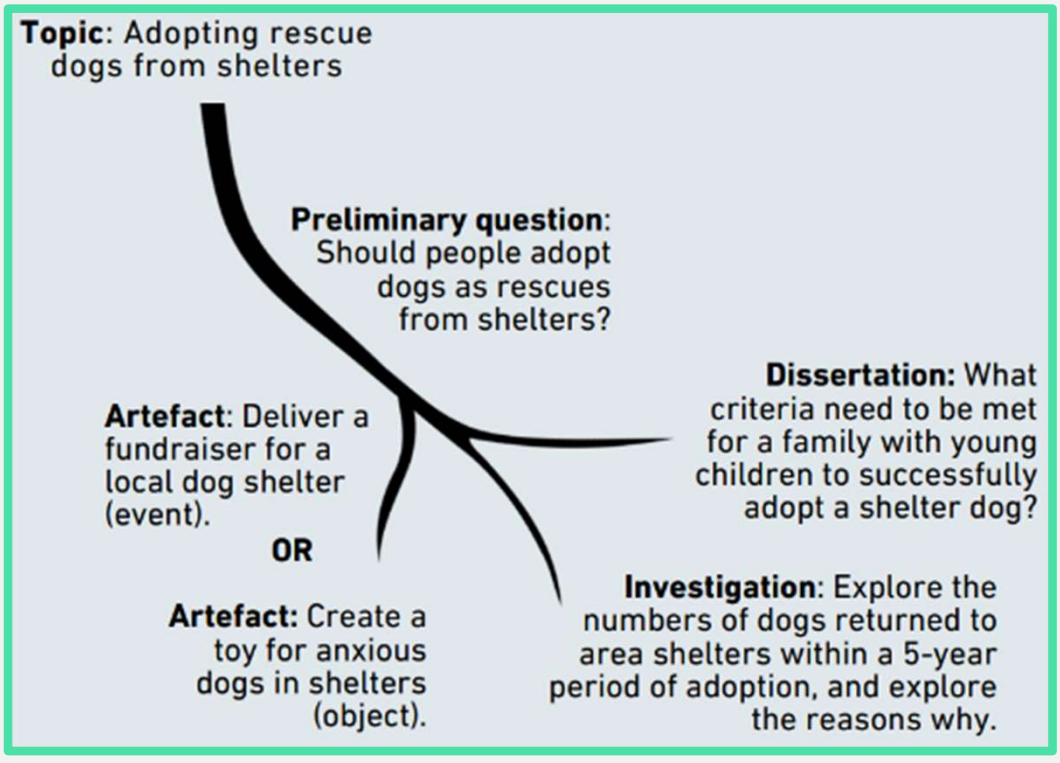
Every stage of the process needs to be **documented** – one of the four assessment objectives is **decision making** so any ideas that you have and the thoughts you have around those, should be written down and your rationale for pursuing - or not - one route over another should be laid out clearly for anyone to understand.

TASK

Try out the following optional question starters with your project focus to see which one fits your intention best:

- **Who** had the largest / most significant / greatest **impact** on...
- **What** had the largest / most significant / greatest **impact** on...
- **To what extent** was...
- **How did ... influence ...**
- **Which area of ...**
- **An exploration of...**

Here's an example of how the same area of interest could develop into various project types in response to research.



ProjectQ:
Part A Candidate Proposal

Exploring your first thoughts

With explicit **decision making** in mind, this area should be completed with a view to explaining the steps you have taken to reach the specific area of focus that you are choosing to explore.

TASK

On ProjectQ, complete your **Part A Candidate Proposal** to explore and explain your focus ideas. Ask yourself:

→ Why am I interested in this area?
→ What have I read that have influenced my decisions?
→ How do I envisage this focus fitting in with and supporting my future study and/or career plans?

You must ensure that the following information is included:

- Precisely what your focus is
- Examples of resources that you intend to use: these should be links or very specific details of books
- What your project will be and what you intend to explore in it e.g. a dissertation exploring the impact of...
- The exam board that your subjects follow

ProjectQ:
Part B&C Candidate Proposal

Part B
This is completed by your Supervisor. They are effectively writing you a reference and therefore you should have given them ample evidence of how you are managing the project.

Part C
This is completed by the Co-Ordinator. They will read your Record of Initial Ideas, Part A and Part B Candidate Proposal. They should be able to understand where your idea began and how it has already evolved.

5. Setting aims and objectives

Aims

- Are broad statements of desired outcomes, or the general intentions of the research, which 'paint a picture' of your research project
- Emphasize what is to be accomplished (not how it is to be accomplished)
- Address the long-term project outcomes, i.e. they should reflect the aspirations and expectations of the research topic.

Objectives

- Are the steps you are going to take to answer your research questions
- or a specific list of tasks needed to accomplish the goals of the project
- Emphasize how aims are to be accomplished
- Must be highly focused and feasible
- Address the more immediate project outcomes
- Should read as an 'individual' statement to convey your intentions

Setting aims and objectives

Example 1

Aim: To critically assess the contribution of the British Empire to colonised countries.

Objectives

- To select two contrasting countries previously colonised by Britain
- To compare and contrast the social, political and economic effects of colonisation on these countries
- To evaluate the overall impact colonisation had

Example 2

Aim: To design and deliver a series of lessons aimed at Year 6 children, giving them an introduction to British Sign Language (BSL)

Objectives

- Observe lessons with Year 6 children to gather data on duration, language used, potential activities
- Read relevant literature to establish what language and activities would be age-appropriate and the pedagogy of teaching students in Year 6
- Find a group of Year 6 children at a school that will allow me to trial, develop and deliver my lessons
- Undertake research and/or read relevant literature into the teaching of BSL to children
- Gather primary data from experienced teachers about how to create a series of lessons rather than a one-off workshop
- Undertake a full risk assessment: do I need a Disclosure and Barring Service (DBS) check? Do I need to obtain parental permission for each child I teach?

Setting aims and objectives

Putting it into practice

TASK

For your chosen focus area, set yourself an aim and a series of initial objectives.

Both of these will change, particularly your objectives, as you continue through your project.

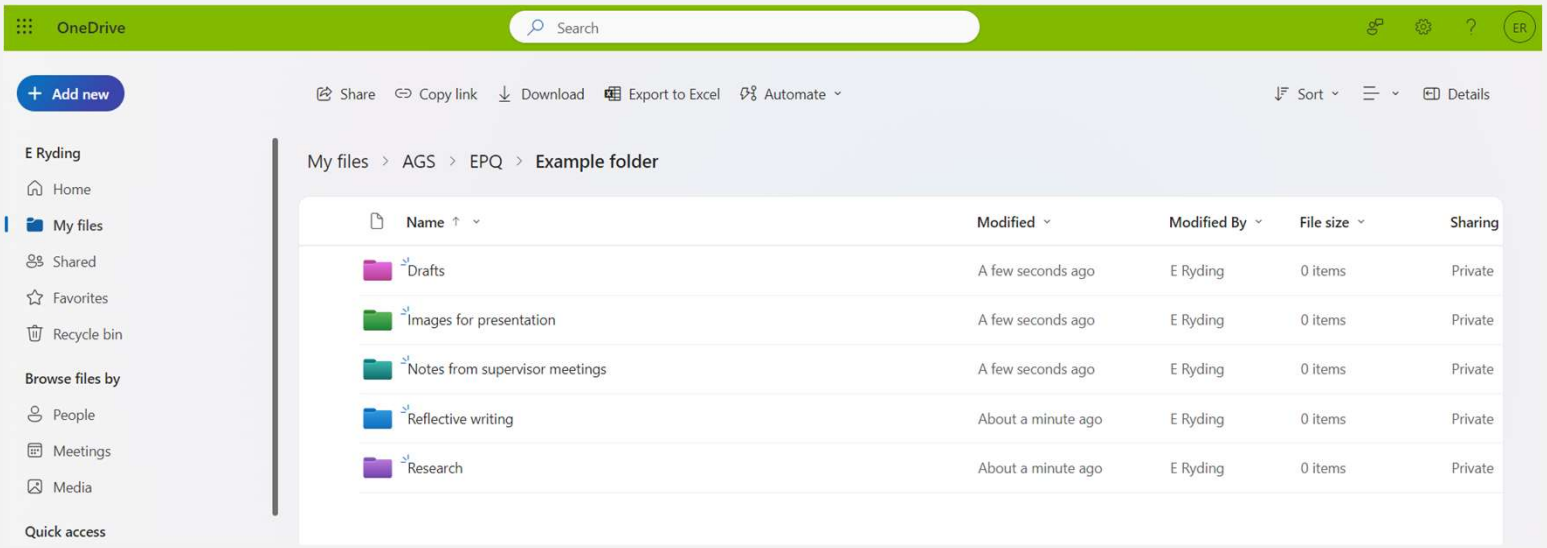
Aim:

Objectives:

6. Management of project

You are not just managing your time for this project, you're managing the information that you're gathering as well. That means you need to have an organisation system in place.

You get access to OneDrive with your Microsoft school login so store all of your documents on there. This means you can access it wherever you are and it's backed up in the Cloud so we shouldn't have any issues with losing parts of our projects!

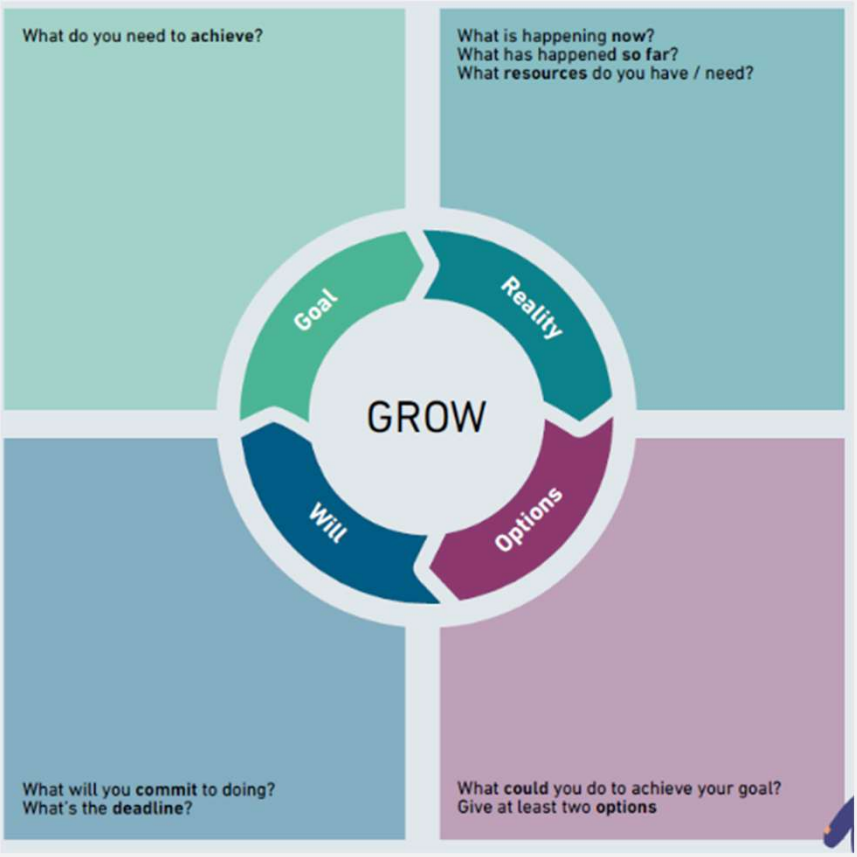


You could also do this with physical folders, post-it notes for different ideas, different coloured pens for different parts of your research or essay plan.

Management of project

The GROW coaching model can help you to make decisions about your project. There are A3 laminated versions of this in the library that you are welcome to write on in whiteboard pen to visualiser your tasks

You could also make use of the Pomodoro technique to focus your energy and attention for a dedicated time:



Or Gantt Charts to map out and monitor tasks and time over the full project:

7. Starting your research

How do you start researching?

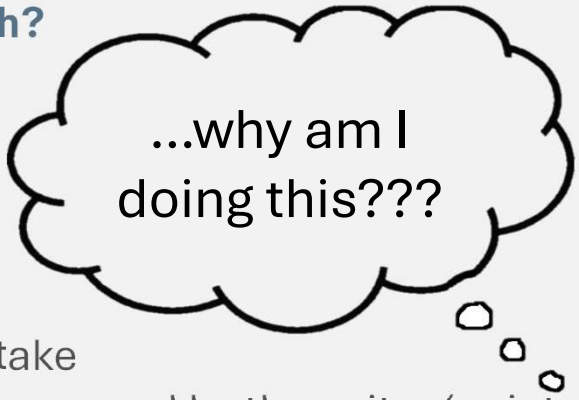
Before you open a book, listen to a podcast, read a journal, or look at any other type of resource for your research ask yourself...

It could be to:

- **Explore topic; collect ideas/inspiration**
- **Identify research questions**
- **Understand main ideas and arguments**
- **Critique key ideas and arguments**
- **Reread for writing up**

Starting your research

What impacts your reason for the research?



