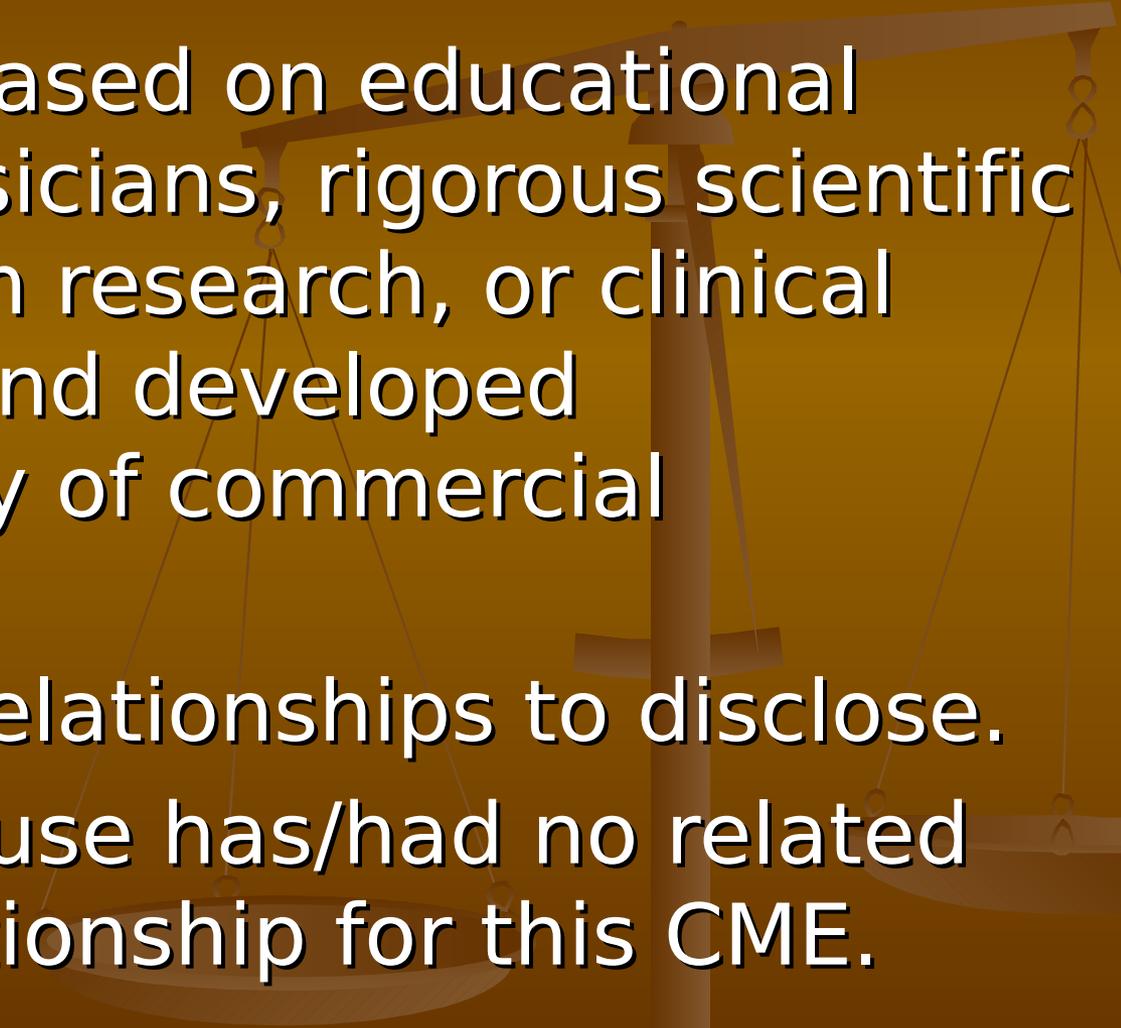


# Conducting a Literature Review



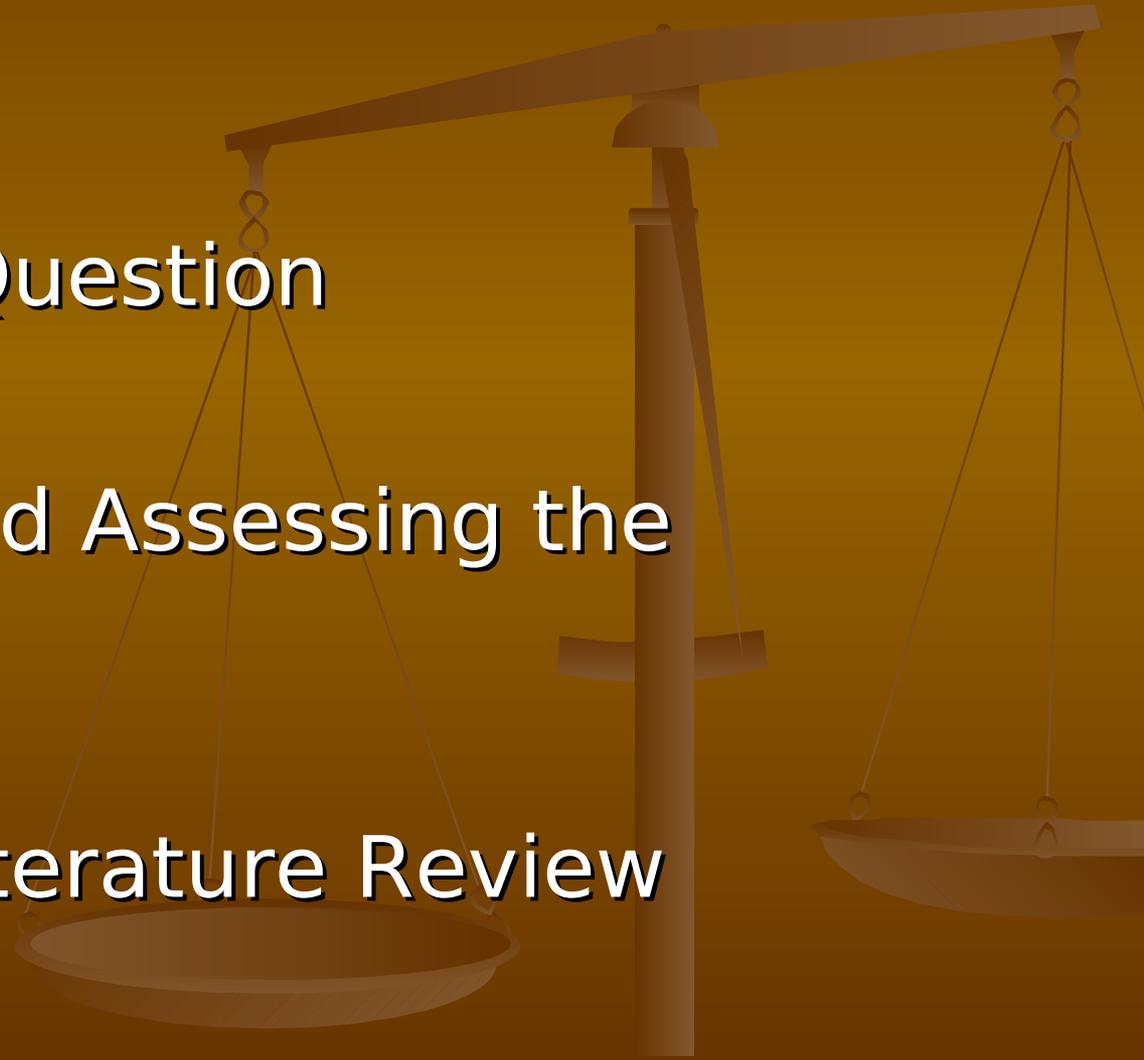
Mario Davidson, PhD  
Biostatistician III  
Vanderbilt University School of  
Medicine  
Nashville, TN

# Speaker has No Conflict of Interest

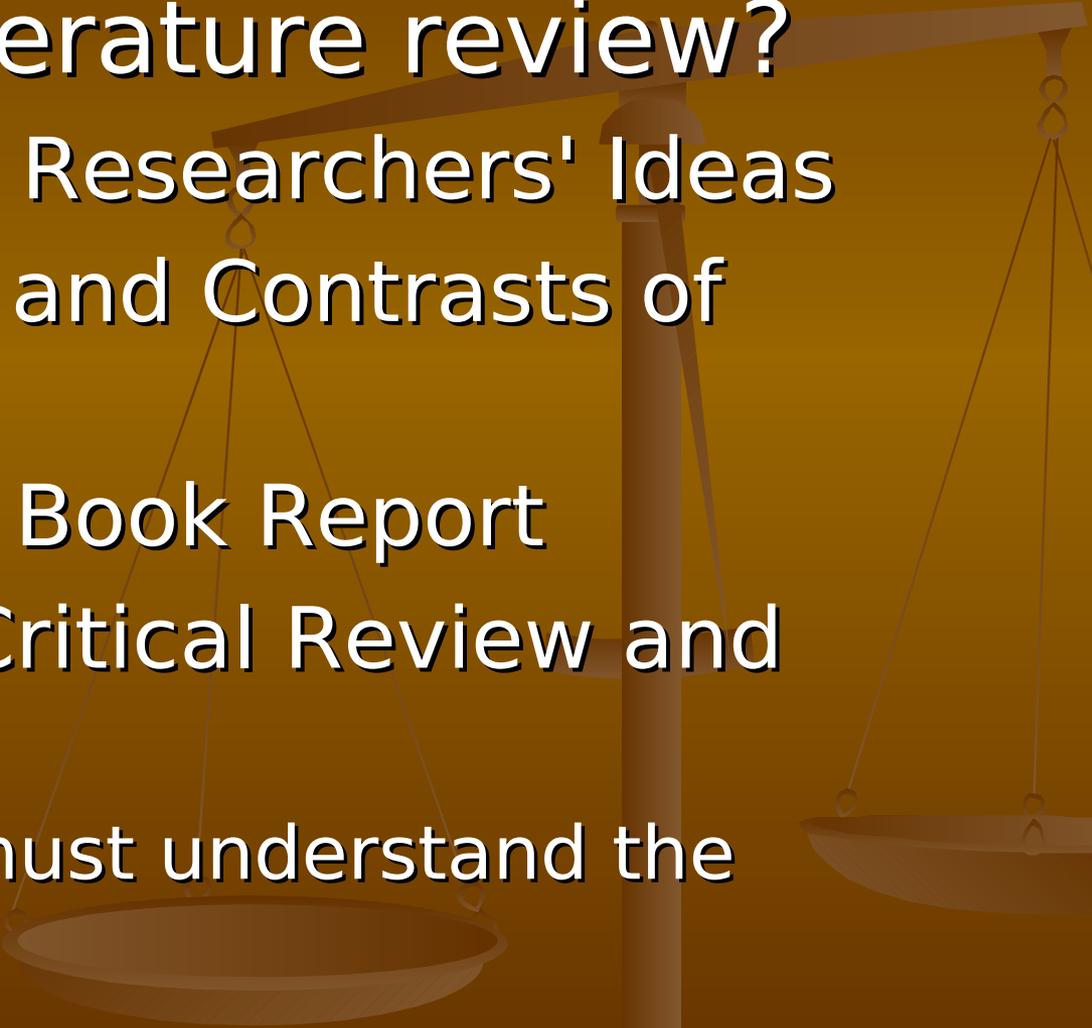
- Information based on educational needs of physicians, rigorous scientific evidence from research, or clinical experience, and developed independently of commercial influences.
  - No financial relationships to disclose.
  - Myself or spouse has/had no related financial relationship for this CME.
- 

# Overview

- Introduction
- Formulate a Question
- Organizing and Assessing the Sources
- Writing the Literature Review

