- 1. Pick a research topic: e.g., Batteries
- 2. Search for information on the topic: **Avoid .com searches** as these are **bias** (Figure 1).

the action of supporting or opposing a particular person or thing in an unfair way, because of allowing personal opinions to influence your judgment:

Figure:1 Definition of Bias URL https://dictionary.cambridge.org/dictionary/english/bias

- 3. Start reading about your topic taking notes of interesting points and where exactly you are getting this information from: Wikipedia is acceptable as a starting point then .org .edu .gov websites and Google Scholar, Progress onto journal articles, books and data bases.
- 4. The more you read the more you will begin to see the main themes appearing:
 - 1) History of the battery
 - 2) Types of batteries, Primary & Secondary
 - 3) Different size/storage capacity of batteries,
 - 4) Life of batteries,
 - 5) Cost
 - 6) Glossary of terms
- 5. Read, take notes, and keep a record of your sources (sources must be credible for you to use them in any type of research). This is not a chat with your mates or a quiz in a pub. We are only interested in FACTS! Facts are not the same as <u>truths</u> as there are many types of truths (my truth, your truth, their truth, the truth).
- 6. To write you must read loads and loads.
 - a. Research is not just reading something that one person said and then regurgitating it.
 - b. We are looking for reason, balance, and facts. Therefore, we only use credible sources for our research.
 - c. You as a professional are looking to go beyond the standard (Google it and then accept the first result that comes up).
 - d. You are expected to present information and ideas and then discuss them, question them, show different opinions on topics. This shows that you are not just taking anything for granted. Basically, believe noting and question everything, always. This will make you a better researcher and a better human being.

Check List

- 1. Create a mind map
- 2. Refine your mind map
- 3. Start adding content, ideas, links, images etc to each section

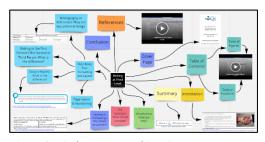


Figure 2 Mind Map created in Miro

- 4. Once mind map is complete start titling and writing each section, keep the discussion balanced (positive V negative) (pro V con). Show some level of abstract thought and processing taking place in your head and then on the page. Fake it till you make it. Talk the talk until you can walk the walk.
- 5. Write your summary/abstract last which is a condensed overview of your research findings.
- 6. Write your introduction after your summary and then write your conclusion.
 - 1) Lastly check all your references, writing, spelling, formatting, layout of your document, are all the images text wrap set to square or top & bottom.
 - 2) Have you included all relevant information about your topic?
 - 3) Have you used plain English when explaining concepts and ideas?
 - 4) Have you kept all your sentences short and to the point?
 - 5) Have you deleted all redundant sentences and words?
 - 6) Do all your paragraphs have one main message?
 - 7) Are all your sections and paragraphs balanced? (e.g. one page on each main topic, with 4 paragraphs per page).
 - 8) Have you included a reference for every bit of information that is not common knowledge? (Common knowledge is a piece of information that any random person might know, e.g. rain is wet, Ireland is Equation:1 Formula showing the amount of time you are

a green looking country, the desert is dry, the temperature is hot in the desert during the day)

modules this semester

$$\frac{120}{12} = 10 \text{ hours per week}$$

required to spend studying each week for each of your 6

Each 5 Credit module = 100-150 hours of work (Figure 3). This semester is 12 weeks (Equation 1)

It is recommended that the credit systems of providers should operate on the basis that one credit equals 20 -30 hours of notional time (or equivalent)