- → The level of detail and time you spend looking at a text
- → Whether you decide to skip sections
- → The quantity and type of notes you take
- → The depth or level of detail of notes you take
- → Whether you decide to follow up references used by the writer (pointers to further resources could, in fact be the main thing you are looking for)

What might this look like in practice?

I need to know more about the timings of World War Two

↓

I have found a timeline in this book/on this webpage but there are dozens of entries

↓

Evaluate which bits of information you actually need – do you only need to know events which involved the major or minor powers? Do you only need to know events that happened at the beginning or end? etc

↓

Record that information somewhere for future reference – with a reference noting where and when you got this information

8. Where to find resources

School resources

- ✓ The Humanities library
- ✓ Massolit for Classics, History, English, Government and Politics, Psychology etc etc
- ✓ Your amazing subject specialist teachers who can direct your attention towards reliable books/articles
- ✓ The 'A Very Short Introduction To…' collection of books in the Sixth Form workspace and the library
- ✓ Open access academic journals – see below
- ✓ The school library (and Mr Ellis!)
- ✓ Any library you can get to
- ✓ The University of Leeds library, you just have to register with them first (see Ms Ryding!)

Wikipedia is widely viewed as an unreliable academic source because anyone can create an account and edit information on a page so bear the following in mind when using it:

- The benefits of Wikipedia are that it's a great example of the democratisation of knowledge. The collective knowledge of the human race is a precious resource and sites like Wikipedia strive to preserve it rather than further their own agenda.
- It is brilliant for giving you a starting point. You can go on and read very briefly about an historical figure or professional which allows you to decide whether to move forward with your research on that particular topic or not.
- Finally, more often than not these days any assertions that are made on a Wikipedia page are cited and referenced at the end so find the source of that reference and read, evaluate and use that (if it's appropriate!). If something that sounds like a fact hasn't been cited, steer well clear of it!

Where to find resources

Examples of prominent open-access journals in various fields:

1. Science & Technology:

PLOS ONE

- A multidisciplinary journal that covers a wide range of scientific disciplines, including biology, chemistry, medicine, and physics.
- Website: https://journals.plos.org/plosone/

Nature Communications

- A multidisciplinary open access journal that covers physics, biology, chemistry, and earth sciences.
- Website: https://www.nature.com/ncomms/

IEEE Access

- An open access journal covering all areas of engineering and technology, published by the Institute of Electrical and Electronics Engineers (IEEE).
- Website: https://ieeeaccess.ieee.org/

Frontiers in Neuroscience

- A leading open access journal in the field of neuroscience.
- Website: Frontiers in Neuroscience

2. Medical & Health:

BMJ Open

- A high-quality open access journal that publishes original research in all areas of clinical medicine.
- Website: https://bmjopen.bmj.com/

The Lancet Global Health

- Open access journal focusing on global health issues, with an emphasis on high-impact, clinically relevant research.
- Website: https://www.thelancet.com/journals/langlo/home

American Journal of Public Health (AJPH)

- A top journal in public health, with open access articles and research.
- Website: https://ajph.aphapublications.org/

Where to find resources

3. Social Sciences & Humanities:

Social Sciences Open

- Open access journal that focuses on social science topics, including sociology, psychology, and economics.
- Website: https://www.ssrn.com/index.cfm/en/social-sciences-humanities-open-fl/

Frontiers in Psychology

- One of the largest open access journals in psychology, with articles covering various aspects of the field.
- Website: https://www.frontiersin.org/journals/psychology

Digital Scholarship in the Humanities

- A journal that covers research in the digital humanities, with open access research articles on computing, history, and culture.
- Website: https://academic.oup.com/dsh

4. Environmental Sciences & Sustainability:

Environmental Research Letters

- A prominent open access journal that focuses on environmental science and sustainability.
- Website: https://iopscience.iop.org/journal/1748-9326

Sustainability

- An interdisciplinary open access journal dedicated to sustainability, including ecological, social, and economic aspects.
- Website: https://www.mdpi.com/journal/sustainability

Geosciences

- A journal covering a wide range of research in the Earth and environmental sciences, published open access.
- Website: https://www.mdpi.com/journal/geosciences

Where to find resources

5. Education:

Open Education Studies

- A journal focused on research and practice in open education, offering free access to all articles.
- Website: https://www.degruyter.com/journal/key/edu/html?srsltid=AfmBOoprg_FRUpGUWQWC_btf0R_Gg0AilxORxF5MwGp2GNTMdWwVRL5W

Journal of Educational Technology & Society

- Open access journal that covers research related to educational technology and its impact on society.
- Website: https://www.j-ets.net/

Plus...

https://scholar.google.com/
https://www.jstor.org/
https://www.massolit.io/
https://www.sciencedirect.com/
https://www.ted.com/talks
https://www.researchgate.net/
https://www.psychologytoday.com/gb
https://www.youtube.com/
https://doaj.org/
https://www.doabooks.org/
https://core.ac.uk/
https://www.oapen.org/
https://www.openlibhums.org/journals/
https://www.researchgate.net/
https://plos.org/
https://www.biomedcentral.com/
https://www.elsevier.com/en-gb
https://www.scienceopen.com/
https://www.wiley.com/en-gb
https://eric.ed.gov/

9. Engaging with research

Evaluating and critically engaging with research – worked example

Article: Daily Mail, Mark Prigg, 28/02/2014

Headline: *The pill that could slow aging: Researchers reveal groundbreaking study to extend lifespan and improve health of the elderly*

Extract: *A groundbreaking new study could hold the key to living longer and remaining healthy in old age. US researchers found a protein called SIRT1 extended the lifespan of mice, delaying the onset of age-related health problems. It also improved their general health, lowering cholesterol and even warding off diabetes. Although the study was carried out in mice, researchers say it could eventually be used in humans. Researchers led by Dr Raphael de Cabo of the National Institute on Aging at the National Institutes of Health tested the effects of a small molecule that activates SRT1, called SIRT1720, on the health and lifespan of mice. 'Here, we show for the first time that a synthetic SIRT1 activator extends lifespan and improves health span of mice fed a standard diet.' says Dr. de Cabo.*

The investigators found that SRT1720 supplementation led to decreases in total cholesterol and LDL-cholesterol levels, which might help protect against heart disease, and improvements in insulin sensitivity, which could help prevent diabetes, heart disease and cancer. The animals were given the supplement from the age of six months and for the rest of their lives, alongside a standard diet.

However, experts warn that the study is still at a very early stage and had not yet been tested in humans.

Engaging with research

Evaluating and critically engaging with research – worked example

Factors to consider	Evaluation
Type of source	Article in a tabloid newspaper. Tabloid newspapers are renowned for exaggeration and selecting information that they want to use but the article that they reference is likely to have been published in a peer-reviewed[1] journal due to the nature of the topic of the article
Author's background	The author of this article isn't an expert but Dr Rafael de Cabo certainly is (a quick internet search of his name can confirm this) so the findings in his research report can likely be relied upon.
Date published	The newspaper article was published in 2014 when the scientific research paper was reviewed: this means that the information reported is as up to date as possible[2] and considered reliable.
Depth of reviews	We're looking here to see if the peers who reviewed this research have reported similar findings or if they have any serious concerns: the final line of our extract which reveals that other experts have warned the reader that this pill has not been tested on humans yet suggests the findings are controversial.
Sources cited	No other sources have been cited in this article
Objectivity	The tone is fairly balanced: there is no extreme bias either way

[1]peer-reviewed means experts in the same field have read the project. It provides quality control and proves credibility
[2]The book I have taken this example from was also written in 2014 therefore reports this example as being up to date

Evaluative conclusion: while this article can be viewed as reliable because it draws its information from an article written by an expert in the field and provides a useful, contemporary socio-cultural response to the possibility of aiding the aging process, ultimately this is a newspaper article and not an academic report. The best course of action would be to find the research paper written by Dr Rafael de Cabo.

Engaging with research

Putting it into practice

TASK
Read the following article and complete the table and final commentary to evaluate it's value

Article: The Guardian, Eleanor Morgan, 22/10/2021

Headline: *How to retrain your frazzled brain and find your focus again*

Extract: *Picture your day before you started to read this article. What did you do? In every single moment – getting out of bed, turning on a tap, flicking the kettle switch – your brain was blasted with information. Each second, the eyes will give the brain the equivalent of 10m bits (binary digits) of data. The ears will take in an orchestra of sound waves. Then there's our thoughts: the average person, researchers estimate, will have more than 6,000 a day. To get anything done, we have to filter out most of this data. We have to focus.*

Focusing has felt particularly tough during the pandemic. Books are left half-read; eyes wander away from Zoom calls; conversations stall. My inability to concentrate on anything – work, reading, cleaning, cooking – without being distracted over the past 18 months has felt, at times, farcical.

The good news? We can learn to focus better, but we need to think about attention differently. It is not something we can just choose to do. We have to train the brain like a muscle. Specifically, with short bursts of daily exercises.

Dr Amishi Jha is a professor of cognitive and behavioural neuroscience at the University of Miami and an expert in the science of attention. She has written a book called Peak Mind: Find Your Focus, Own Your Attention, Invest 12 Minutes a Day, a four-week training programme based on her research

Engaging with research

showing how simple mindfulness exercises carried out by people with high-demand jobs, such as soldiers, elite athletes and emergency medics, improve many aspects of cognitive and emotional health, including strengthening our attention.

When I first opened Peak Mind, I set a timer to see how long it would take me to feel the pull of social media. Three minutes in, I check Twitter. I tell Jha this and she erupts with laughter. "Oh, that's fantastic," she says.

I tell her this distractibility has made me anxious. She nods patiently. "There is nothing wrong with your attention, even if you feel more distracted right now. That is a healthy response to your current situation. To think otherwise is just false," she says. "We're in a crisis because our attention works so well. It's doing exactly what it was designed to do: respond powerfully to certain stimuli."

Stress is one of the biggest obstacles to focusing, says Jha. In a high-alert state, we often start ruminating and catastrophising. We get stuck in "loops of doom" or imagined scenarios. This mode impacts our "working memory": the amount of information that can be held in our minds and used for a task. For example, choosing the words to put together in an email, or reading a page in a book.

"Working memory is like a mental whiteboard with disappearing ink," says Jha. When that whiteboard is full of thoughts, feelings and images relating to what's making us stressed, there is no room for new information. We might start blanking, zoning out or snapping at our partners, then feel guilty, which makes focusing even harder.

Jha began thinking differently about mindfulness when she experienced her own "crisis of attention" ("a blaring, unrelenting onslaught of mental chatter," she writes) that reduced her ability to feel present with her small children.

Engaging with research

So she came up with some simple practices "that exercise the brain in ways that it is prone to being weakened". These short bursts of mindfulness training each day can help us notice the traffic of our thoughts and urges, and develop what Jha calls the "mental muscle" to observe, rather than act.

I admit that I am sceptical. Even as a trainee psychotherapist (with a vested interest in learning to be present) I find it hard to believe that something so stark, that we can do by ourselves, can help focus a mind that feels scrambled by multiple lockdowns, political divisiveness or economic uncertainty.

I start by setting a timer for three minutes each day, instead of the recommended 12 – a smaller "dose", encouraged by Jha, to get used to it. The first exercise involves sitting upright, closing your eyes and focusing on where your breathing feels most prominent, usually in the chest or diaphragm. Direct your focus here like a beam and notice when thoughts or sensations pull it away: a memory bubbling up; a reminder that you need to reply to a text; an itch. The point is noticing when the "flashlight" moves, then moving it back. That's it.

From the beginning, this flashlight image is one of the most useful mindfulness tools I've used. After three days, I start to notice when I am being pulled away from trying to focus on something (reading is trickiest for me). I am noticing when my focus is ruptured, which feels new.

The first step to better focus is accepting a key truth, says Jha: you cannot just decide to have unfettered attention. You have to practise. "The notion of an unwavering mind is a fantasy," she says. The problem is that we now have far more sources of distraction. We are not just recipients of content, but willing participants. Despite how often we are encouraged to "unplug" from our devices, we cannot outwit the algorithms designed by armies of software

engineers, statisticians and psychologists.

More unsettling is how we need our phones to rescue us from our phones. The global mindfulness meditation apps market size is expected to reach over $4.2bn by 2027. But in stepping back and learning why our attention can feel so slippery – rather than reaching for another attention-sucking app – perhaps we can assuage some of the difficult emotions associated with being distracted.

In week two, Jha introduces the "body scan". Using the flashlight to move through the body, from toes to scalp, you are encouraged to notice what physical sensations are there. Whenever the mind wanders, return it to the area of the body where the attention was before the wandering.

Even in three-minute bursts, my mind fizzes with words, people, places and feelings. I tell Jha that I have to move my flashlight back so many times, I wonder if it will ever feel easier. "You're doing great!" she says. "You have introduced something new and it can take time to get used to it. But know that it will get better."