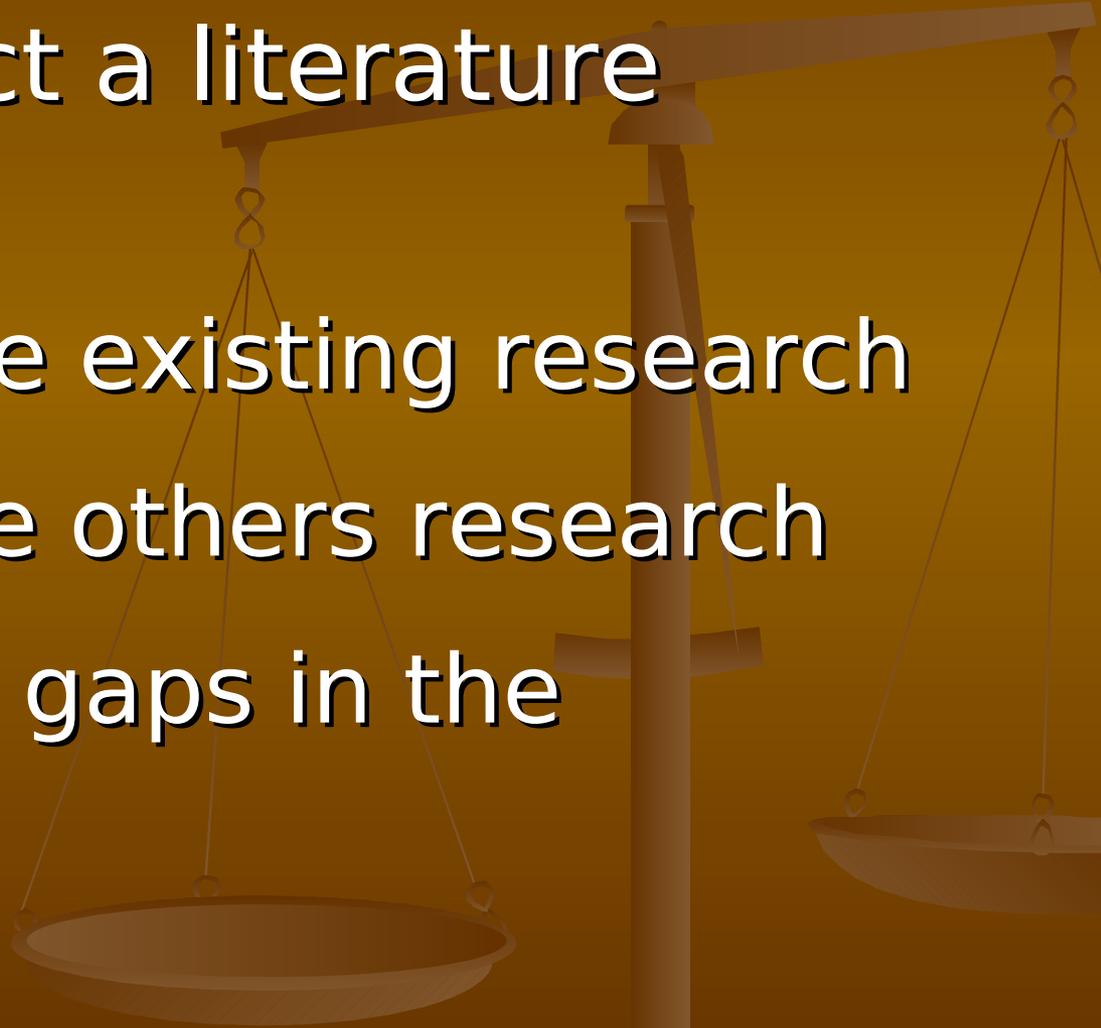


# Introduction

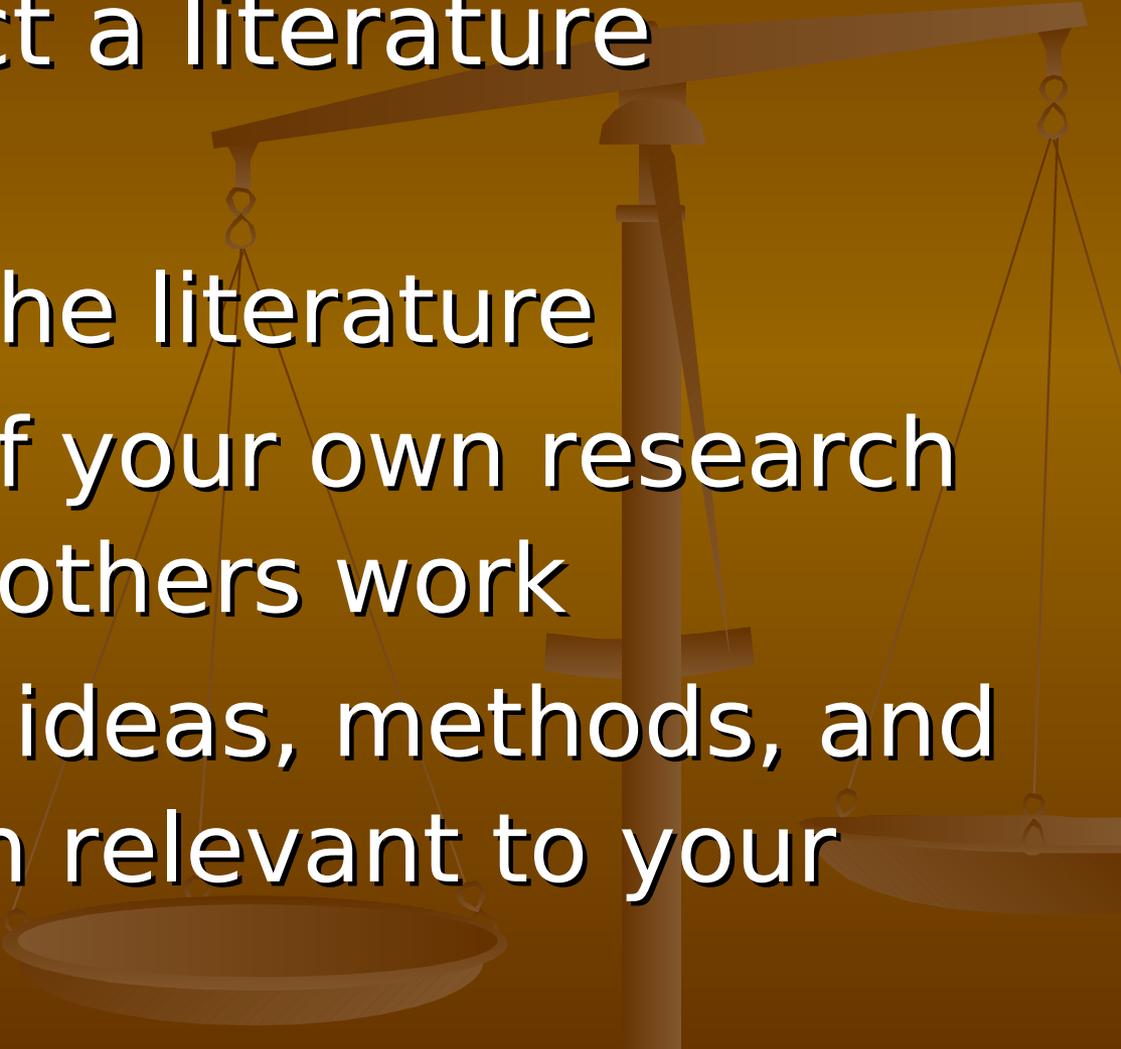


- What is a literature review?
  - Synthesis of Researchers' Ideas
  - Comparison and Contrasts of Works
  - More than a Book Report
  - Requires a Critical Review and Assessment
    - Thus, you must understand the sources!

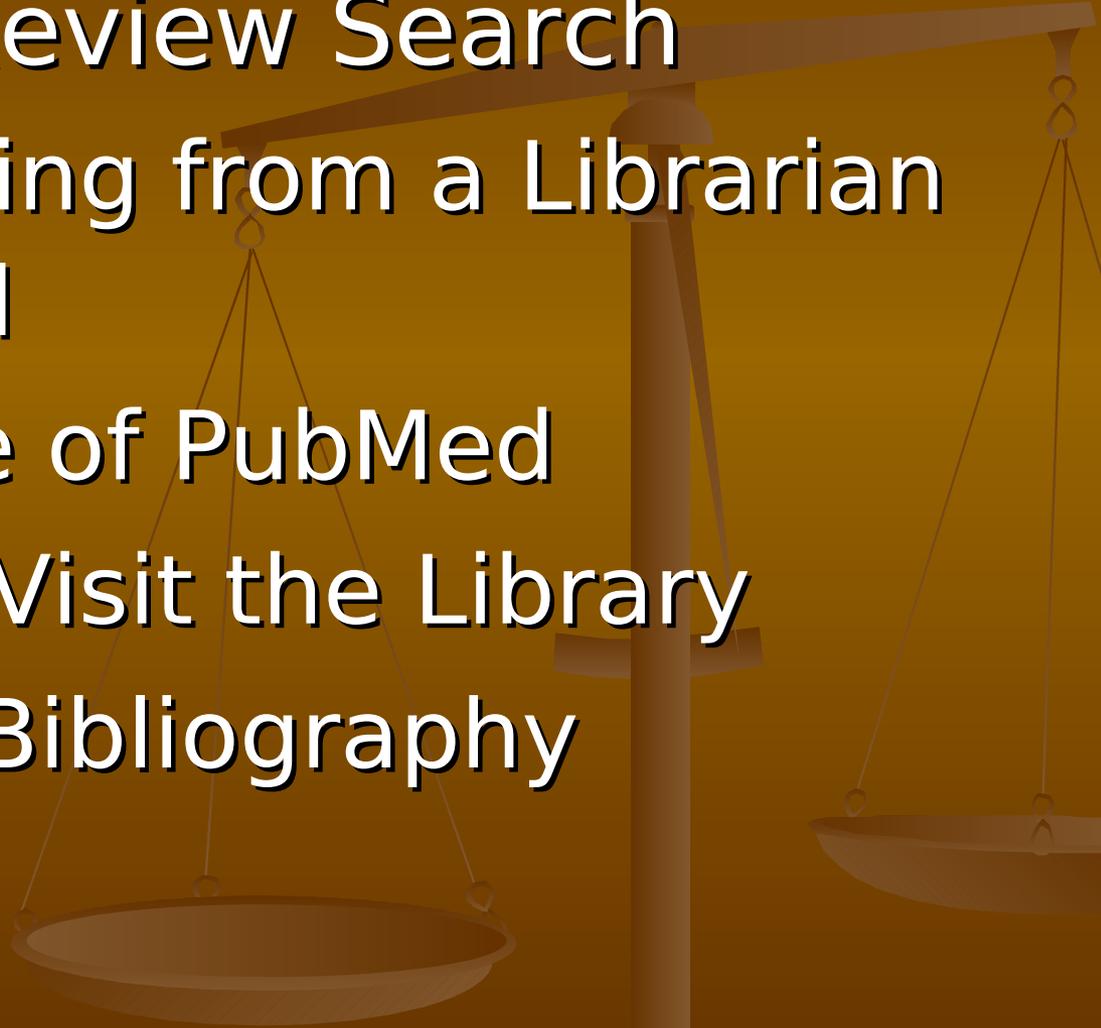
# Introduction (cont.)

- Why conduct a literature review?
    - To evaluate existing research
    - To describe others research
    - To identify gaps in the literature
- 

# Introduction (cont.)

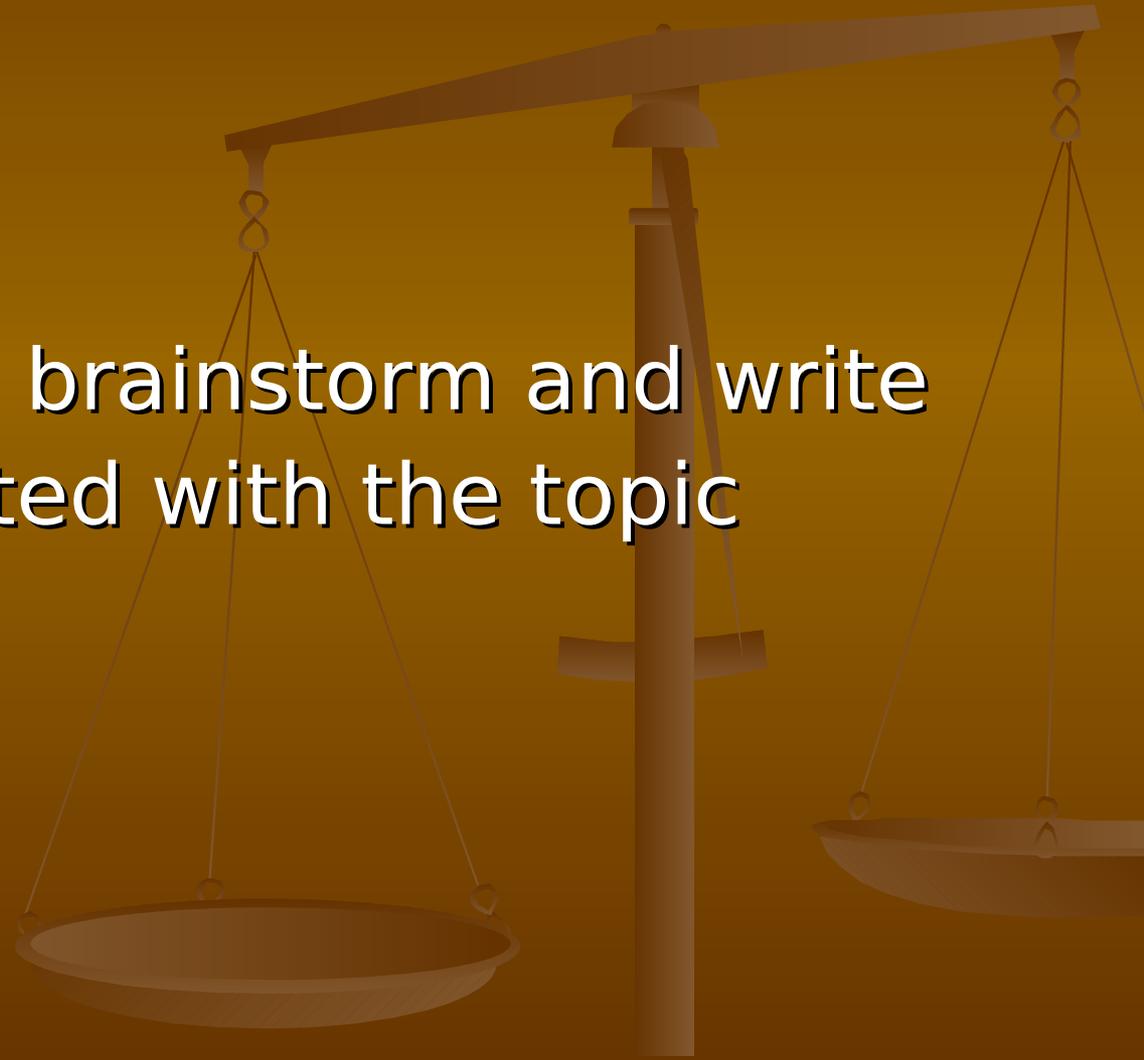
- Why conduct a literature review?
    - To add to the literature
    - To speak of your own research relative to others work
    - To identify ideas, methods, and information relevant to your research
- 

