WEIGHING THE EVIDENCE

What is evidence?
Anything the author/speaker uses to support their premises and claims. Generally, evidence is considered to be of a factual nature and is distinguished from beliefs, assumptions and opinions.

What questions should I ask?
1. Does the claim need evidence to support it?
2. What are my criteria for evaluating the evidence? You must decide before evaluating evidence how you will determine its worth and by what standards. It is not enough to say, “This is bad” or “This is good”. You must be able to say why
3. How good is the evidence? Rather than asking if it is “true” (claims rarely are absolute), ask is it “dependable”.

Kinds of Evidence

- Intuition – this type of evidence refers to “gut feelings” or “hunches”. Generally not very dependable. However, in some cases intuition is all you have to go on. For example, an airplane pilot that has a hunch about something being wrong with the plane might be a reliable source in the moment.

- Authorities – these are appeals to others who are deemed to have more knowledge about a subject – so-called “experts”. Remember, sometimes even the best authorities are wrong. Also, age, being in print and status do not necessarily make an authority better. Evaluating these calls for evaluating the expertise of the authority:
  o Why should you believe this authority?
  o How much expertise or training does the authority have on the subject?
  o Was the authority in a position to have especially good access to relevant data?
  o Is it reasonable to assume that the authority is free from bias?
  o Does the authority have a reputation for making dependable claims?

- Testimonials – generally quoted statements by users of a product or service. Factors to consider:
  o Selectivity – We generally only hear from those that support the claim being made. What about the experiences of others?
  o Personal Interest – does the person making the testimonial have a vested interest in the outcome?
  o Omitted Information – Testimonials rarely provide the complete picture

- Personal Experience – beware of basing evaluation on your own limited experience. This leads to committing fallacies such as Hasty Generalizations.

- Personal Observations – recognize that our observations are always filtered through our own beliefs. Need to verify evidence in other ways.
- **Case Studies and Examples** – again, these often only provide part of the picture, usually the most vivid picture that supports the claim. Sample size is too small to make generalizations.

- **Research Studies** – Research generally has the advantage of being verified by others in the field. It also contains precise language and measurements rather than vague concepts, which help to determine with more precision what the results indicate. Problems with research include:
  - Research can vary greatly in quality
  - Research findings often contradict one another
  - Research findings do not *prove* anything. Only provide probabilities
  - Research can also be filtered through the researcher’s bias and personal interest
  - Secondary sources often distort or simplify research findings
  - Research “facts” change over time (we used to believe the world was flat as a fact!)
  - Some research is conducted under very artificial circumstances

Questions to ask about research:
- What is the quality of the source of the report?
- Has the study been replicated?
- Is there any reason the findings might be distorted or selectively reported?
- How artificial are the conditions?
- How far can the findings be generalized?
- What biases are present in the research methods?

- **Analogies** – these can both stimulate insights, because they simplify complex information, and they can deceive us, because they may not present the complete picture. Consider the following when evaluating analogies:
  - In how many ways are the two things being compared similar? The more similarities, the better.
  - How relevant are the similarities and differences between the two items?