After a fortnight of doing the exercises, I notice that being able to carve a little sliver of space between myself and the contents of my mind means I am able to divert my attention back to what I need to do more easily. The body scan exercise has given me a new awareness of how distracted I am by physical sensations (a cramp; a gurgle; an itch). It is hard to explain how significant this layer of awareness is unless you've tried it.

I am going to carry on with the exercises, with a view to building up to the 12-minute daily dose, because something is shifting in my relationship with my thoughts. I begin another book after I finish Jha's and reset my timer. It takes me 23 minutes to open Twitter. That's progress.

Engaging with research

1. *Pay attention to your breath, and where on your body you feel it most: direct your focus like a beam of light. Do this for three minutes a day, for a week.*
2. *Integrate this technique into everyday life – for example, brushing your teeth. If you're thinking about your to-do list as you're scrubbing, bring the light back. Focus on the sensations.*
3. *A lot of people report that their mind is "too busy." Your job is not to stop it – your job is to exist with it, and to place your attention back where you want it.*
4. *Ignore "mindfulness myths": you are not "clearing your mind." This is an active mental workout.*
5. *There is no "blissed-out" state you are aiming to experience; in fact, the whole point is to be more present to the moment.*

NB: This article was amended on 25 October 2021. The global mindfulness meditation apps market size is expected to reach over $4.2bn by 2027, not $4.2m as stated in an earlier version.

Engaging with research

Putting it into practice

Factors to consider	Evaluation
Type of source	
Author's background	
Date published	
Depth of reviews	
Sources cited	
Objectivity	

Engaging with research

Evaluative conclusion:

10. Ethics and data usage

How do the ethics of research influence our understanding and usage?

We've looked at how to gather knowledge and find, engage with and evaluate resources on one level but we must also consider how the research has been conducted and how that shapes our understanding and usage of the data.

You can also use this information to look at the two different types of data that you *could* gather yourself, if you needed to and how you make sure that you do this ethically.

Key terms

Quantitative – data which represents how much / long / many there are of X

Qualitative – data which cannot be counted or quantified. Could be words or pictures that represent how someone feels: it's not numerical whatever it is!

Ethical – relating to moral principles

Moral – making the right choice for everyone/thing involved

Integrity – the quality of being honest and holding strong morals

Responsibility – the state of having a duty of care

Respect – the act of acknowledging and valuing

Anonymity – being unidentifiable

Transparency – being clear and honest

Choosing between qualitative and quantitative data depends on the intention of your research: while qualitative research aims to understand meaning, quantitative research aims to quantify variables and analyses statistical relationships through numerical data.

Data analysis: qualitative data is analyzed by categorizing information to understand themes and insights. Quantitative data is analyzed statistically to identify patterns.

Data type: qualitative data is based on personal accounts or documents. Quantitative data is numerical or measurable.

Ethics and data usage

Quantitative data

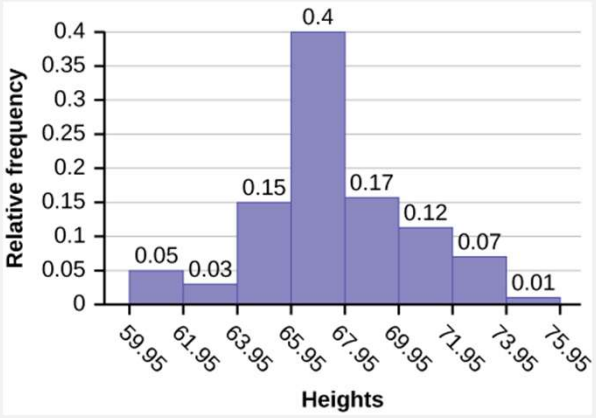
Quantitative data are summarised using measures such as the mean, median or mode.

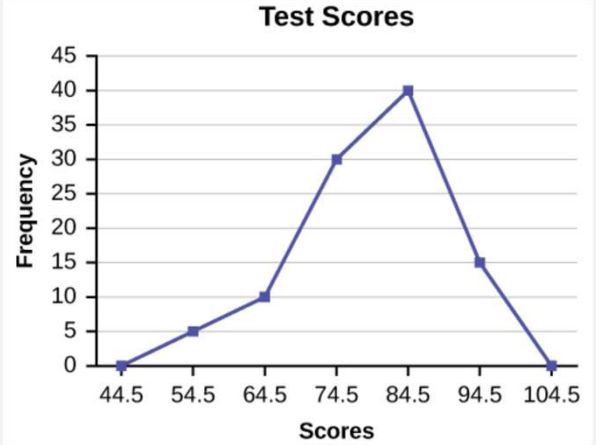
These are called measures of central tendency and express the average:
Mean – add all the numbers up and divide by the total number of items
Median – arrange numbers in order and identify the middle number/s
Mode – the value or item that appears most often

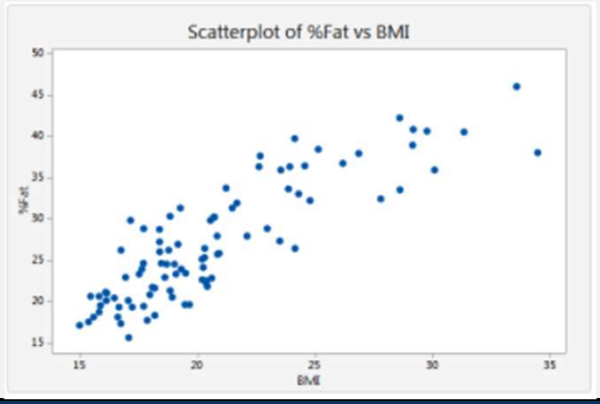
Measures of dispersion are also useful:
Range – the difference between the highest and lowest numbers
Interquartile range – divide the data into four and give the range between the first and third quartile. The removes the influence of extreme values.
Standard deviation – the spread of the data around the mean.

Probably the most important measure to us is graphical representation. This allows the reader to view and engage with your findings at a glance:

Bar chart or histogram: the height of each bar shows the frequency of the item. It is best to display measures of central tendency rather than individual scores
Frequency graphs: these are used when data are continuous and therefore can be joined by a line
Scatter diagrams: used for correlational data







Ethics and data usage

Qualitative data

There is no single method for analysing qualitative data but some general guidelines are as follows:

1. Read and re-read the data *dispassionately* with the express intention of trying to understand the meaning communicated and the perspective of the author
2. Break the data into meaningful units – small sections of text that can convey meaning (think snapshot quotes from people reviewing an item or event)
3. Assign a label or code to each unit. These will act as categories for your analysis: one item could hold multiple categories i.e. UK / university educated or Russia / high school educated
4. Combine the simple codes into larger categories or themes i.e. country of birth / highest level of education
5. A check can be made to evaluate the quality of the first set of data collected: if you can apply the same codes and categories effectively then you have a reliable representation of the topic area investigated.
6. The final report will be informed by these categories and should be referenced throughout.

Ethics and data usage

Engaging with data

TASK
Look at the following list of topics and decide whether each study would require 'quantitative data', 'qualitative data' or a combination of both.

- → To what extent does the sugar tax reduce sugar consumption in the UK?
- → How has Donald Trump changed politics?
- → Given how they change behaviour, should advertising and marketing be made illegal?
- → When should one country legally intervene in another, when it comes to human rights abuses?
- → Could a four day school week improve mental health among secondary school students?

TASK
Read the following quantitative description of the picture and then write a qualitative description.

- Picture is 10" by 14"
- With frame 14" by 18"
- Weight: 8.5 pounds
- Surface area of painting is 140 square inches
- Cost: £300

Ethics and data usage

Engaging with data

Primary data are collected by the researcher but it may well be cross-referenced or triangulated with secondary data as well. When primary data is conducted, it is paramount that all participants and the data they are sharing are treated with respect. **Research ethics** are the things that a researcher must take into consideration when engaging with research subjects (humans). They can be categorized as follows:

- → Informed consent
- → Deception
- → Privacy
- → Anonymity and confidentiality
- → Right to withdraw
- → Protection of participants

More details on each of these categories can be found on the following pages. They may not influence your project directly but you may need to use the concepts to evaluate the secondary research that you're using: have they all be conducted entirely ethically?

An 'issue' is anything which raises discussion or conflict. An 'ethical issue' is something which raises a discussion or conflict between what the researcher wants and the participant's rights.

Ethics and data usage

Accounting for ethics

Informed consent

Participants should give permission or consent before they agree to take part in any study. 'Informed' means they know exactly what the aim of the study is and what they will be required to do. They should also be informed of any potential risks, just like at the beginning of TV programmes 'there are scenes which some viewers may find disturbing'.

As a general rule there should not be any kind of incentive provided for participants and there definitely shouldn't be any coercion.

Deception

The problem with fully informed consent is that knowing the aims of a study may affect the honesty of some or all of the participants. Therefore researchers sometimes do not share the aims in their entirety or perhaps mislead them in some way. In some instances this may only be a minor issue but in others this could of course be a major issue.

Privacy

Privacy refers to a person's right to control information about themselves. Both confidentiality and anonymity are related to this – it is every individual's right to decide who gets to know what about themselves.

Protecting privacy is sometimes difficult in observational studies for example when observing members of the public in a public park. There is an assumption that it is acceptable to record the behaviour of other if they are in public but there is no universal agreement about what does or does not constitute a public space.

Ethics and data usage

Accounting for ethics

Anonymity and confidentiality

Anonymity: when no one, not even the researcher, knows the true identities of the participants. Maintaining anonymity in your participants may mean removing more than just the names: ages, geographical locations of home or work, job titles, strong opinions when presented in isolation or combination could reveal a person's identity.

Confidentiality: when the identities of all participants are not disclosed and pseudonyms or codes are used instead.

Right to withdraw

Even if a participant has signed a consent form before the study they must be made aware that they are free to withdraw from the study at any time. This mean that, if they do become uncomfortable about the procedures, their well-being is assured.

This is due to the nature of participants not always being able to fully anticipate what will happen as part of the research proceedings or because the researcher cannot fully anticipate what will happen.

Participants must also be able to request that the data they have given be removed from the study. Even if pseudonyms or a coding system is put in place, researchers must account for and respect a participant's right to withdraw their data.

Ethics and data usage

Accounting for ethics

Protection of participants

- The researcher should assess the level of risk involved in their study as they have a duty of care not to cause either physical or psychological harm to their participants. Ethical guidelines state that participants must not be exposed to harm greater than they would experience in everyday life. At the outset, participants should be informed of potential risks but it should also be noted by both researcher and participant that some reactions cannot be anticipated.
- Physical harm is more clear-cut and might include intrusive interventions such as the administration of drugs or other substances, vigorous physical exercise, or techniques such as hypnotherapy. The majority of participants would not encounter such interventions in the course of everyday life.
- Psychological harm is more difficult to clarify though. For example, there would be minimal risk involving brief questionnaires that ask about favourite TV programmes but questions relating to parental alcoholism or illegal behaviour may pose a much higher psychological threat. Embarrassment of participants in any degree would also classify as a psychological risk.

Ethics and data usage

Engaging with data

Here's one EPQ student's documentation of their use of 'right to withdraw' and 'protection of participant':

Children in the study were encouraged to give voice to their perceptions and feelings about how their learning difficulties affect their time in schools and the behaviours which they display. By its very nature, this process invoked emotive memories and feelings. Bringing their behaviours into conscious thought processes may have also invoked heightened levels of emotional awareness. The extent to which these types of possible risks may occur was impossible to quantify or anticipate in full prior to the start of the project; a point which was magnified due to the longitudinal nature of such qualitative research (Economic and Social Research Council 2006). In anticipation of difficulties in this regard, participants, parents and the schools were, at the outset, given information on their right of withdrawal from the processes of this research.

TASK

Highlight the sections that refer specifically the student's choices to keep their research subjects (and their respective data) safe and respected.

Ethics and data usage

Golden guidelines:

As a general rule, dealing with ethical issues – after you've chosen a suitably ethical topic that is – can be dealt with by providing participants with a 'briefing' and then a 'debriefing'.

Briefing

A consent form should be sent to all participants detailing the following:

- ✓ The rationale for the study (including aims and research questions)
- ✓ Why the participants have been selected
- ✓ Information about their right to withdraw
- ✓ Information of what they are required to do
- ✓ Details of how their data will be stored

Debriefing

This involves giving all relevant details after the event and should include:

- ✓ The title of the study
- ✓ A full explanation of the purpose of the study
- ✓ How the findings will be used
- ✓ If deception was used, a clear explanation of how and why
- ✓ Confirm if the results are confidential or anonymous
- ✓ A reminder of their right to withdraw if participants are uncomfortable at all
- ✓ If the research poses a risk of stress, counselling or equivalent would be offered in the debrief
- ✓ A thank you for their participation
- ✓ Contact information for the researcher so that they can seek further information or guidance in the future should they need to

Ethics and data usage

Putting it into practice:

TASK
Consider the following EPQ topics. Does the topic raise any ethical questions and if so, what issues are raised?