# Introduction (cont.)

- Literature Review Search
    - Seek Training from a Librarian on PubMed
    - Go Outside of PubMed
    - Physically Visit the Library
    - Scour the Bibliography
- 

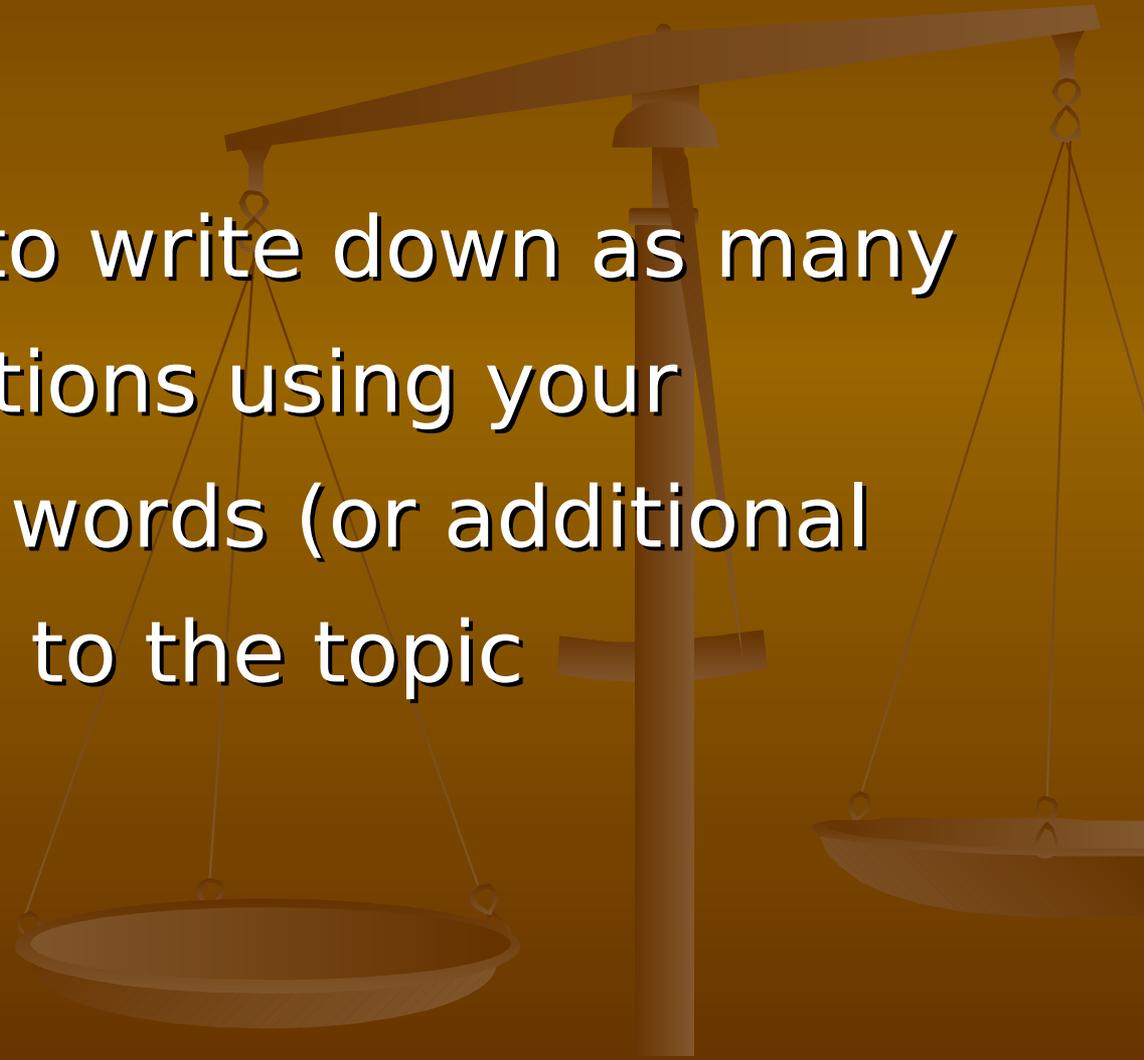
# Small Group Activity: Formulate a Question

- Topic: Dating
- One minute to brainstorm and write words associated with the topic



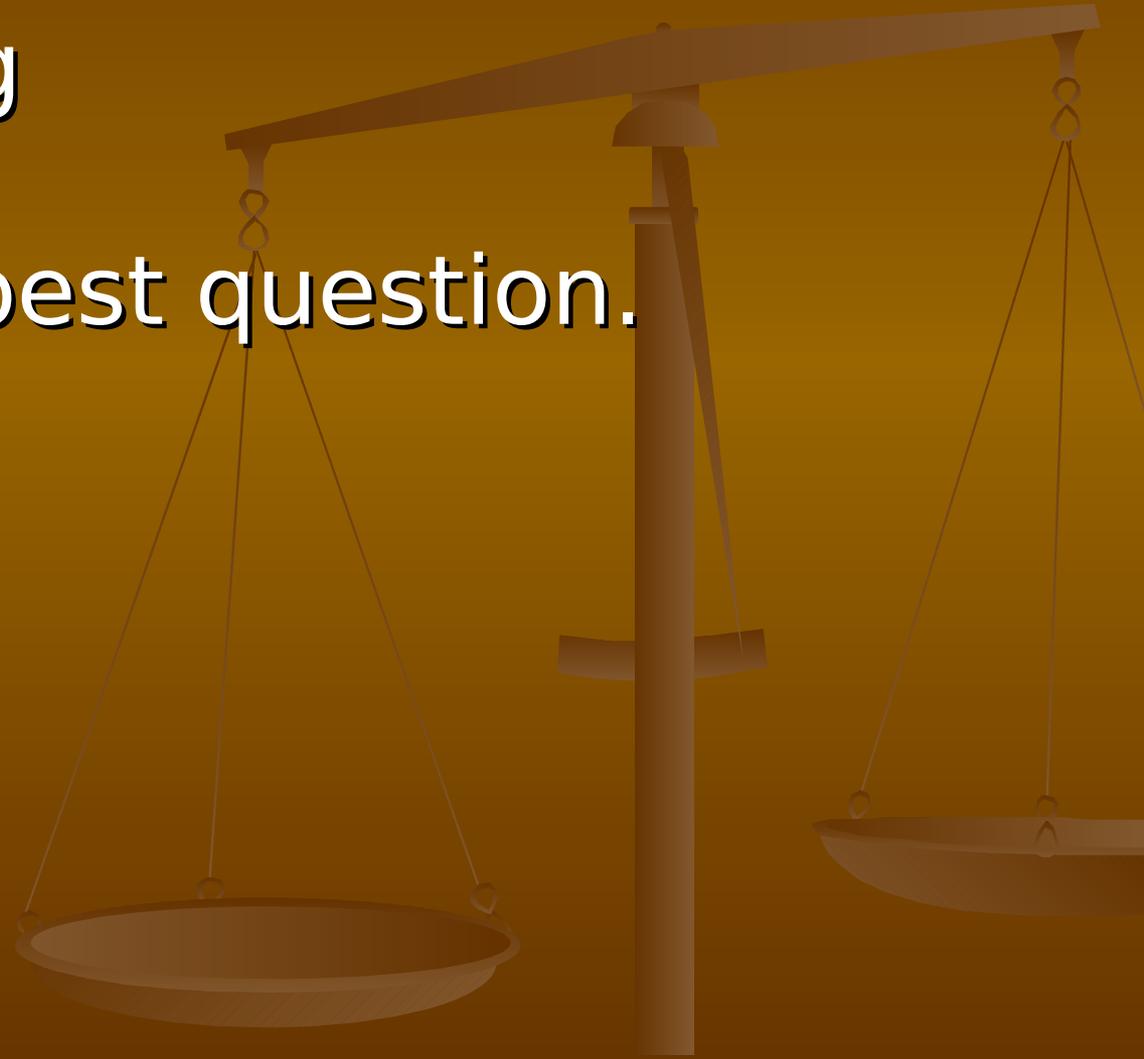
# Small Group Activity: Formulate a Question

- Topic: Dating
- Four minutes to write down as many research questions using your brainstorming words (or additional words) related to the topic



# Small Group Activity: Formulate a Question

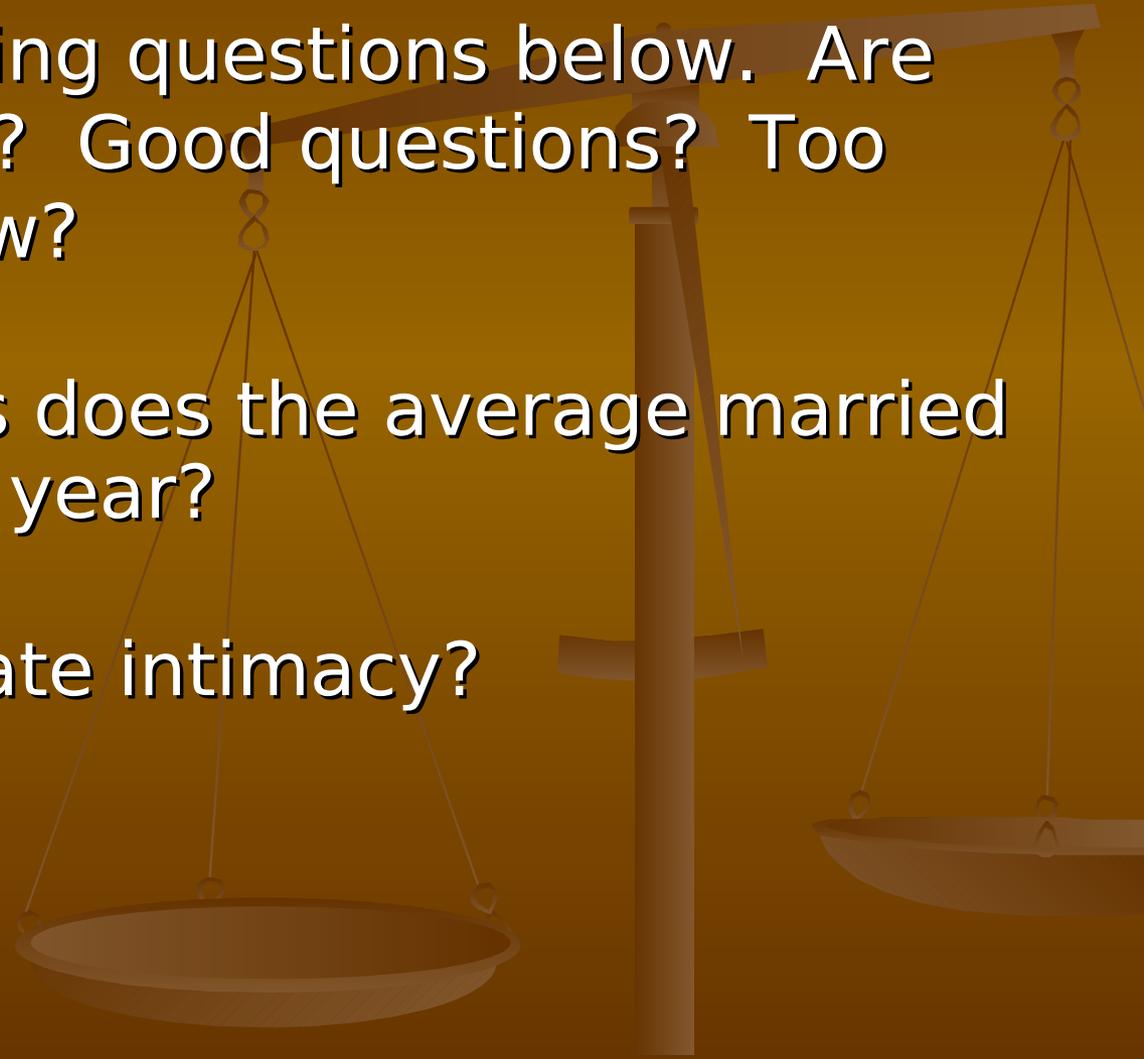
- Topic: Dating
- Choose the best question.



# Small Group Activity: Formulate a Question

Discuss the following questions below. Are they researchable? Good questions? Too broad? Too narrow?

- How many dates does the average married couple have per year?
- Does dating create intimacy?