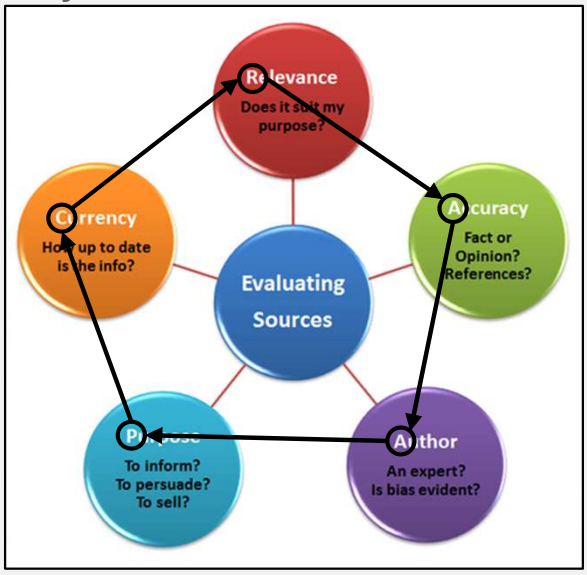
1. A questionnaire to investigate attitudes towards hydraulic fracturing.
2. An observation study to investigate whether people buy more 'Big Issue' magazines when it is sunny compared to when it is raining.
3. A small-scale survey to investigate whether teenagers have taken class A drugs.
4. An experiment to investigate magnetic field patterns.
5. A questionnaire which asks primary school children whether they have nightmares on a regular basis.
6. An experiment to investigate the effect of nitrous oxide on teenagers.
7. Examining the effects of alcohol in respiration in yeast.
8. To investigate whether alcohol decreases reaction time in PE students who are playing table tennis.

TASK
Apply this ethical question to your own project: is there anything that you need to be aware of with either primary or secondary research?

11. Excellent note-taking

Notes for reading research texts

When you're engaging with written texts, you won't have time to read the whole thing and then go back and re-read it take notes: a book? A full research paper? A dissertation? You're looking at anything from 1-10+ hours of reading time! Good time management requires you to be able to evaluate a source before investing time in it.



Practical tips for being able to do this:

1. Read:
   a) the abstract of an academic article
   b) the publisher's blurb of a book
   c) the index and/or contents
2. Use the CRAAP and/or RAVEN acronym to build a first impression of the text.

R	**Reputation:** does the source's location, history and status suggest trustworthiness?
A	**Authority:** has the piece been written from a position of authority and experience in the relevant field?
V	**Verifiability:** can the information be proven and trusted? Would the author gain anything by fabricating or altering the data?
E	**Expertise:** is the source creator in a position of authority in their field?
N	**Neutrality:** is the source creator biased at all i.e. endorsing a product or

Excellent note-taking

Practical tips for turning the information you've gathered into notes:

1. Establish the purpose of your note-taking

It could be to...

- Frame an overview of the subject
- Record a sequence or process
- Record what is novel in a piece of work
- Compare different viewpoints and/or arrive at your own
- Extract the logic of an argument or position
- Understand the meaning of data
- Borrow quotes – with suitable citations
- Add you own commentary on the text

2. Make sure you know what you need to record

It depends on your purpose but this could be:

- The author's opinion
- Dates or orders of events
- Significant figures' opinions, quotes or versions of events
- Data findings
- The contrasting arguments

3. Decide on the appropriate form of note taking

Use the information on the next page to make a decision on this.

Excellent note-taking

Practical tips for turning the information you've gathered into notes:

Note type	Details	Advantage
Keyword notes	A minimalist note-taking strategy that focuses on capturing the essential words and phrases that convey the main ideas and key concepts of the material being studied. Instead of taking extensive or detailed notes, this method emphasizes brevity and clarity, making it easier to recall the core information during review.	Good as a layout for easy access to information
Outlining	Notes are organized hierarchically with main topics, subtopics, and supporting details. This is a linear and structured way to capture information. Suitable for structured learning.	Good as a summary of information and a layout to easily access information
Matrix notes/ grid notes	A method that uses a table or grid to compare and contrast different categories or sets of information. This approach is especially useful for comparing multiple attributes of several topics, organizing complex data, or reviewing related concepts in a systematic way.	Good layout for recording different viewpoints, approaches, applications

Excellent note-taking

Practical tips for turning the information you've gathered into notes:

Note type	Details	Advantage
Timelines	Timelines organize information chronologically along a line (either horizontally or vertically) to represent the order of events, dates, or milestones. It's useful for subjects like history, project planning, or event sequencing.	Act as memory aid for a sequence of events; stages in a process
Flow-chart notes	Combines visuals, arrows, symbols, and shorthand for rapid and dynamic note-taking. Allows for connecting key ideas and adding thoughts as you go, which can help with engagement.	Allow clear path through complex options
Concept maps/ mind maps	A visual method of note-taking that involves placing a central idea in the middle of the page and connecting related concepts around it using branches. Best for brainstorming and exploring complex ideas.	Good for recording information on a single page
Herringbone maps	The Herringbone (or Fishbone) diagram is a visual note-taking method that helps outline the cause-and-effect relationships related to a main idea or topic. It's often used to break down processes or analyse complex problems and their contributing factors.	Good for laying out opposing sides of an argument

Excellent note-taking

Putting it into practice

TASK: use the table of different note-taking formats to decide on the best format for each of the following tasks and purposes

Task	Task description	Note-taking format
Historical timeline of the Renaissance	Research key events, figures, and milestones during the Renaissance period, with dates and their significance.	
Biology experiment observations	Conduct an experiment, record observations, and note hypotheses, methods, results, and conclusions.	
Character analysis in a novel	Analyze a character's development, motivations, and relationships throughout a novel.	
Comparative essay on political systems	Compare and contrast two different political systems, noting key similarities, differences, advantages, and disadvantages.	
Art movement study	Research key artists, techniques, themes, and historical context of a specific art movement.	

Excellent note-taking

Putting it into practice

Task	Task description	Note-taking format
Business case study analysis	Analyze a business case study, identifying key issues, proposed solutions, pros and cons, and final recommendations.	
SWOT analysis	Perform a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis on a company of your choice, noting each aspect clearly.	
Psychological theory comparison	Compare different psychological theories, their founders, core concepts, and applications in real-life scenarios.	
Coding project documentation	Document the code structure, functions, bugs, and key steps in developing a software application or program.	
Environmental science report	Summarize research findings on an environmental issue, including causes, impacts, and potential solutions.	
Debate preparation	Prepare for a debate by outlining arguments, counterarguments, evidence, and rebuttals.	

Excellent note-taking

Practical tips for turning the information you've gathered into notes:

Come up with a series of codes that make sense to you and use them consistently across your notes. This will enable you to have clear and consistent notes.

1. On all notes you take, make a note of the key details:
    a. the date(s) you made the notes
    b. the people and location or topic
2. For written texts, make sure you record the full details of the source. You will need this information to make sure you can accurately cite any text you refer to and avoid plagiarism:
    a. The author's full name or initials and surname
    b. The title of the full text PLUS the chapter or section
    c. The pages of the full chapter/section
    d. The page number that any specific reference you make comes from
    e. The date the text was published
    f. The publisher and place of publication (normally the city)

TASK: go back to any notes that you have made already and double check that you have all of this information documented. Add it if not!

12. Time management tips

What is time management?

Time management put simply is the process of structuring and organising the competing demands on one's life. That means that everything has equal value and should be considered over the time period that you are looking to manage but it does not mean that you have to do everything.

The time period that you're looking at could be anything from a week to a year – make use of the timeline on ProjectQ to your half-termly and weekly phases of management.

Because this project lasts a year and attributes marks to time and project management, the best thing to do is allocate a time like you would to any other subject. Little and often is the key to success.

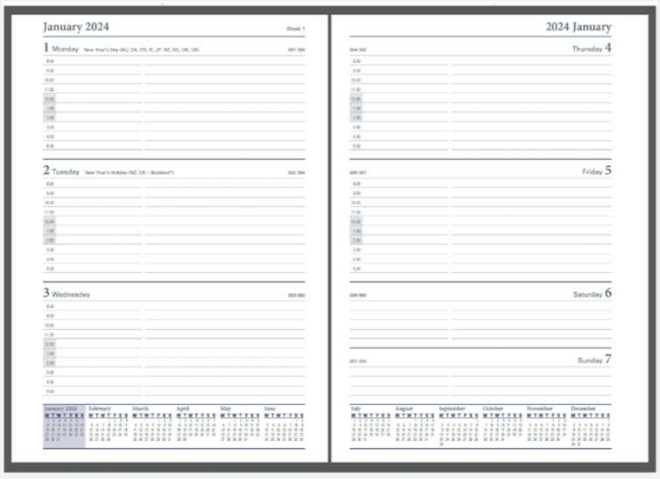
	1	2	3	4	5	6
Monday	EPQ		Biology	Biology	Maths	
Tuesday	Maths	Biology		Study	Physics	Physics
Wednesday		Maths	Study	EPQ meet		
Thursday		Physics	Biology	Maths	Maths	
Friday	Physics	Physics	Study			Biology

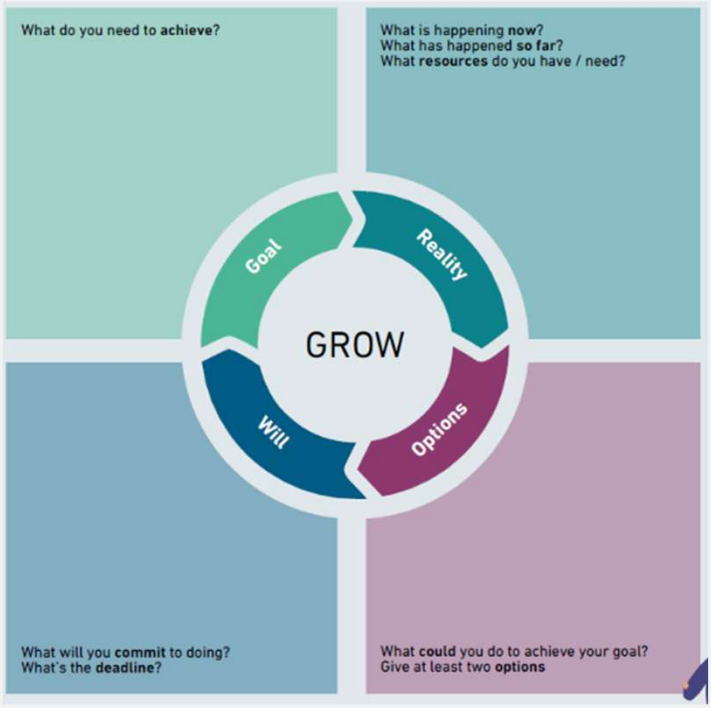
Time management tips

What can you do to help yourself?

There are numerous options and it's most likely that you will use different techniques at different stages of your project: your planner might be used throughout but the Eisenhower matrix (bottom right) might only be used when you're feeling under pressure and need a reset.

To-do lists are great for this because they're flexible: they might just cover the tasks you need to complete in one study session but they also might be more flexible and cover the week or half term.





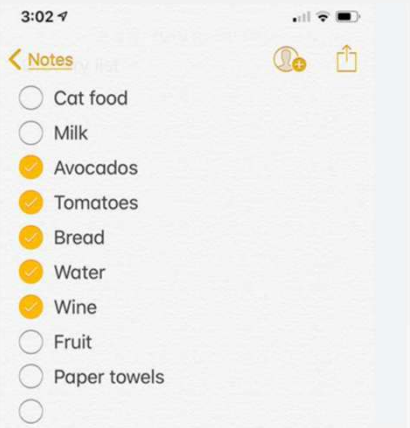
Time management tips

Putting it into practice

TASK
Use the timetable below to map out your personal week. You can include as many different commitments as you like from both school and home life!

	1	2	3	4	5	6
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						

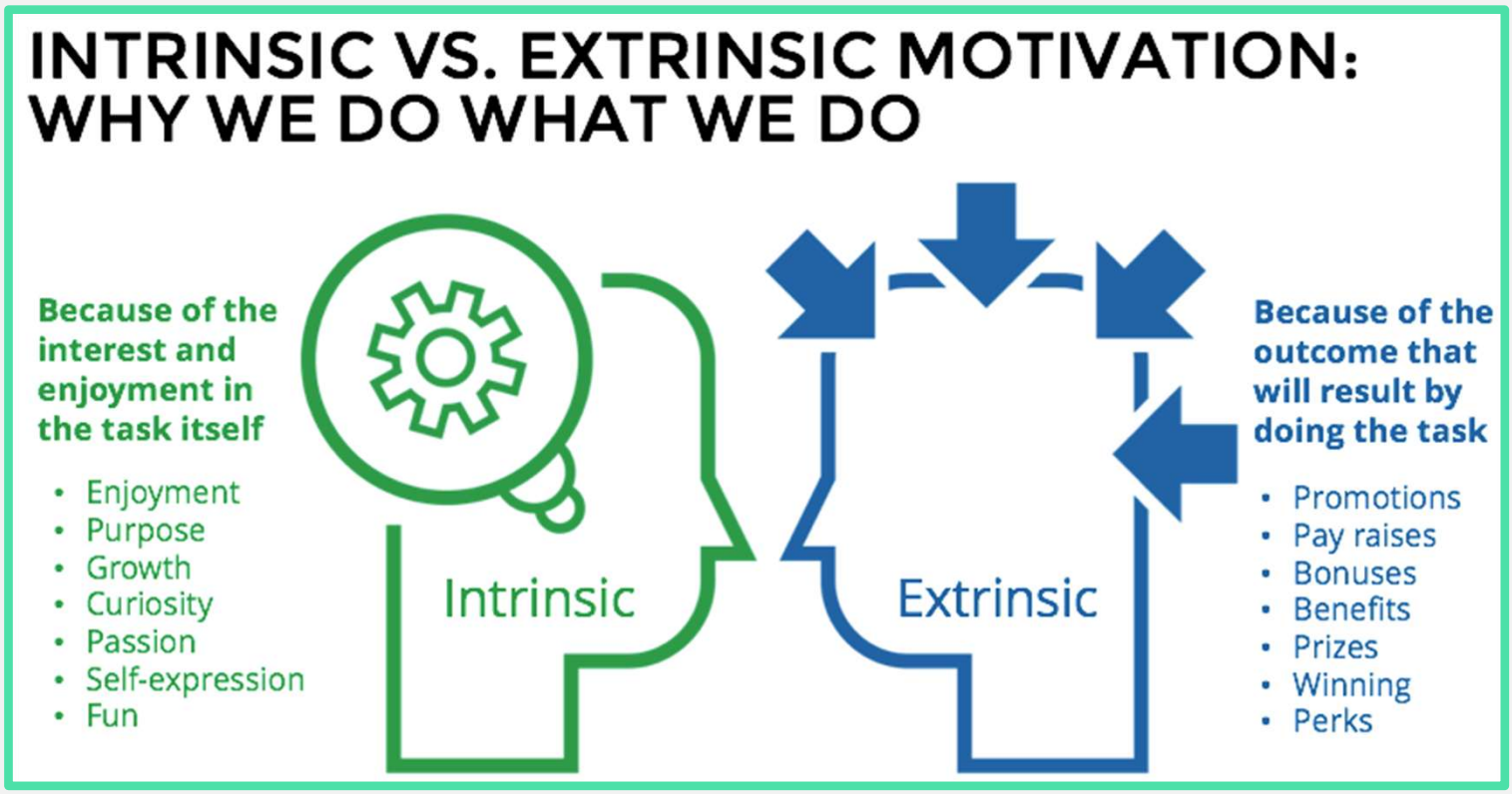
TASK
Create a to-do list for the next 2-week gap you've got between meetings. How many jobs can you tick off in that time?



13. Self-motivation tips

What is motivation?

If you've hit a bit of a brick wall, take a few minutes to analyse why you're doing what you're doing...



...and make a list. Knowing your motivation can give you a push in the right direction and get you back in the right headspace.

Alternatively (or as well as) you could write down what you want to achieve ultimately, and this could be big or small:

- ✓ by the end of this session, I want to have a clear plan for where I'm going to look for resources
- ✓ by the end of Year 12 I want to know I've got a minimum of 24 UCAS points in the bag
- ✓ in the future, I want to earn enough money to be able to own my own property without having to rely on someone else

Self-motivation tips

Here are 10 exercises to try out if you're struggling with motivation:

Two-minute rule: getting started is always the hardest part. Set yourself a timer and work on a task for 2 minutes. More often than not this then spurs on an extended phase of work (on that task).	**Self-evaluate** understanding the problem at hand simplifies the solution. Analyse *why* you feel unmotivated and address that as a way to get you going on the task. Can't focus because your mouth tastes weird? Make a cup of tea.
Free writing – writing has a therapeutic and calming effect. The words don't have to be read by anyone other than yourself so set a timer and write down anything and everything that's on your mind. Removing emotional clutter might unblock the motivation train.	**Affirmations and quotes:** write down words that inspire you or you easily connect with. Even if they're not directly connected to motivation, recalling quotes from your favourite authors/influencers/TV characters, boosts your mood and ups your energy levels.
Gratitude list: Gratitude is a simple but powerful tool. When unmotivated, write a list of things you are grateful for. You can make this as brief or extensive as you like. Maybe you want to focus on intrinsic and extrinsic motivators	**The Pomodoro technique**: this is a technique whereby tasks are completed in 25 minute chunks followed by 5 minutes of break time. It forces tasks to be broken down into manageable chunks and you're never far from a break!
Physical exercise: moving your body on a regular basis not only releases endorphins but it also reinforces mental toughness and energises the pursuit of your goals.	**Reverse psychology:** accept that you feel unmotivated and don't have to do anything on your list. You've just given yourself the choice of pursuing your goals or letting them pass you by.
Quick vision board: put together a collection of images that reflect what you want your life to look like in the future. Refer back to this to boost that motivation for why you're doing something.	**Make it fun:** changing your mindset makes any task enjoyable. Write down 3 things that you enjoy about the tasks on your to-do list. That could be anything from "I like using this pen" to "I like it when it's over!"

Self-motivation tips

TASK

Read the following entry from a student's Production Log about why they chose to do an EPQ:

"I did the EPQ because I wanted to know more about what sustainability looked like in practice. I have chosen one particular example to focus on so I'm going to focus all of my research on that example. I want to go to university so I think this will put me in a strong position for my studies when I get there."

Evaluate the quality of this entry.

Do you understand what their motivation is? Do you understand why they made the decisions that they did? Do you understand what their next steps are? What advice would you give them to improve their entry?

Self-care (for motivation)

A quick guide to self-care so that you can look after yourself when you're trying to juggle everything that is demanded of a sixth former!

14. Critical thinking

What does critical thinking look like?

→ Critical thinking means different things to different people.

→ In an academic, university context the term is generally used to describe the ability to **analyse a problem and present a solution to it**.

→ It is important to realise as a starting point that the use of the word 'criticism' in academic contexts is different from that in normal conversational English: in the academic sphere 'to criticise' refers to the process of seeing and explaining both the positive and negative aspects of an issue. The aim of a piece of criticism is to produce a balanced discussion and arrive at a conclusion having thoroughly explored all perspectives.

→ Thus, in our context, the concept of 'critical thinking' is going to be used to mean process of **applying your intelligence** to a specific issue or problem; **weighing-up the options** for solutions and **offering a clearly evaluated solution**.

Critical thinking is...

- **Incisive:** it is perceptive, keen and insightful. It sees through complexity and obscurity
- **Logical:** it uses evidence that develops and enhances to establish a clear position
- **Deep:** involves the higher-level skills of analysis, synthesis and judgement.

Critical thinking **is *not*...**

- **Disorganised**: a haphazard collections of materials
- **Prejudiced**: it does not ignore evidence on one side of the issue
- **Unsubstantiated**: it does not fail to keep an account of evidence

ProjectQ: Planning Review

Exploring your first thoughts

Planning and managing your project are the focus of this section, you are looking to reflect on the actions you've taken so far and put precise, specific plans in place to ensure your project is completed to the highest standard possible.

TASK

On ProjectQ, complete your **Planning Review** to set out the next steps in the process. Ask yourself:

- → What have done so far that's worked?
- → What could I have done better?
- → How has your research influenced the decisions that you've made in terms of the focus of your project.
- → What steps are you going to take in both the short and long term to ensure success in your project?
- → What has your Supervisor and/or Co-Ordinator advised you to do?
- → Have you learned any specific skills that you are going to apply to your project?

Use sections 11, 12 and 13 (note-taking, time management and self-motivation) to support your planning and management. You can change tactics and try out new methods at any stage of the process to find what works best for you.

ProjectQ:
Mid-Project Review

Exploring your first thoughts

We are still firmly in the **planning and managing** stages of your project and therefore you need to be evidencing this as clearly as possible. You can do this with a Gantt chart or any other time management document and attach this as part of your evidence pack but you should still narrate the actions that you have taken in this page.

TASK

On ProjectQ, complete your **Mid-Project Review** to reflect on how far you've come and establish the next steps in the process. Ask yourself:

- → What have done that's worked?
- → What would I do differently? Can I put this into action for the rest of the project?
- → What do I need to do next to move my project forward?
- → What has my research taught me?

The following pages lay out some key information about malpractice, specifically plagiarism. Now you're at the Mid-Project Review stage you will be moving onto the **realisation** stage and therefore you must be certain that you are creating an original and unique project which does not put you at risk of **malpractice, plagiarism or dual-accreditation.**

15. Malpractice

Malpractice

If a student commits **malpractice** it means that they have failed to follow the rules of an examination or assessment.

'Candidate malpractice' means malpractice by a candidate in connection with any examination or assessment, including the preparation and authentication of any controlled assessments, coursework or non-examination assessments, the presentation of any practical work, the compilation of portfolios of assessment evidence and the writing of any examination paper.

Students who are suspected of **plagiarism** or **collusion** will be investigated and this shall be sent off to the examination board by the examination's officer. The examination board will notify the head teacher of their final decision. If the examination board finds the student guilty of malpractice because they have either colluded or plagiarised, the course -work may be awarded 0 marks.

Plagiarism – copying another students' work or copying from any source e.g. books, articles, websites or AI.

Collusion – sharing your work with another student to benefit the competition of the coursework. Sharing your work for someone else to copy is still cheating and is deemed as malpractice. The consequence could mean that your coursework is jeopardised.

If a teacher suspects malpractice but does not report it, they are also committing malpractice.

The AGS malpractice policy, which has been drawn from the JCQ (Joint Council for Qualifications) can be found here: Malpractice Policy (Exams) (2).pdf

Malpractice - AI

AI and assessments

AI stands for artificial intelligence and using it is like having a computer that thinks.

AI tools like ChatGPT or Snapchat, My AI can write text, make art and create music by learning from data from the internet.

Using AI to create your coursework and say it is your own work is cheating and is considered as 'malpractice.' Candidate's work, which is suspected of using AI, will undergo an investigation through the examination board. This could result in the candidate's coursework being invalid and will not count towards their final GCSE or A-Level coursework.

Do not use any AI to complete your coursework. It is cheating and could jepordise your grade.

The exam boards use sophisticated 'plagarism' software called Turnit In to identify any cheating. As coursework is submitted to the examination board, any plagiarism will be identified and consequences will occur.

For the full AI policy created by JCQ (Joint Council for Qualifications) please following the link below:

JCQ guidance - AI-Use-in-Assessments_Feb24_v3.pdf

16. Referencing

Referencing guide

It is essential that you credit authors for their research material and ideas otherwise you could be accused of **plagiarism**. This is a very serious academic offence. It applies regardless of how much you copy. Learning to cite references correctly will help to ensure that you do not commit plagiarism by accident. Referencing is also used to demonstrate that you have read widely and deeply and to enable the reader to locate where you obtained each quote or idea.

Basic referencing terms

- → **Reference** - details of any item (e.g. book, chapter, video, web page, article) used as a source which enables that source to be found by someone else.
- → **Bibliography** - a list of references at the end of a document e.g. essay, thesis, journal article.
- → **Citation** - brief details about a reference given in the text of a document e.g. (author: date)
- → **Style** - the exact way in which references and citations are laid out. There are many different styles e.g. Harvard, British Standard (Numeric), Author/Date, Vancouver.
- → **In-text citation** – the reference made within the body of the text, usually in brackets.
- → **Footnote** – a reference made throughout the body of the text using a superscript number at the end of the reference and the details with a corresponding number at the bottom (foot) of the page.

Referencing: Harvard

Key details about Harvard

The Harvard referencing style is a widely-used author-date referencing system. It is often preferred in the social sciences and other academic fields for its simplicity and clarity.

In-Text Citations (Author-Date System)

→ Citations appear in the text within parentheses, indicating the author's surname, year of publication, and, if applicable, page numbers.

→ No footnotes are used for citations, unlike Oxford style.

Bibliography (Reference List)

→ A complete list of all sources cited is provided at the end of the document, organized alphabetically by the authors' last names.

→ Each entry includes the author's name, year of publication, title, and other publication details.

→ The format for books, journal articles, websites, etc., varies slightly.

Page numbers for direct quotes

→ When quoting directly, page numbers must be included in the in-text citation e.g. (Jones, 2018, p. 23).