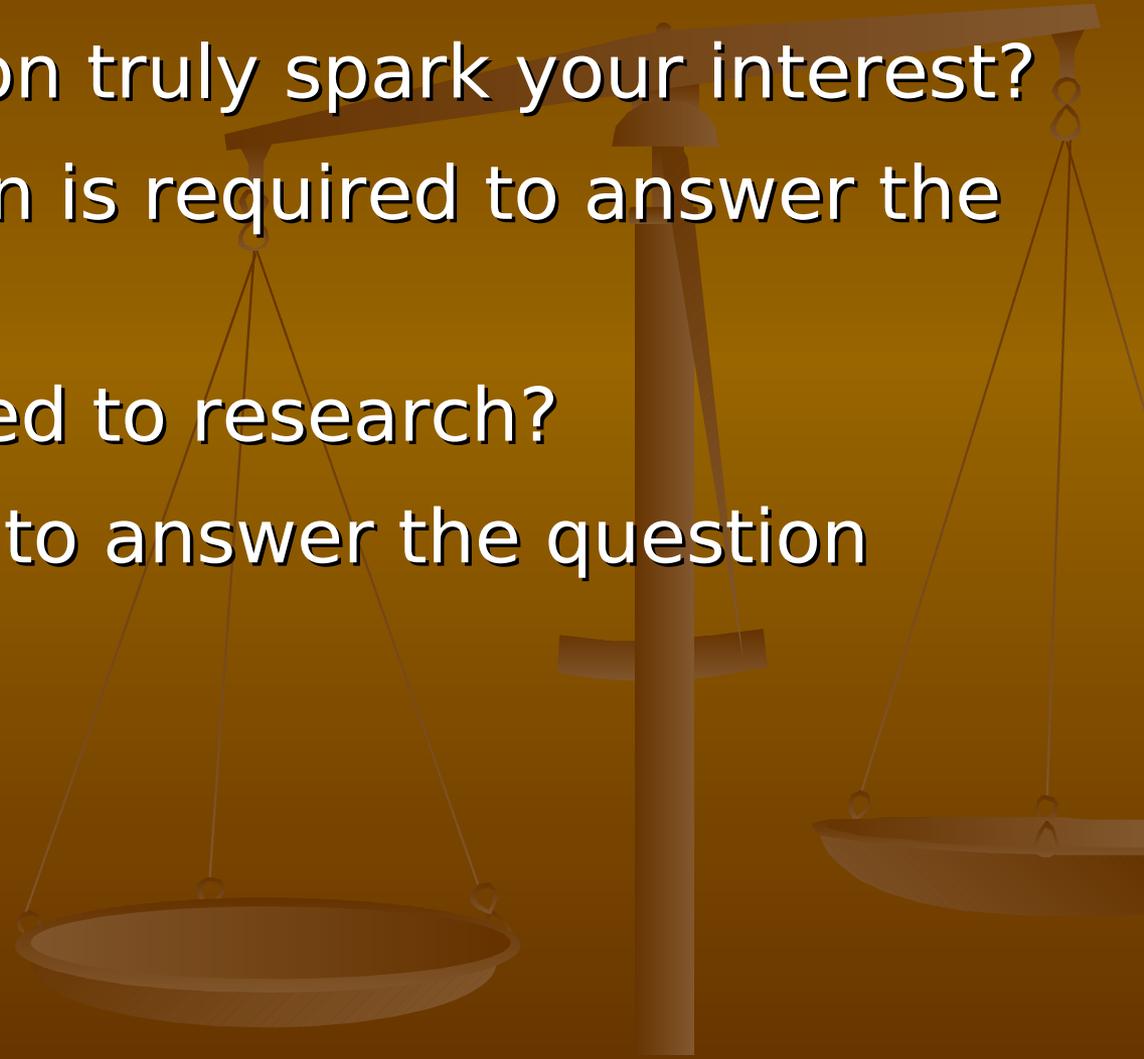
# Small Group Activity: Formulate a Question

Discuss the following questions below. Are they researchable? Good questions? Too broad? Too narrow?

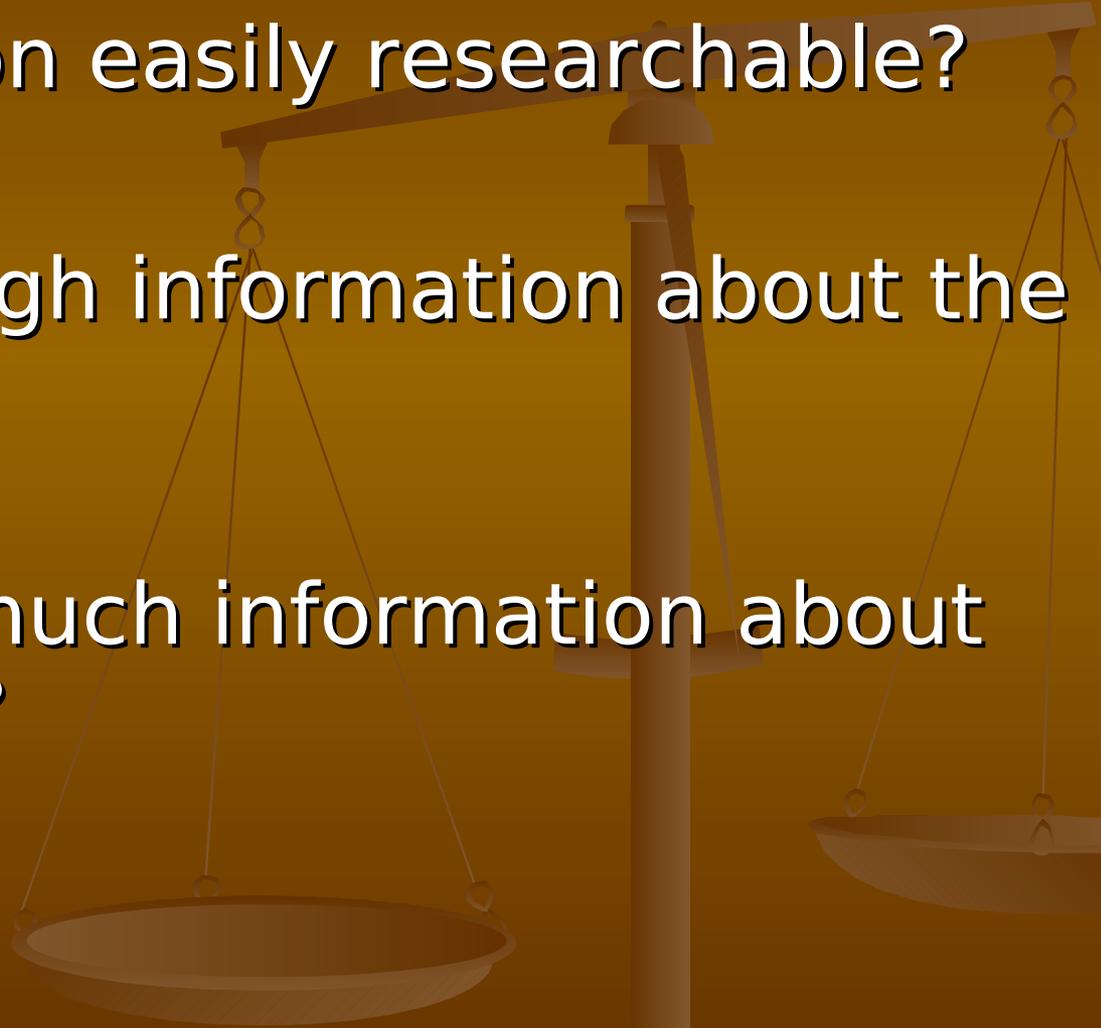
- How many dates does the average married couple have per year?
  - Too narrow; can be answered with one statistic.
- Does dating create intimacy?
  - Too broad; how are we defining intimacy?
  - What methodology will be used?
  - What population?
  - Is number of dates relevant? Etc.

# Small Group Activity: Formulate a Question (cont.)

- Does the question truly spark your interest?
- What information is required to answer the question?
- Who will you need to research?
- Will you be able to answer the question fully?

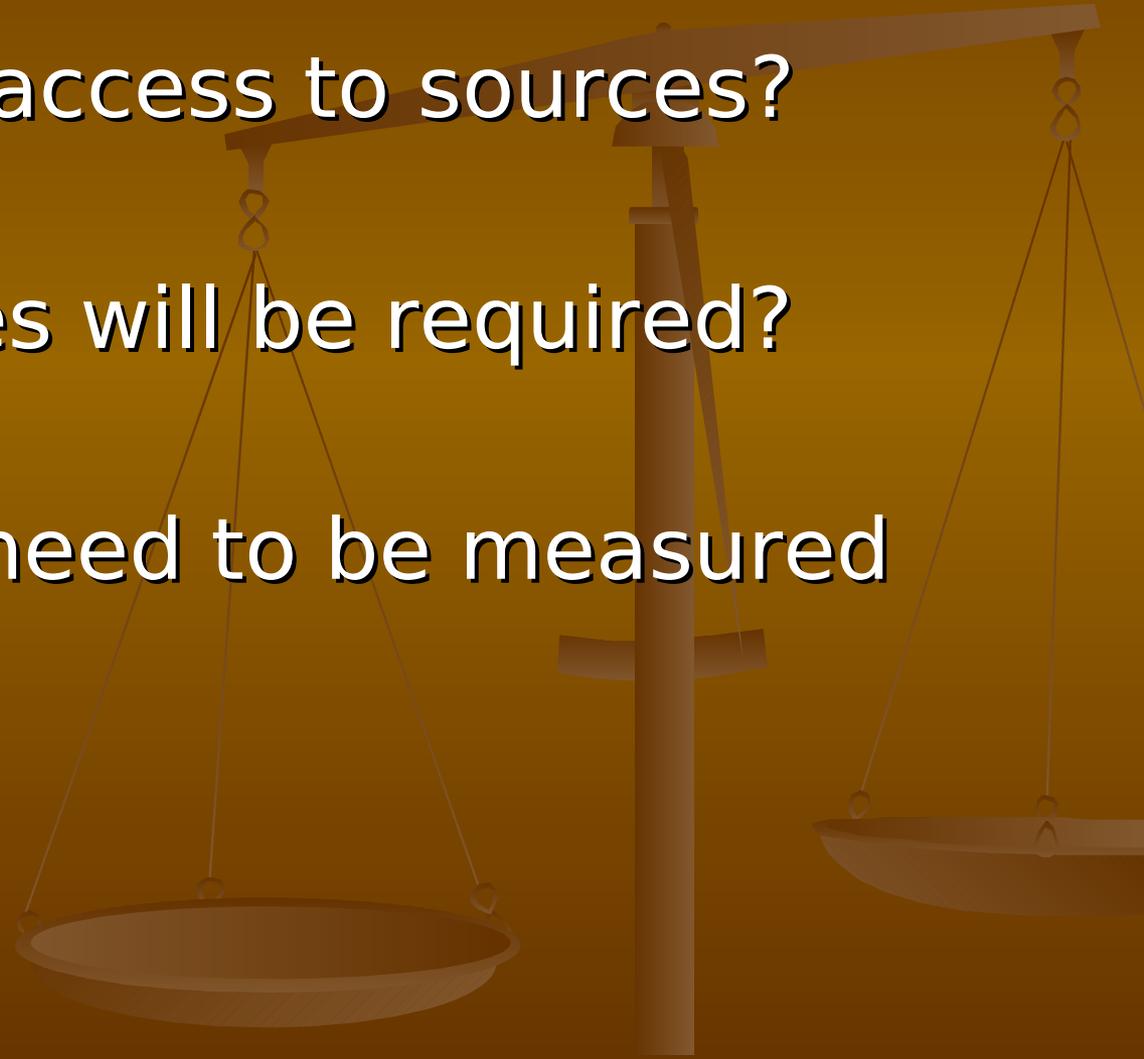


# Small Group Activity: Formulate a Question (cont.)

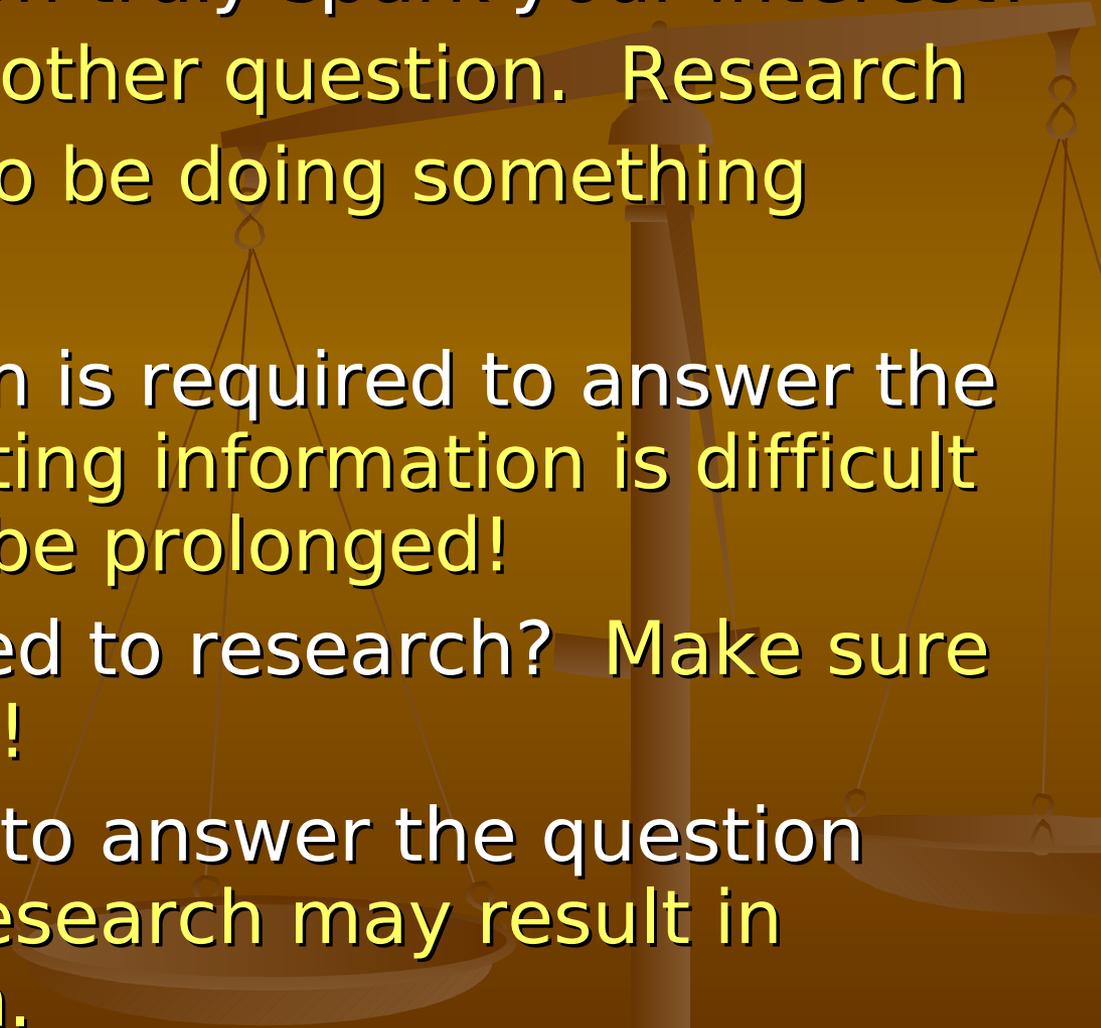
- Is the question easily researchable?
  - Is there enough information about the question?
  - Is there too much information about the question?
- 

# Small Group Activity: Formulate a Question (cont.)

- Will you have access to sources?
- What resources will be required?
- Will anything need to be measured and how?

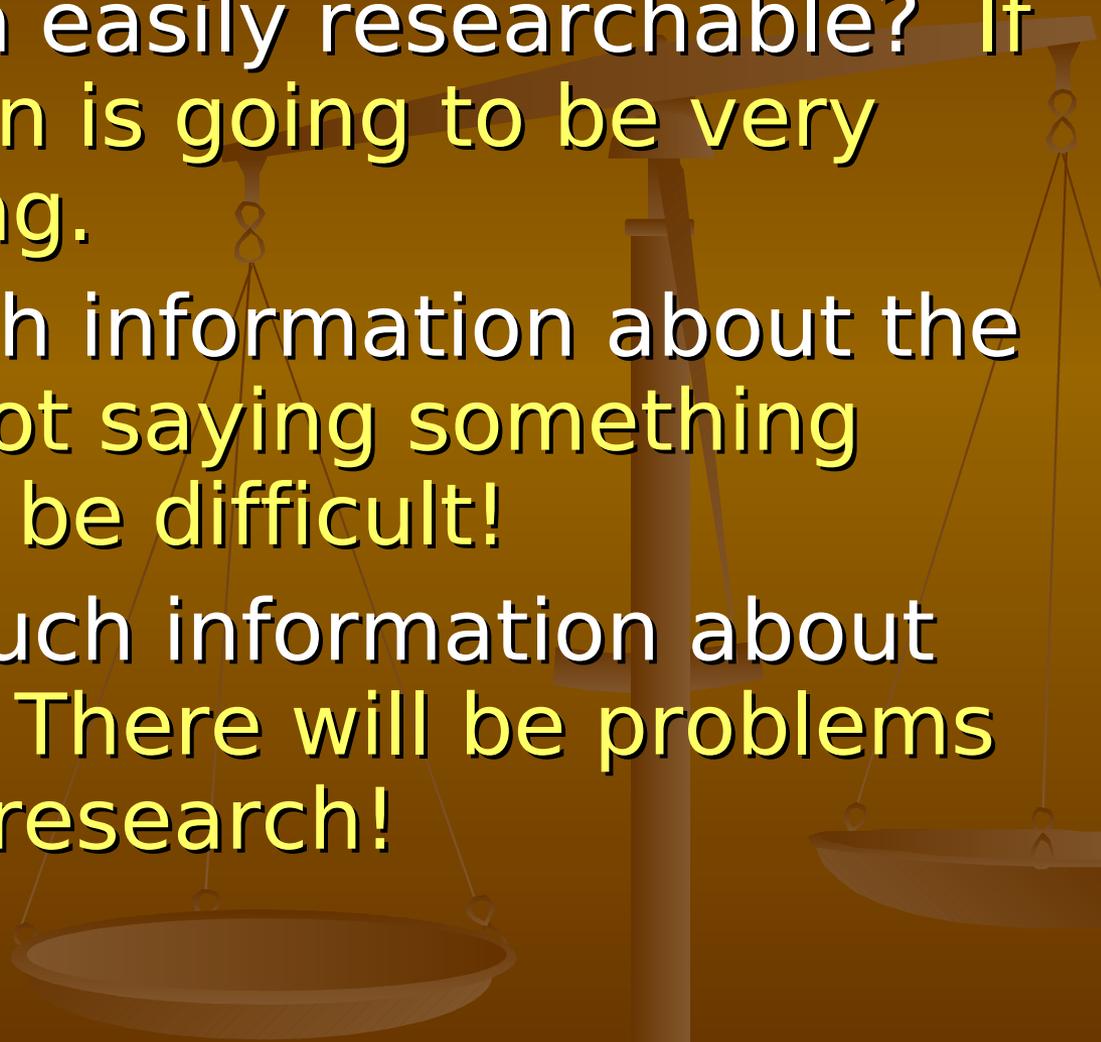


# Formulate a Question

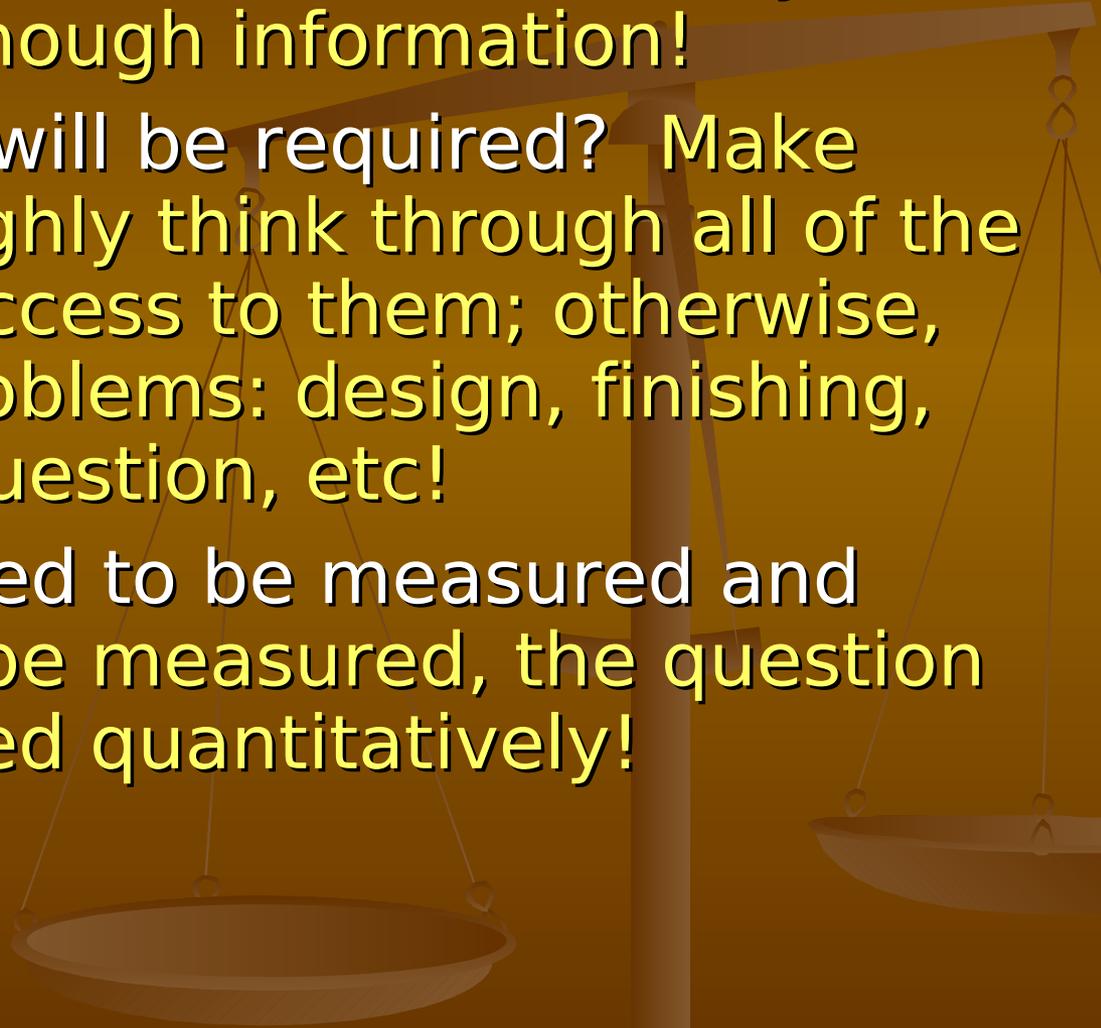


- Does the question truly spark your interest? If no, choose another question. Research takes too long to be doing something uninteresting!
- What information is required to answer the question? If getting information is difficult the process will be prolonged!
- Who will you need to research? Make sure you have access!
- Will you be able to answer the question fully? Shallow research may result in failure to publish.

# Formulate a Question (cont.)

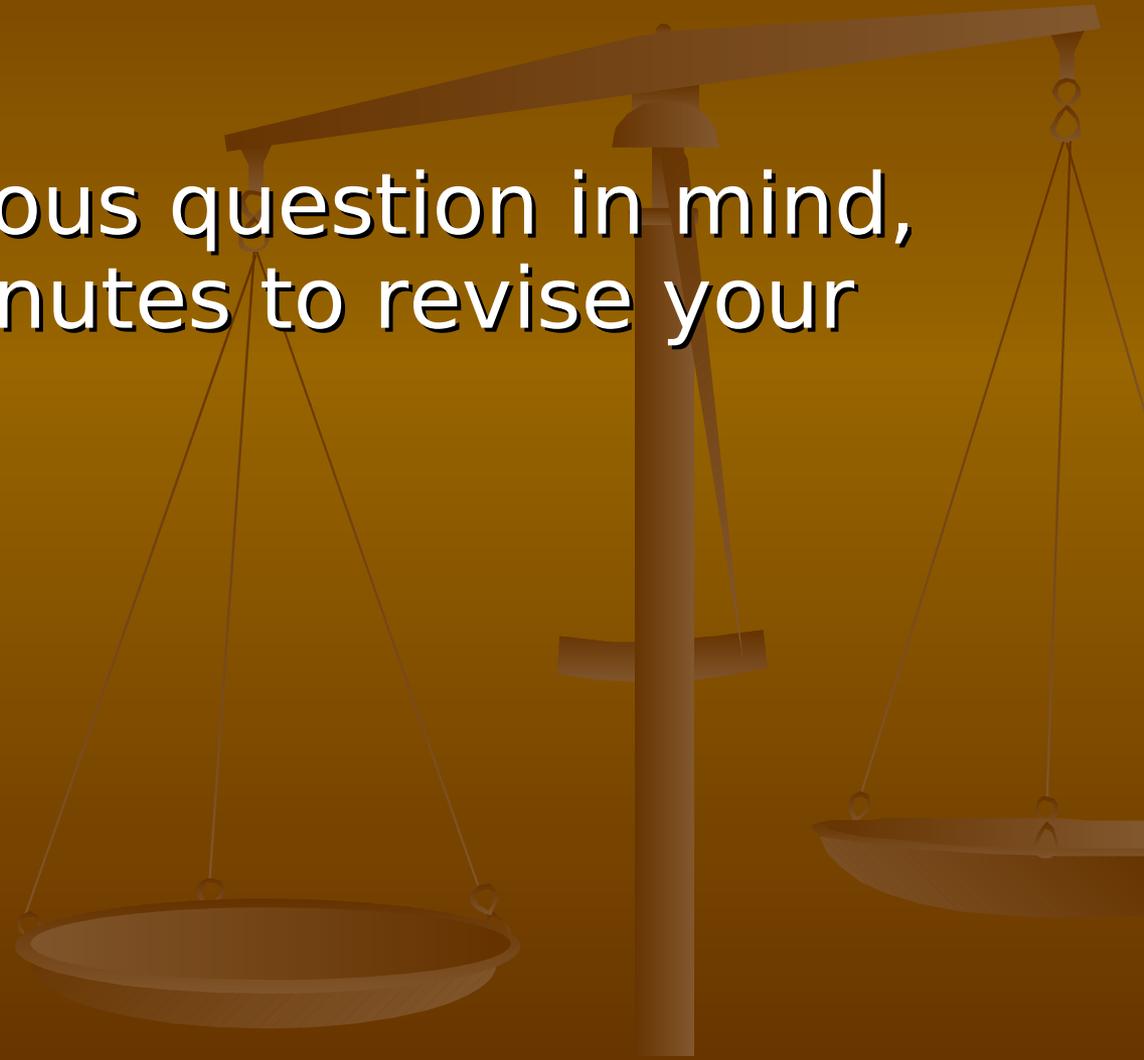
- Is the question easily researchable? If not, completion is going to be very time consuming.
  - Is there enough information about the question? If not saying something intelligible will be difficult!
  - Is there too much information about the question? There will be problems finishing your research!
- 