Referencing: Harvard

Source Type	Bibliography format	In-text format	Bibliography example
Book (Single Author)	Author(s) Last name, Initial(s). (Year) *Title of book*. Edition (if applicable). Place of publication: Publisher.	(Author Last name, Year)	Smith, J. (2015) *The art of writing*. 2nd ed. London: Penguin.
Book (Multiple Authors)	Author(s) Last name, Initial(s). and Author(s) Last name, Initial(s). (Year) *Title of book*. Edition. Place of publication: Publisher.	(First Author Last name and Second Author Last name, Year)	Johnson, A. and Lee, M. (2018) *Modern science explained*. New York: Oxford University Press.
Chapter in Edited Book	Author(s) Last name, Initial(s). (Year) 'Title of chapter', in Editor(s) Initial(s). Last name (ed(s).) *Title of book*. Place of publication: Publisher, pp. page range.	(Author Last name, Year)	Brown, P. (2017) 'History of the Renaissance', in H. Green (ed.) *World History*. London: Routledge, pp. 78-99.
Journal Article	Author(s) Last name, Initial(s). (Year) 'Title of article', *Title of Journal*, Volume number (Issue number), pp. page range.	(Author Last name, Year)	Turner, C. (2020) 'Emerging trends in digital marketing', *Journal of Marketing*, 35(2), pp. 45-59.
Website	Author(s) Last name, Initial(s). (Year) *Title of web page*. Available at: URL (Accessed: Day Month Year).	(Author Last name, Year)	Clark, J. (2023) *How to cite online sources*. Available at: https://www.citationguide.com (Accessed: 10 October 2024).
Newspaper Article	Author(s) Last name, Initial(s). (Year) 'Title of article', *Title of Newspaper*, Date of publication, pp. page range.	(Author Last name, Year)	Williams, R. (2022) 'The future of renewable energy', *The Times*, 15 March, p. 12.
Government Publication	Author(s) or Organization (Year) *Title of document*. Place of publication: Publisher.	(Organization/Author, Year)	Department of Education (2019) *National Curriculum Guidelines*. London: HMSO.

Referencing: Harvard

Source Type	Bibliography format	In-text format	Bibliography example
Thesis/ Dissertation	Author(s) Last name, Initial(s). (Year) *Title of thesis/dissertation*. Level of thesis. Institution.	(Author Last name, Year)	Martin, E. (2016) *A study on climate change*. PhD thesis. University of Cambridge.
Conference Paper	Author(s) Last name, Initial(s). (Year) 'Title of paper', in Editor(s) Initial(s). Last name (ed(s).) *Title of proceedings*. Place of publication: Publisher, pp. page range.	(Author Last name, Year)	Davis, L. (2017) 'Technological innovations in education', in M. Baker (ed.) *Proceedings of the Education Conference*. London: Academic Press, pp. 120-130.
Film/Video	Director(s) Last name, Initial(s). (Year) *Title of film/video*. [Film] Country of production: Production company.	(Director Last name, Year)	Nolan, C. (2010) *Inception*. [Film] USA: Warner Bros.

Referencing: Chicago

Key details about Chicago

Footnotes

→ Full citation appears the first time a source is referenced in the footnote. Subsequent references to the same source use shortened forms, usually just the author's last name, a shortened title, and the page number (e.g., Smith, Art of Writing, 50).

Bibliography

→ The author’s first name is written out fully (not just initials), and the author’s last name comes first. Titles of books, journals, and films are italicized, while article and chapter titles are in quotation marks.

Punctuation:

→ Chicago style uses commas to separate elements in a bibliography (e.g., author, title, publisher), and periods to separate the main sections (e.g., author, year, title). In footnotes, commas are used within each citation.

Subsequent footnotes:

→ If citing the same source repeatedly, you can use a shortened citation for subsequent references after the first full citation (e.g., Smith, Art of Writing, 100).

Referencing: Chicago

Source Type	Bibliography format	Footnote format	Bibliography example
Book (Single Author)	Author's Last name, First name. *Title of Book*. Place of publication: Publisher, Year.	1. Author's First name Last name, *Title of Book* (Place of publication: Publisher, Year), page number.	**Bibliography**: Smith, John. *The Art of Writing*. London: Penguin, 2015. **Footnote**: 1. John Smith, *The Art of Writing* (London: Penguin, 2015), 45.
Book (Multiple Authors)	First Author's Last name, First name, and Second Author's First name Last name. *Title of Book*. Place of publication: Publisher, Year.	1. First Author's First name Last name and Second Author's First name Last name, *Title of Book* (Place of publication: Publisher, Year), page number.	**Bibliography**: Johnson, Alan, and Mark Lee. *Modern Science Explained*. New York: Oxford University Press, 2018. **Footnote**: 1. Alan Johnson and Mark Lee, *Modern Science Explained* (New York: Oxford University Press, 2018), 102.
Chapter in Edited Book	Author's Last name, First name. 'Title of Chapter,' in *Title of Book*, edited by Editor's First name Last name, page range. Place of publication: Publisher, Year.	1. Author's First name Last name, 'Title of Chapter,' in *Title of Book*, ed. Editor's First name Last name (Place of publication: Publisher, Year), page number.	**Bibliography**: Brown, Peter. 'History of the Renaissance,' in *World History*, edited by Helen Green, 78-99. London: Routledge, 2017. **Footnote**: 1. Peter Brown, 'History of the Renaissance,' in *World History*, ed. Helen Green (London: Routledge, 2017), 85.
Journal Article	Author's Last name, First name. 'Title of Article,' *Title of Journal* Volume Number, Issue Number (Year): Page range.	1. Author's First name Last name, 'Title of Article,' *Title of Journal* Volume Number, Issue Number (Year): page number.	**Bibliography**: Turner, Carol. 'Emerging Trends in Digital Marketing,' *Journal of Marketing* 35, no. 2 (2020): 45-59. **Footnote**: 1. Carol Turner, 'Emerging Trends in Digital Marketing,' *Journal of Marketing* 35, no. 2 (2020): 47.
Website	Author's Last name, First name. *Title of Webpage*. Last modified Month Day, Year. URL.	1. Author's First name Last name, *Title of Webpage*, last modified Month Day, Year, URL.	**Bibliography**: Clark, James. *How to Cite Online Sources*. Last modified October 10, 2023. https://www.citationguide.com. **Footnote**: 1. James Clark, *How to Cite Online Sources*, last modified October 10, 2023, https://www.citationguide.com.

Referencing: Chicago

Source Type	Bibliography format	Footnote format	Bibliography example
Newspaper Article	Author's Last name, First name. 'Title of Article,' *Title of Newspaper*, Month Day, Year.	1. Author's First name Last name, 'Title of Article,' *Title of Newspaper*, Month Day, Year, page number.	**Bibliography**: Williams, Robert. 'The Future of Renewable Energy,' *The Times*, March 15, 2022. **Footnote**: 1. Robert Williams, 'The Future of Renewable Energy,' *The Times*, March 15, 2022, p. 12.
Government Publication	Government Agency or Author's Last name, First name. *Title of Document*. Place of publication: Publisher, Year.	1. Government Agency or Author's First name Last name, *Title of Document* (Place of publication: Publisher, Year), page number.	**Bibliography**: Department of Education. *National Curriculum Guidelines*. London: HMSO, 2019. **Footnote**: 1. Department of Education, *National Curriculum Guidelines* (London: HMSO, 2019), 34.
Thesis/ Dissertation	Author's Last name, First name. *Title of Thesis/Dissertation*. Type of thesis, Institution, Year.	1. Author's First name Last name, *Title of Thesis/Dissertation* (Type of thesis, Institution, Year), page number.	**Bibliography**: Martin, Emily. *A Study on Climate Change*. PhD diss., University of Cambridge, 2016. **Footnote**: 1. Emily Martin, *A Study on Climate Change* (PhD diss., University of Cambridge, 2016), 27.
Conference Paper	Author's Last name, First name. 'Title of Paper,' in *Title of Conference Proceedings*, edited by Editor's First name Last name, page range. Place of publication: Publisher, Year.	1. Author's First name Last name, 'Title of Paper,' in *Title of Conference Proceedings*, ed. Editor's First name Last name (Place of publication: Publisher, Year), page number.	**Bibliography**: Davis, Lisa. 'Technological Innovations in Education,' in *Proceedings of the Education Conference*, edited by Michael Baker, 120-130. London: Academic Press, 2017. **Footnote**: 1. Lisa Davis, 'Technological Innovations in Education,' in *Proceedings of the Education Conference*, ed. Michael Baker (London: Academic Press, 2017), 125.
Film/Video	Director's Last name, First name, dir. *Title of Film*. Country of production: Production Company, Year.	1. Director's First name Last name, dir. *Title of Film* (Country of production: Production Company, Year).	**Bibliography**: Nolan, Christopher, dir. *Inception*. USA: Warner Bros., 2010. **Footnote**: 1. Christopher Nolan, dir. *Inception* (USA: Warner Bros., 2010).

Referencing: MLA

Key features of MLA referencing:

In-Text Citations:

→ These are placed in parentheses within the text, typically at the end of the sentence, with the author's last name and the page number (if applicable).

→ Example: (Smith 45) means the information is from page 45 of Smith's book.

→ If you mention the author in the sentence, only the page number is required in the parentheses. E.g., "Smith argues that writing is an art (45)."

Works Cited Entries:

→ The author's full name is used (first name followed by last name), and titles of books and journals are italicized.

→ Article and chapter titles are placed in quotation marks.

→ For multiple authors, use "and" between the names of two authors. For more than two authors, list the first author followed by "et al." (e.g., (Johnson et al. 2018)).

→ URLs are included without the "http://" prefix.

→ The publisher of the book or journal is listed after the title.

Page Numbers

→ For books and articles with specific pages referenced, always include the page number(s) in the in-text citation.

Date Format

→ MLA prefers the day-month-year format for dates when referencing sources like newspaper articles and webpages.

Referencing: MLA

Source Type	Reference format	In-text format	Bibliography example
Book (Single Author)	Author's Last name, First name. *Title of Book*. Publisher, Year.	(Author's Last name page number)	**Works Cited**: Smith, John. *The Art of Writing*. Penguin, 2015. **In-text**: (Smith 45)
Book (Multiple Authors)	First Author's Last name, First name, and Second Author's First name Last name. *Title of Book*. Publisher, Year.	(First Author's Last name and Second Author's Last name page number)	**Works Cited**: Johnson, Alan, and Mark Lee. *Modern Science Explained*. Oxford UP, 2018. **In-text**: (Johnson and Lee 102)
Chapter in Edited Book	Author's Last name, First name. "Title of Chapter." *Title of Book*, edited by Editor's First name Last name, page range. Publisher, Year.	(Author's Last name page number)	**Works Cited**: Brown, Peter. "History of the Renaissance." *World History*, edited by Helen Green, 78-99. Routledge, 2017. **In-text**: (Brown 85)
Journal Article	Author's Last name, First name. "Title of Webpage." *Website Name*, Publisher (if different from website name), Date of publication, URL.	(Author's Last name page number)	**Works Cited**: Turner, Carol. "Emerging Trends in Digital Marketing." *Journal of Marketing*, vol. 35, no. 2, 2020, pp. 45-59. **In-text**: (Turner 47)
Website	Author's Last name, First name. *Title of Webpage*. Last modified Month Day, Year. URL.	(Author's Last name)	**Works Cited**: Clark, James. "How to Cite Online Sources." *Citation Guide*, 10 Oct. 2023, https://www.citationguide.com. **In-text**: (Clark)
Newspaper Article	Author's Last name, First name. "Title of Article." *Title of Newspaper*, Day Month Year, pp. page range.	(Author's Last name page number)	**Works Cited**: Williams, Robert. "The Future of Renewable Energy." *The Times*, 15 Mar. 2022, p. 12. **In-text**: (Williams 12)

Referencing: MLA

Source Type	Reference format	In-text format	Bibliography example
Government Publication	Government Agency. *Title of Document*. Publisher, Year.	(Government Agency page number)	**Works Cited and In-text:** Government Agency, page number
Thesis/ Dissertation	Author's Last name, First name. *Title of Thesis/Dissertation*. Year, Institution.	(Author's Last name page number)	**Works Cited**: Martin, Emily. *A Study on Climate Change*. 2016, University of Cambridge. **In-text**: (Martin 27)
Conference Paper	Author's Last name, First name. "Title of Paper." *Title of Conference Proceedings*, edited by Editor's First name Last name, page range. Publisher, Year.	(Author's Last name page number)	**Works Cited**: Davis, Lisa. "Technological Innovations in Education." *Proceedings of the Education Conference*, edited by Michael Baker, 120-130. Academic Press, 2017. **In-text**: (Davis 125)
Film/Video	Director's Last name, First name, dir. *Title of Film*. Production Company, Year.	(Director's Last name)	**Works Cited**: Nolan, Christopher, dir. *Inception*. Warner Bros., 2010. **In-text**: (Nolan)

Referencing: Oxford

Key Features of Oxford Referencing:

The Oxford referencing style, also known as the Oxford Footnote Referencing System, is widely used in the humanities, particularly in disciplines like history, philosophy, and law. Here is an overview of its key features:

Footnotes for In-Text Citations

→ Citations are provided in footnotes at the bottom of each page.
→ Superscript numbers are placed in the text to indicate a footnote reference (e.g., "The development was significant^1^").
→ Each footnote contains full citation details or, for subsequent references to the same source, a shortened version.
→ Footnotes are typically numbered consecutively throughout the document.