# Formulate a Question (cont.)

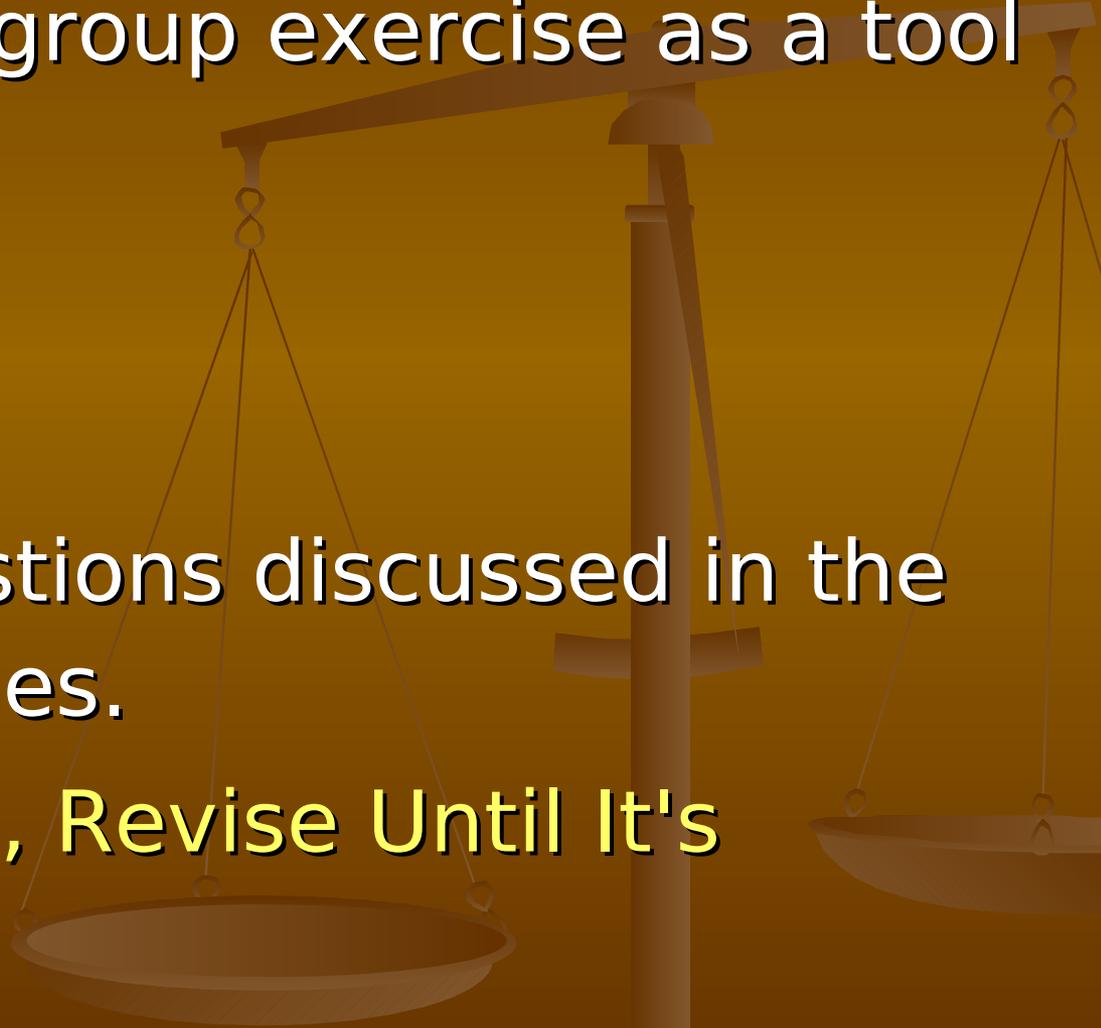
- Will you have access to sources? May not be able to get enough information!
  - What resources will be required? Make sure you thoroughly think through all of the resources and access to them; otherwise, you will have problems: design, finishing, answering the question, etc!
  - Will anything need to be measured and how? If it can't be measured, the question can't be answered quantitatively!
- 

# Small Group Activity: Formulate a Question (cont.)

- With the previous question in mind, you have 5 minutes to revise your question.



# Formulate a Question (cont.)

- Use the small group exercise as a tool
  - Concise
  - Accurate
  - Feasible
    - Ask the questions discussed in the previous slides.
  - **Revise, Revise, Revise Until It's RIGHT!**
- 

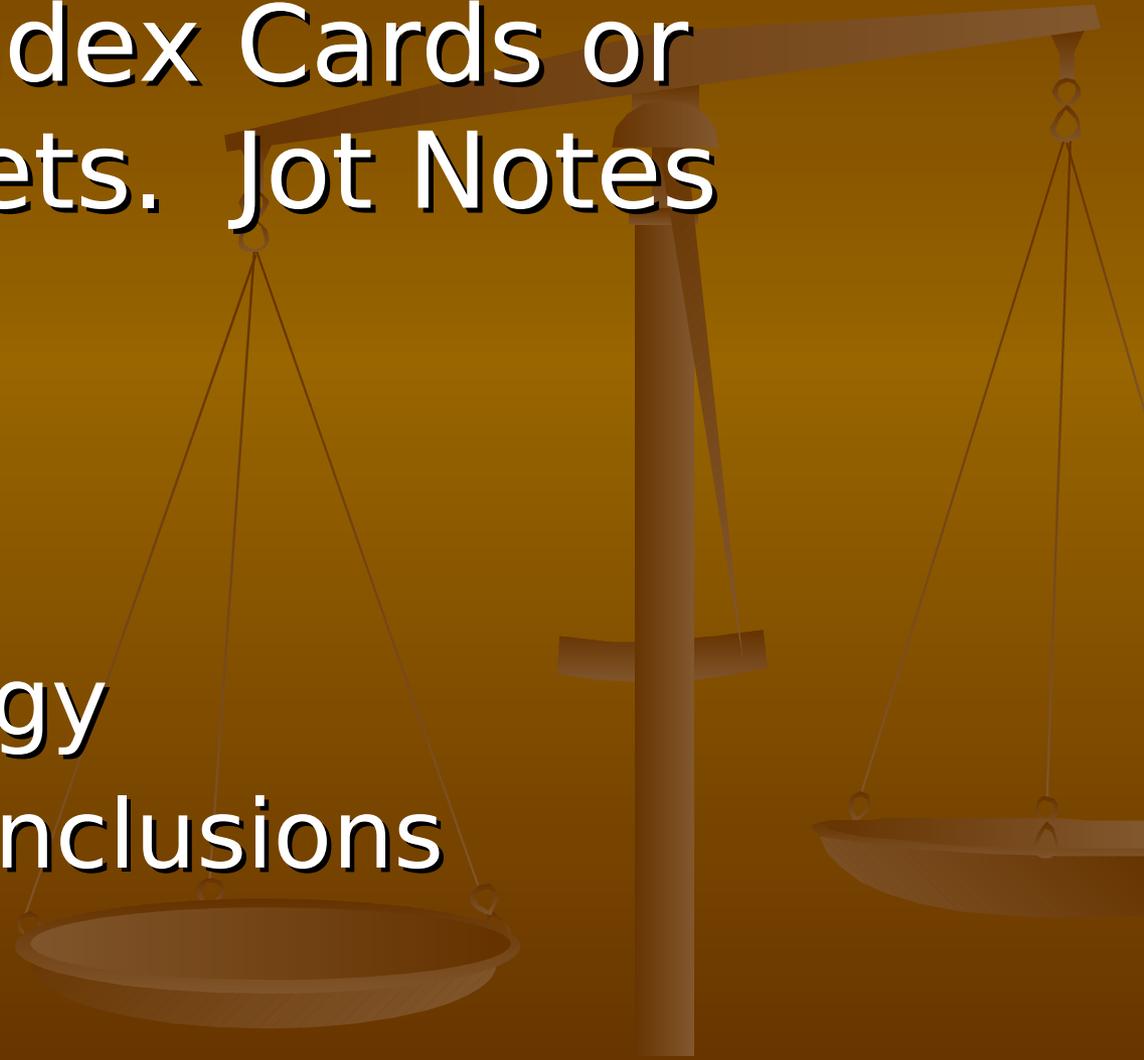
# Organizing and Assessing the Sources

- Organization
- Assessment Questions



# Organization

- Consider Index Cards or Spreadsheets. Jot Notes About:
  - Authors
  - Years
  - Methodology
  - Results/Conclusions

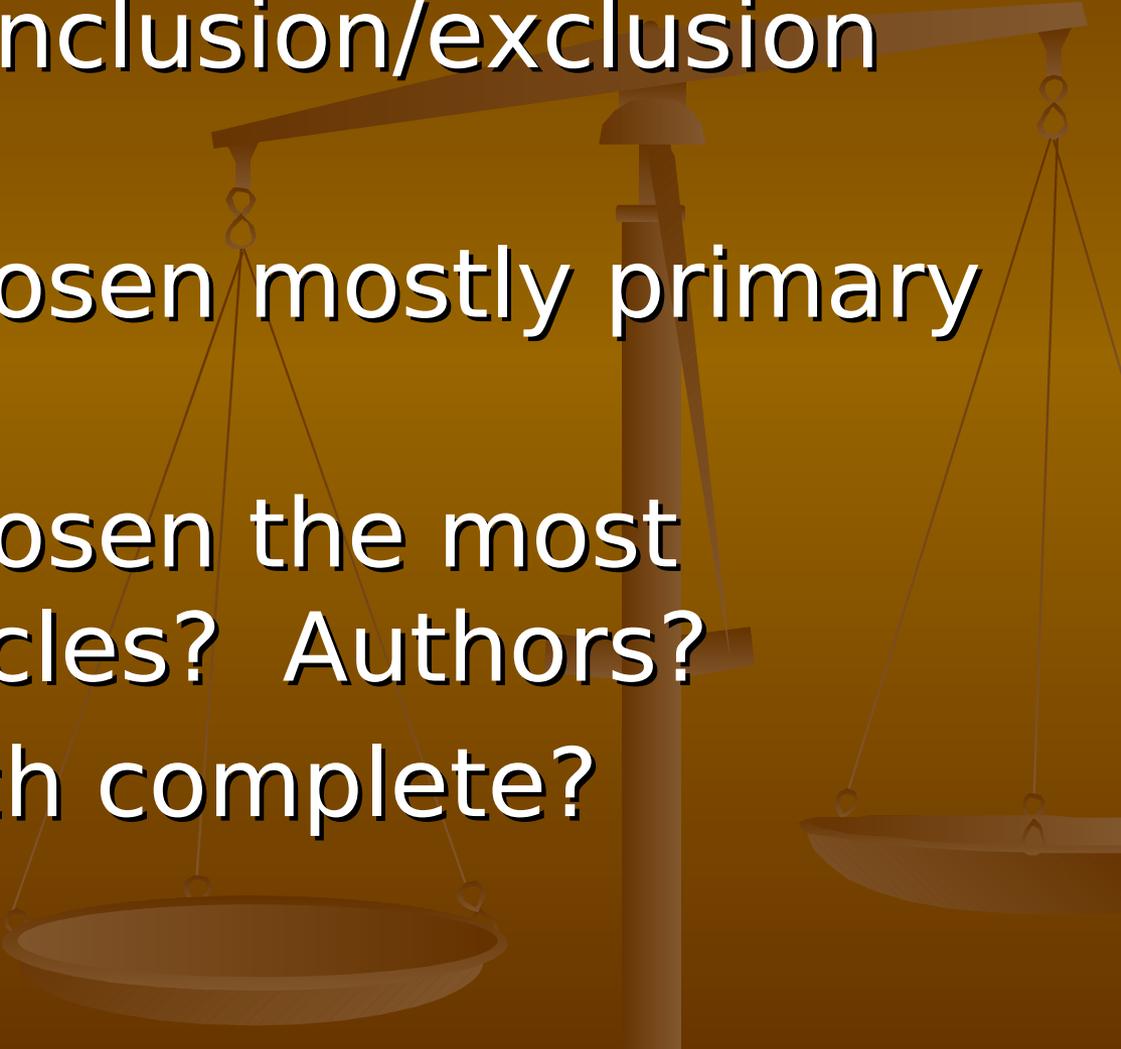


# Organization (cont.)

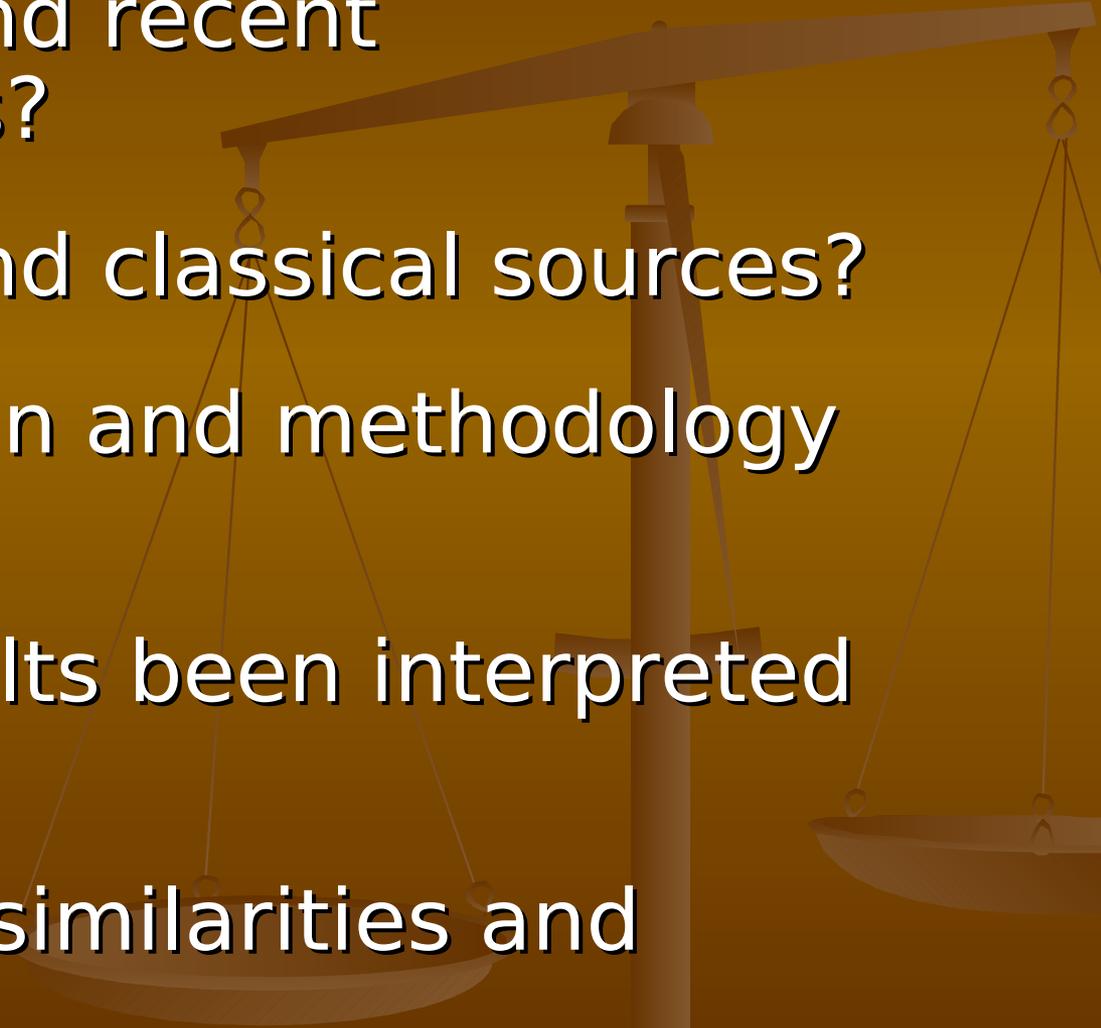
- Determine Organization
  - By Timeline
  - By Theme
  - By Methodology



# Assessment Questions

- What is the inclusion/exclusion criteria?
  - Have you chosen mostly primary sources?
  - Have you chosen the most relevant articles? Authors?
  - Is your search complete?
- 

# Assessment Questions (cont.)

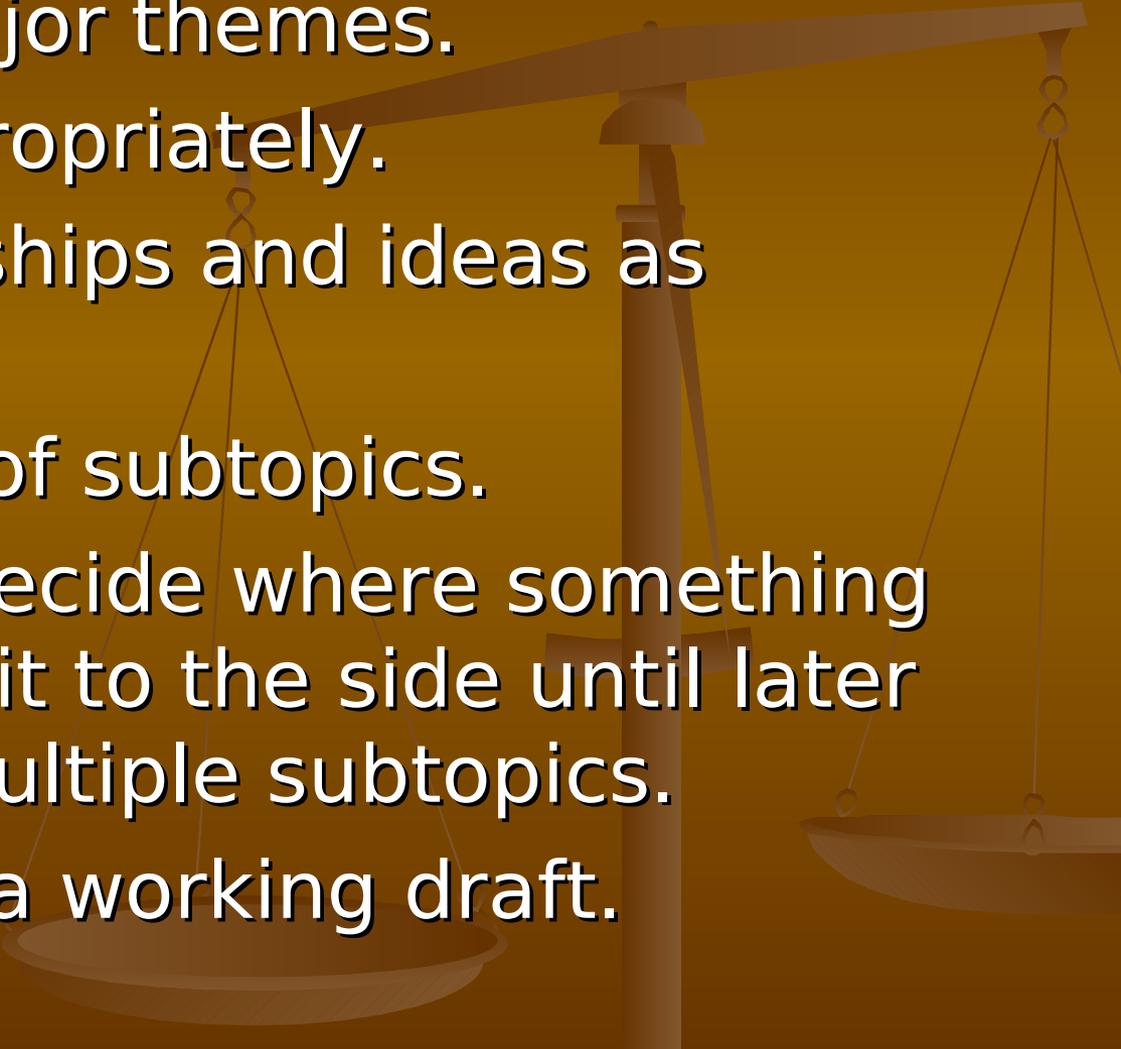
- Have you found recent developments?
  - Have you found classical sources?
  - Was the design and methodology appropriate?
  - Have the results been interpreted correctly?
  - What are the similarities and differences?
- 

# Writing the Literature Review

- Create an Outline
- Structure



# Create an Outline

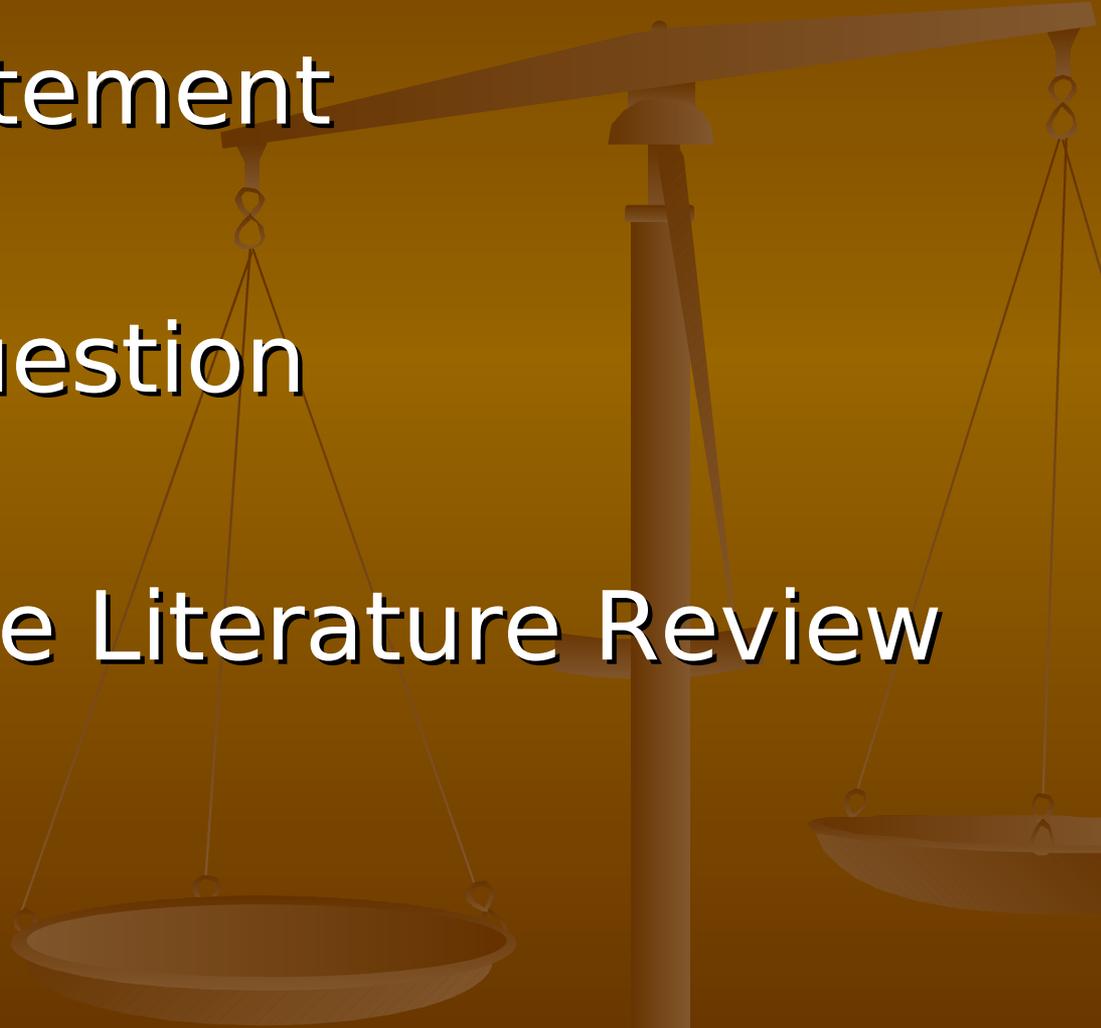
- Identify the major themes.
  - Sort notes appropriately.
  - Group relationships and ideas as subtopics.
  - Avoid long list of subtopics.
  - If you cannot decide where something belongs, place it to the side until later or place it in multiple subtopics.
  - Your outline is a working draft.
- 