Full Bibliographic References

→ At the end of the document, a bibliography lists all sources referenced in the text.
→ The entries in the bibliography are formatted with all essential details (e.g., author, title, publisher, year) and are arranged alphabetically by the author's surname.
→ While footnotes may offer more detailed citations (including specific page numbers), bibliography entries provide an overall reference to the source.

Referencing: Oxford

Source Type	Reference Format	In text format	Examples
Book (Single Author)	Last name, First name, *Title of Book* (Publisher, Year)..	1. Author's First name Last name, *Title of Book* (Publisher, Year), page number.	**Works Cited**: Smith, John, *The History of England* (Penguin Books, 2010). **In-text**: John Smith, *The History of England* (Penguin Books, 2010), 45.
Book (Multiple Authors)	Last name, First name, First name Last name and First name Last name, *Title* (Publisher, Year).	First name Last name and First name Last name, *Title* (Publisher, Year), page number.	**Works Cited**: Johnson, Sarah, Mark Lee and Emma Brown, *Climate Change Explained* (Oxford University Press, 2015). **In-text**: 1. Sarah Johnson, Mark Lee and Emma Brown, *Climate Change Explained* (Oxford University Press, 2015), 112.
Chapter in Edited Book	1. First name Last name, 'Chapter Title', in First name Last name (ed.), *Book Title* (Publisher, Year), page number.	1. First name Last name, 'Chapter Title', in First name Last name (ed.), *Book Title* (Publisher, Year), page number.	**Works Cited**: White, Anna, 'Modern Architecture Trends', in John Smith (ed.), *Architectural Evolution* (Routledge, 2015), 120-145. **In-text**: 1. Anna White, 'Modern Architecture Trends', in John Smith (ed.), *Architectural Evolution* (Routledge, 2015), 123.
Journal Article	Lastname, Firstname, 'Article Title', *Journal Name* Volume, Issue (Year), page range.	1. Firstname Lastname, 'Article Title', Journal Name Volume, Issue (Year), page number.	**Works Cited**: Doe, Jane, 'New Discoveries in AI', *Journal of Technology* 15, no. 3 (2018), 40-50. **In-text**: 1. Jane Doe, 'New Discoveries in AI', *Journal of Technology* 15, no. 3 (2018), 45.
Website	Last name, First name (if available), 'Title of Webpage', Website Name (full URL), date accessed.	1. Author's First name Last name (if available), 'Title of Webpage', Website Name (full URL), date accessed.	**Works Cited**: Doe, John, 'Space Exploration Milestones', NASA (https://www.nasa.gov/space-exploration, accessed 10 October 2024). **In-text**: 1. John Doe, 'Space Exploration Milestones', NASA (https://www.nasa.gov/space-exploration, accessed 10 October 2024).

Referencing: Oxford

Source Type	Reference Format	Footnote format	Example
Newspaper Article	Author's Last name, First name. "Title of Article." *Title of Newspaper*, Day Month Year, pp. page range.	(Author's Last name page number)	**Works Cited**: Williams, Robert. "The Future of Renewable Energy." *The Times*, 15 Mar. 2022, p. 12. **In-text**: (Williams 12)
Government Publication	Government Agency. *Title of Document*. Publisher, Year.	(Government Agency page number)	**Works Cited and In-text:** Government Agency, page number
Thesis/ Dissertation	Author's Last name, First name. *Title of Thesis/Dissertation*. Year, Institution.	(Author's Last name page number)	**Works Cited**: Martin, Emily. *A Study on Climate Change*. 2016, University of Cambridge. **In-text**: (Martin 27)
Conference Paper	Author's Last name, First name. "Title of Paper." *Title of Conference Proceedings*, edited by Editor's First name Last name, page range. Publisher, Year.	(Author's Last name page number)	**Works Cited**: Davis, Lisa. "Technological Innovations in Education." *Proceedings of the Education Conference*, edited by Michael Baker, 120-130. Academic Press, 2017. **In-text**: (Davis 125)
Film/Video	Director's Last name, First name, dir. *Title of Film*. Production Company, Year.	(Director's Last name)	**Works Cited**: Nolan, Christopher, dir. *Inception*. Warner Bros., 2010. **In-text**: (Nolan)

Referencing

How you choose to reference is entirely up to you – Harvard referencing is the most common but MLA and Chicago are also acceptable.

The main thing to remember is that you must always know **who** said **what**, **when** and **where**.

Here are some links to guides that you might find useful:

→ For a comprehensive guide plus links to examples: https://libguides.leedsbeckett.ac.uk/subject_support/harvard_referencing/quote_unquote_online

→ For when you're not sure how to reference a particular type of source: https://library.leeds.ac.uk/referencing-examples/9/leeds-harvard

→ For a one page, printable guide to referencing: https://libguides.hull.ac.uk/ld.php?content_id=6029953

→ For when you want to test your referencing skills: https://library.northampton.ac.uk/liberation/ref/cat.php

17. Academic writing

Word counts

For an academic essay it is ***likely*** that you are going to follow a structure that looks something like this:

→ **Introduction:** use a couple of hundred words to introduce your essay:
- What are you focusing on?
- What are you aiming to discover/explore?
- What is your reader going to encounter when they read your essay?

→ **Main body:** this is likely to be separated into a number of sections to help your reader engage with the content. These could be sub-headed i.e. as most of your projects have different components either in the form of time periods, people, countries or phases, these would become your sub-headings. Every section should be written with a keen focus on the question that you're answering and the very best essays evaluate, analyse and synthesise information through the lens of your question rather than just re-present the research you've completed.

→ **Conclusion**: the very best essays will regularly reach 'mini conclusions' as a way of keeping a tight focus on your question but then you should also include a few hundred words for a conclusion at the end of the piece which summarises and synthesises all of the information that you've discussed: no new information is introduced here.

*****FOOTNOTES AND THE BIBLIOGRAPHY DO NOT COUNT AS PART OF YOUR WORD COUNT; IN-TEXT CITATIONS DO*****

You should include the total for your word count at the end of your piece of writing: normally before the bibliography.

Academic writing

The purpose of academic writing is to communicate complex ideas in a way that makes them more easily understood and less likely to be challenged. That means your job is to write in a way that avoids any ambiguity.

Do not be tempted to use complex language or expressions that are not your own, just to make your writing *appear* "academic". Use straightforward language that is natural to you but not informal: your reader needs to understand the information and ideas that you are conveying.

Keep it:

→ **Formal:** informal language often means different things to different people so we write in Standard English to include everyone
→ **Structured:** complex ideas need to be controlled to produce an unambiguous statement
→ **Precise:** everything is evidenced and supported; any inference is clearly explained and logical

Standard English avoids any sort of colloquialisms or slang:

→ Avoid shortened forms: Shouldn't, can't etc
→ Avoid colloquial, informal phrases or cliches such as: at the end of the day; in a nutshell; when it comes to the crunch Replace with: finally, in summary, in a crisis
→ Avoid casual everyday words such as: really, okay, maybe.
→ Where abbreviations and acronyms are required the accepted way of avoiding repetition while maintaining clarity is to use the unabbreviated term first with the abbreviation or acronym in brackets. After that first instance, just the abbreviation or acronym is acceptable.
→ For example: **First mention**: "An article in the American Journal of Philology (AJPh) reported..." **Subsequent mention**: "Writing in the AJPh, Brown concluded that..."

Academic writing

Standard English rules includes grammar:

→ Use of apostrophes: check whether the “s” is there to indicate possession or a plural; learn the rule for “its/it’s”!
→ Inconsistent use of tenses – you should be writing in the past tense because you are reporting on things that have happened
→ If you’re going to use semicolons and colons, double check the rules
→ Incomplete sentences or lots of very short sentences hinder the flow of your piece – read sections out loud to see if they are easy to read, if they’re not then something needs to change!

Writing titles or names of specific things should be italicised

→ Lincoln's *Gettysburg Address* and Martin Luther King's *I Have a Dream* speech are examples of famous speeches.
→ "The Song of Myself" appears in Walt Whitman's poetry collection *Leaves of Grass*.
→ Names of vehicles and ships e.g. *Apollo 13,* H.M.S. *Belfast* (but note that the H.M.S. is not italicized)
→ Brand names of vehicles e.g. Ford Focus, Boeing 747, are not italicised but they are capitalized!
→ Some aspects of technical and scientific writing require italics, as do physical quantities or mathematical constants e.g. species names such as *Homo sapiens* and the constant c (the speed of light).
→ Other language words or phrases should be italicised e.g. *ad valorem*

Academic writing

Writing numbers should follow these rules:

Basic numbers:

→ Numbers **up to nine** should always be written in **words**, anything higher than nine can be written in **numerals**.

→ For precise larger numbers, it is acceptable to use either numerals or words depending on context e.g. a thousand people/1,000 people but for less precise larger numbers, the written form is better e.g. several thousand.

Measurements and decimals/fractions:

→ Use **numerals** for units of measurement or time, e.g. 500 km, 10 minutes.

→ Always use **numerals** for decimals and fractions e.g. 0.5 cm, unless the figures are vague e.g. around half of the population.

→ Units of measurement that **modify a noun** should be hyphenated, e.g. a 3-year-old child.

Combining numbers

→ Avoid starting a sentence with a numeral e.g. “Three hundred and sixty-five days make one year” could become “There are 365 days in a year.”

→ If you start a sentence with a year, write “The year” first e.g. “The year 1066 saw one of the most famous battles in English history.”

Dates, money and time

→ Always use **numerals** for dates, e.g. Monday 4th April, 2016.

→ Use **numerals** for money e.g. His pocket money was exactly £10.00 per week unless the amounts are vague e.g. He earned well over a million last year.

→ Use **numerals** for indicating the precise time e.g. 08:00, or words if the times indicated are vague e.g. around eight o’clock.

ProjectQ:
Project Product Review

Exploring your first thoughts

Your focus at this stage is on **managing and reflecting** on the progression of your project. You are close to the end of the project now and need to put measures in place to ensure that you have fulfilled all the objectives and that you can manage your time and resources effectively to complete it.

TASK

On ProjectQ, complete your **Project Product Review** to reflect on the process and the almost completed project product

- → Did you make a plan and follow it faithfully?
- → If you did, did it work as you anticipated?
- → If you didn't, how did you manage your time?
- → How could you have improved your management?
- → What has your supervisor said about the project product, the information on ProjectQ and the presentation?
- → What steps do you need to take to ensure that you are going to complete your project?
- → How will your new plan differ – or not – from your initial plan to be more effective?

The following pages lay out some key information for refining and perfecting your project product.

18. Editing and formatting

Editing

This is one of the most important stages in the process: everything can make sense when we're in the middle of writing but distancing yourself from your creation allows you to be more objectively critical.

- → Check you have a **golden thread** running throughout your essay:
  - → Does all the information that you're presenting link back to your title?
  - → Have analysed and evaluated all the information that you present?
  - → Is it all connected to and building towards an answer to your question?
- → Leave it alone for a couple of days and then print it off and read it through from start to finish with a pen or highlighter in hand to note little changes to punctuation or spelling (particularly typos that don't get flagged in Word because they're real words e.g. form / from)
- → Once you've gone through your hard copy, go back to the electronic version and make all the necessary changes to iron out any issues

18. Editing and formatting

Formatting

Now you're ready to make sure you are presenting a neat, consistent and physically appealing project.

TASK

Use this checklist to you have included all the components:

- ☐ Calibri, Arial, Aptos or Times New Roman font
- ☐ Size 11 or 12 font – nothing larger or smaller for ANY part of the essay. [Word instructions: use Ctrl+A to select all and set the font and size.]
- ☐ If you have subheadings, put them in **bold** and/or underline them
- ☐ Clearly indicated the starts of new paragraphs
- ☐ Flawless grammar for capital letters on proper nouns and quote marks around your quotations
- ☐ Consistent, accurate referencing throughout
- ☐ Your word count at the end of your dissertation (before the bibliography)
- ☐ Your name, candidate number and centre number (37629) at the top of every page of your essay [Word instructions: INSERT > HEADER > BLANK (THREE COLUMNS) > CANDIDATE NUMBER – NAME – CENTRE NUMBER]
- ☐ A bibliography. This is a list of ALL RESOURCES that you used over the course of your EPQ, regardless of whether you directly referenced it in the body of the essay or not. Make sure it also follows the appropriate format for your referencing style

ProjectQ:
Presentation Record Part A

Exploring your first thoughts

This stage is all about **planning, reflecting** and **clear communication**. This is the plan for how you will structure, manage and present the information for your presentation.

TASK

On ProjectQ, complete your **Presentation Record Part A** to document the planning process for your presentation.

- → The **planned format of presentation** should detail as a minimum the fact that it will be a board at a market-place style event
- → What content have you decided to include?
- → Why have you chosen that content?
- → How have you chosen to present that information?
- → Why have you chosen to present it in that way?
- → How have you planned to rehearse and refine your presentation?

The following pages lay out what the Presentation Event will look like and the skills that you need to demonstrate in this process.

19. Presentation: Content

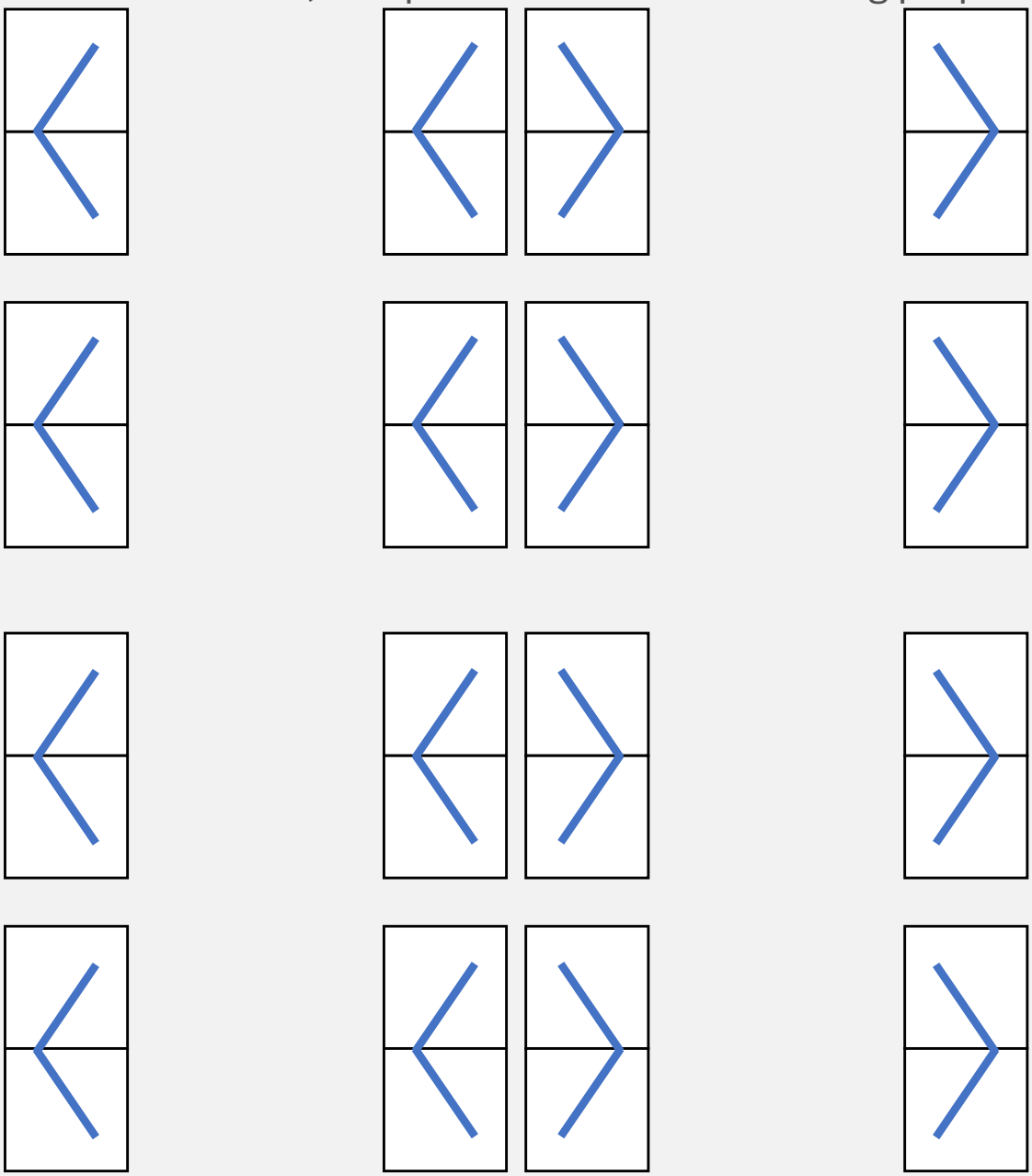
To all intents and purposes you are telling the full story of your experience of the EPQ. Here are some suggested areas to discuss:

- ❑ **Your interest in the topic:** you chose this topic and your audience want to know why. What was it about this issue that made you want to explore it further? How does it link with your studies, hobbies, family and/or career aspirations?
- ❑ **The process of refining the research question:** as well as talking about your chosen topic, you could also talk about how you developed your research question: what other topics and questions did you consider and why did you settle on the title you did? Did you have to omit something you wanted to keep or include something you don't find fascinating but you need it to explain a core element of your argument?
- ❑ **Your findings / the final product:** What was the end result of your project? What did you find? Was there anything surprising to come from the project? If you did a report: were you able to answer your research question in full?
  If you did an artefact: how did you evaluate the success of your product?
- ❑ **Any challenges you faced:** no piece of work is without its challenges! Ask yourself: What hurdles did you have to overcome to complete your project? Was it easy to access all the resources you needed? Are there any limitations to your project (be honest about these – having limitations does not mean your findings are not still very valuable!)
- ❑ **A reflection on the overall experience:** Here you can talk about the impact this piece of work has had on you and your own abilities as a researcher. You might ask yourself: What skills did you develop through completing the project? Did you achieve what you wanted to? Could the project be explored further in future? What advice would you give to other students starting their EPQ now?
- ❑ **Q&A:** your supervisor is going to ask you a series of questions to support the marking of your project so make sure you're prepared for that and end on an appropriate note.

19. Presentation: Event

Presentation event layout

This is the layout of the hall for the event. Everyone will have two exam desks put together and a fold-out, two panel board. You can bring props!



The supervisors, other students and staff will then walk around looking at the boards and having what will feel like conversations with you: you will guide the direction and the content and they can ask questions but the maximum audience size will be 4 or 5 and they'll be very personalised interactions.

19. Presentation: Board

This is your chance to get really creative. Think about what styles, images, colours and information a presentation about your topic would have and then lean into it: show off the results of your hard work!

Golden rules for presentation boards:

- **Keep the focus on clear communication** - your key points should be able to be read, tracked and understood even if you're not there to talk the audience through it. Break down your key points into short bullet points, and elaborate on these in your own (well-rehearsed!) words.
- **Don't be scared to be creative** – if you are discussing progression over time, a time-line would be a really logical and engaging way to present the information. If you've got two sides to an argument, you might want to dedicate a side of the board to each argument.
- **Use interesting, relevant visuals** – this could be pictures of people, places or items, graphs, quotes, statistics, diagrams: anything at all that adds to your

What is your key message?
» What must your audience know?
» What's good to know?
» What's just nice to know?

Include all of the 'musts', as many of the 'goods' that you can, and, if there's room, some of the 'nice'!

TASK

Decide what information from your project falls into the categories:

- Must
- Good
- Nice

20. Presentation: skills

Even the best presenters are nervous – why? Because they care about their work and they want the presentation to go well.

- Practice saying your presentation out loud, by yourself or in front of your friends/family. Try and do this at least twice, but the more practice the better – you will feel much more confident delivering your presentation if you practice as much as possible beforehand.
- If you are feeling nervous you might find it useful to write down your most important points on cue cards. Try using small cards and include only the key information you want to mention.
- Address the audience when you present your work. Remember the audience wants you to do well – they are on your side!
- Speak up and speak clearly – try not to race through your presentation. Take your time to communicate your ideas clearly to the audience: you'll feel better for knowing you've been understood
- Time yourself giving the presentation during your practices and make sure you stick to the time allocated: it shouldn't exceed 10 minutes.

Tips from people who have done it:

- "Go and have a look at the room you'll be delivering your presentation in. Being able to visualise the room as you practice at home will help ease the nerves on the day"
- "Get there early and check all of the equipment you need is available and working"
- "Avoid falling into the trap of just reading information on your board – use them as a guide, but try not to depend on them to provide everything you want to say!"

TASK

Use the check-list on the next slide to prepare your presentation

ProjectQ: Presentation Record Part B

Completed by your supervisor

As you're delivering your presentation, your supervisor will be making notes about the content and the delivery of your presentation. Remember what each of the AOs are – and the marks available for each – so you can demonstrate skills in each of these areas.

	Assessment objective	Presentation content
AO1 (10)	**Manage** Identify, design, plan and carry out a project, applying a range of skills, strategies and methods to achieve objectives	How you reached the focus of your project; how you managed your time; what steps you took to do this.
AO2 (10)	**Use resources** Research, critically select, organise and use information and select and use a range of resources. Analyse data, apply relevantly and demonstrate understanding of any links, connections and complexities of the topic	How, what and where you researched; how you evaluated the value of the sources; how you applied the information you found; where you made links
AO3 (20)	**Develop and realise** Select and use a range of skills, including, where appropriate, new technologies and problem-solving methods to take decisions critically and achieve planned outcomes	How you made your project a reality; what technology you used and why; how you solved any and all problems you faced
AO4 (10)	**Review** Evaluate all aspects of the extended project, including outcomes in relation to stated objectives and own learning and performance. Select and use a range of communication skills and media to present evidenced project outcomes and conclusions in an appropriate format.	How you kept yourself on track; whether you did a good job; how you could have done better. How you communicate your ideas; what conclusions you reached; how you presented your information

ProjectQ: Summary and reflection

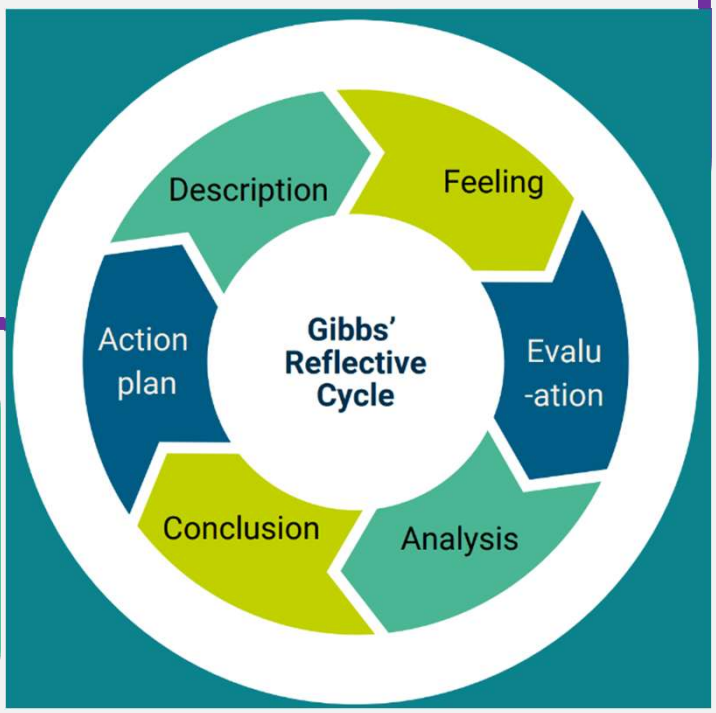
Exploring your first thoughts

This sections is all about **reflection.** Your project doesn't have to have gone perfectly for you to get great marks on AO4 because you can show you can demonstrate the skills identified in the AO4 section.

TASK

On ProjectQ, complete your **Summary and Reflection** to evaluate your project. This should cover the full calendar year that you've worked on this project and you should consider all the steps that you took.

- → How do you feel your project has developed?
- → Did you achieve what you wanted to achieve?
- → What have you learnt about yourself along the way?
- → What do you think worked really well?
- → What would you do differently if you had the chance to?
- → What do you think – objectively – the strengths and weaknesses are of your project? This could be the natural limitation of a 5000 word essay.
- → What advice would you give to other students?



Make use of the **reflective writing** that you completed weekly over the course of your project to remind yourself of how you felt at the different stopping points along the way.

ProjectQ: Candidate Declaration

Exploring your first thoughts

This is **administration** to sign the project off.

TASK

On ProjectQ, complete your **Candidate Declaration**. Follow these steps exactly to ensure there are no issues:

→ **Candidate Declaration:** select "no" from the drop down box
→ **Declaration notes:** leave this blank
→ **Please list below any books etc:** leave this blank
→ **Date candidate signed**: select today's date

Your supervisor will then sign and date and lock this section

21. The final check-list

Last admin tasks

TASK
Use the following checklist to ensure that every component has been completed. Remember our key words: **clear and detailed**

- ☐ Every page of ProjectQ in as much detail as possible. This includes the most recent sections: the Project Product Review, Presentation Record Part A and Summary and Reflection
- ☐ Your candidate number is entered into ProjectQ – email ERY if you haven't done this / don't know it / don't know how to add it!
- ☐ Email your essay and any supporting evidence you wish to be marked to **BOTH** your supervisor **AND** ERY by 3:00pm on **Monday 29th September 2025**

TASK
- ☐ Remove all papers, drawing pins, string etc from your presentation board
- ☐ Store the board back with Sixth Form office

Ms Ryding will organise the downloading of ProjectQ and the photo of your presentation board

22. Roadmap

NB
This is a broad overview of the course: the specific timeline for each academic year is shared on ProjectQ