# Structure

- Introduction
- Body
- Conclusion
- References

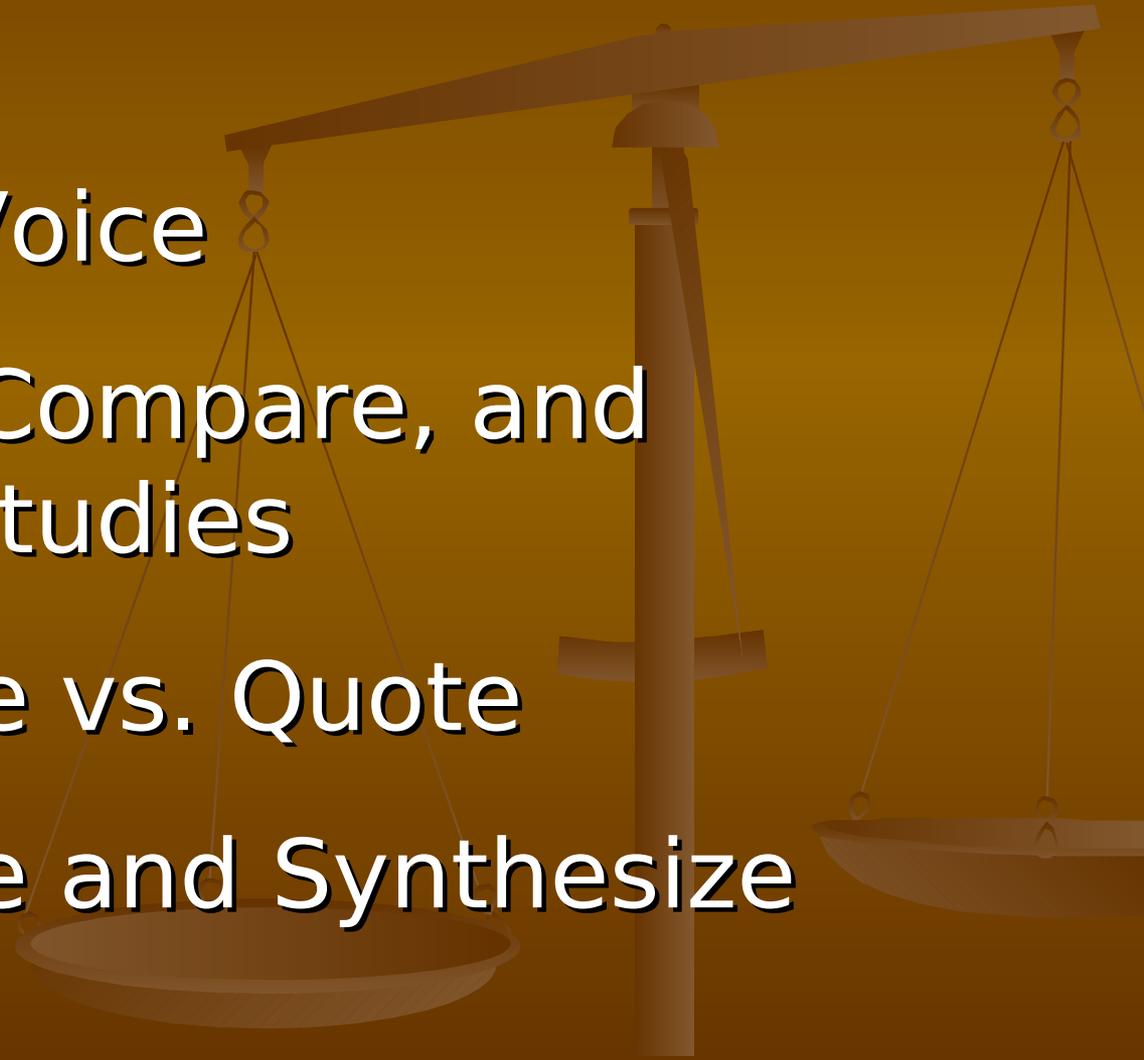


# Structure: Introduction

- Problem Statement
  - Research Question
  - Outline of the Literature Review
- 

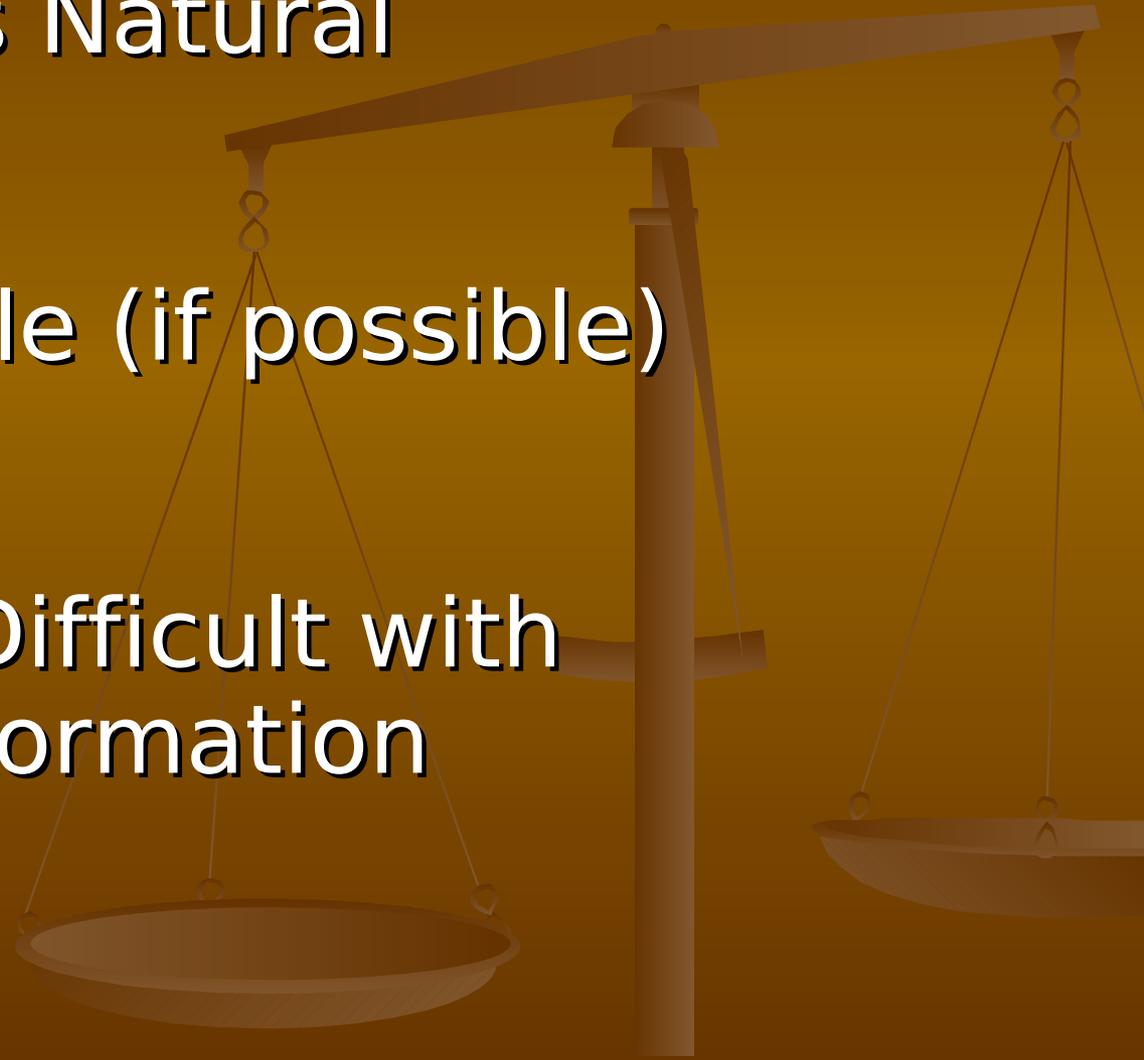
# Structure: Body

- Body
  - Use Your Voice
  - Describe, Compare, and Evaluate Studies
  - Paraphrase vs. Quote
  - Summarize and Synthesize

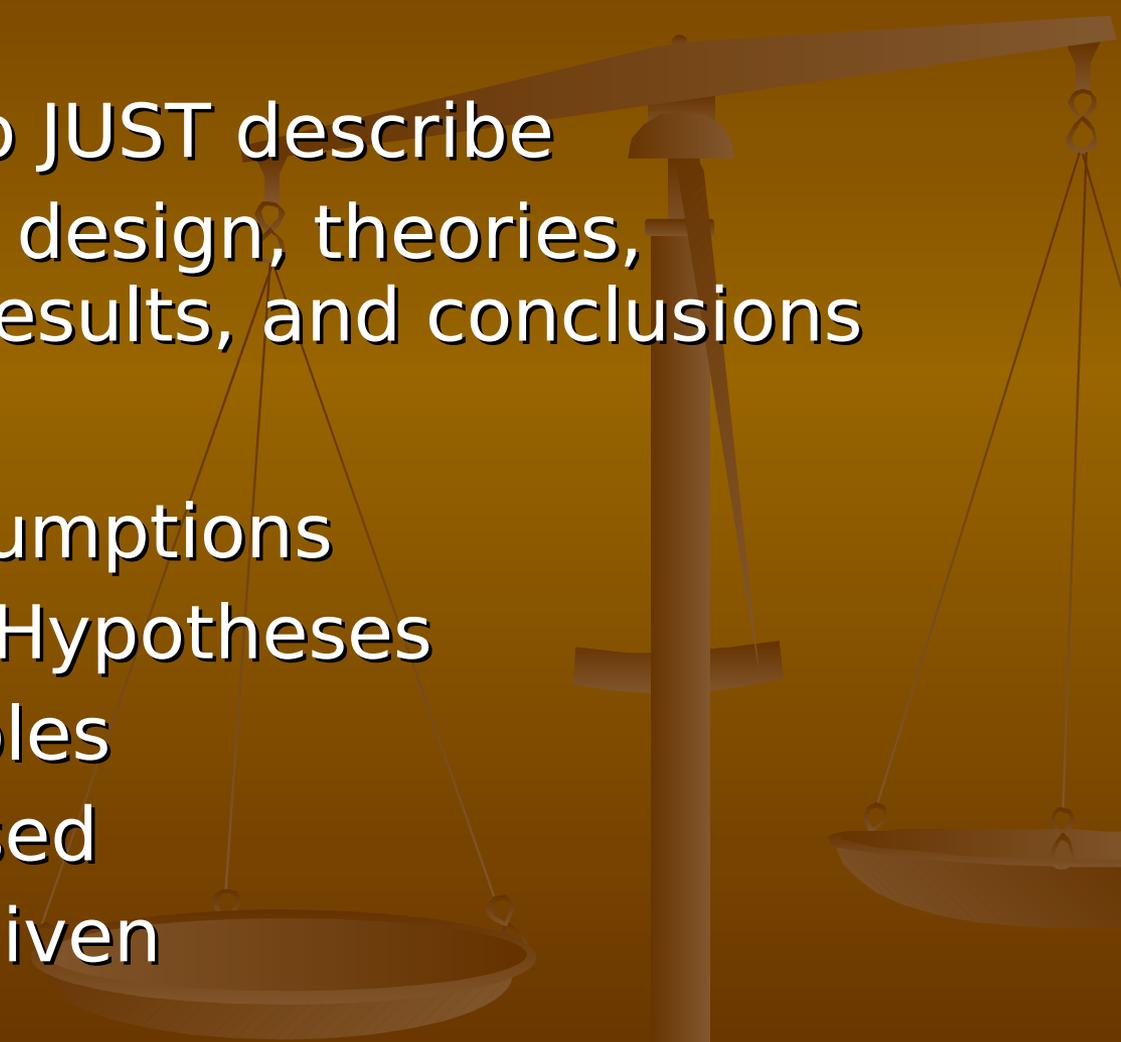


# Body: Use Your Voice

- Come Across Natural
- Keep it Simple (if possible)
- Sometimes Difficult with Technical Information



# Body: Describe, Compare, and Evaluate Studies

- Describe
    - Not enough to JUST describe
    - Provide study design, theories, hypotheses, results, and conclusions
  - Compare
    - Research Assumptions
    - Theories and Hypotheses
    - Design Variables
    - Equipment Used
    - Instructions Given
- 

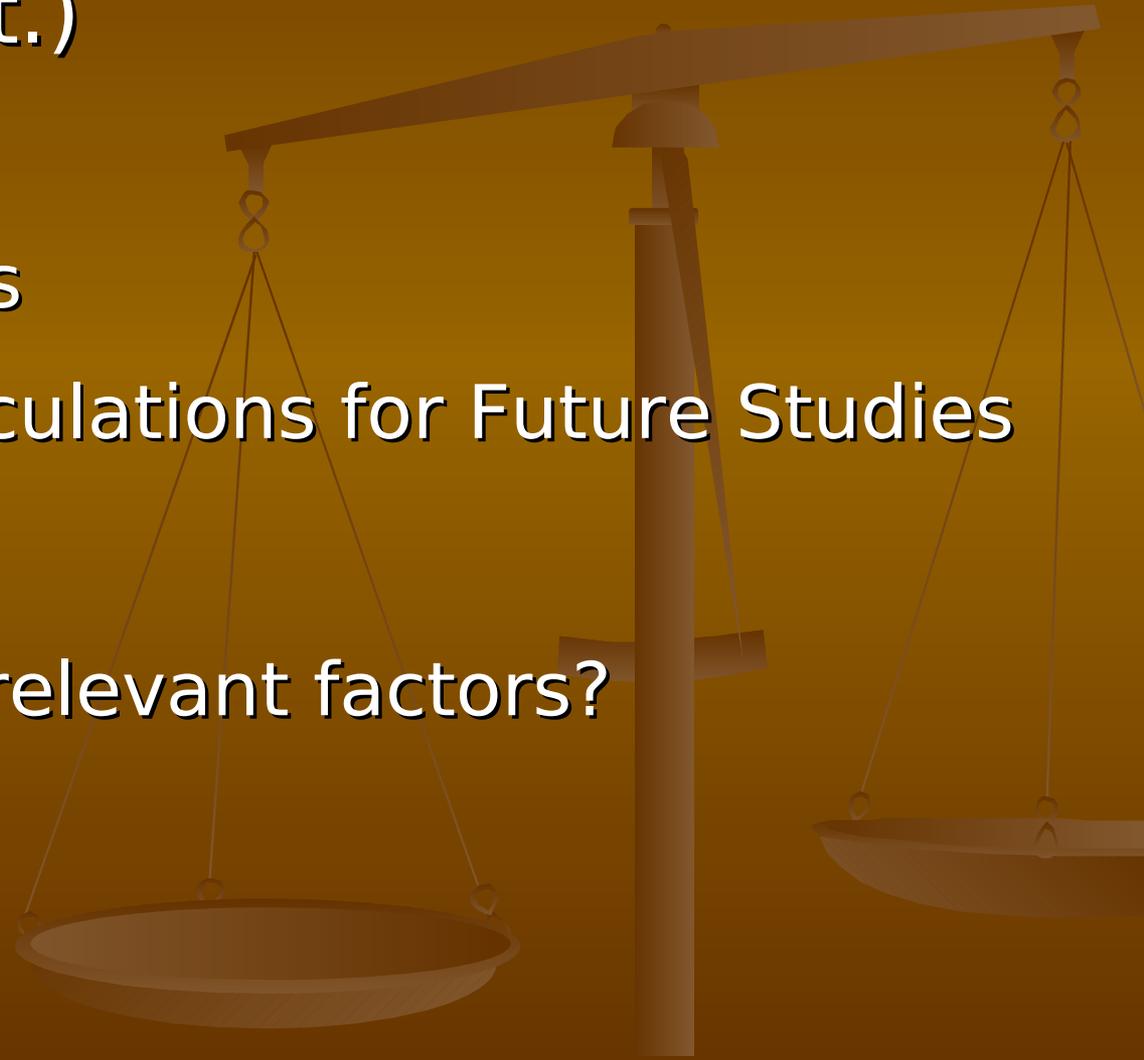
# Body: Describe, Compare, and Evaluate Studies (cont.)

## ■ Compare (cont.)

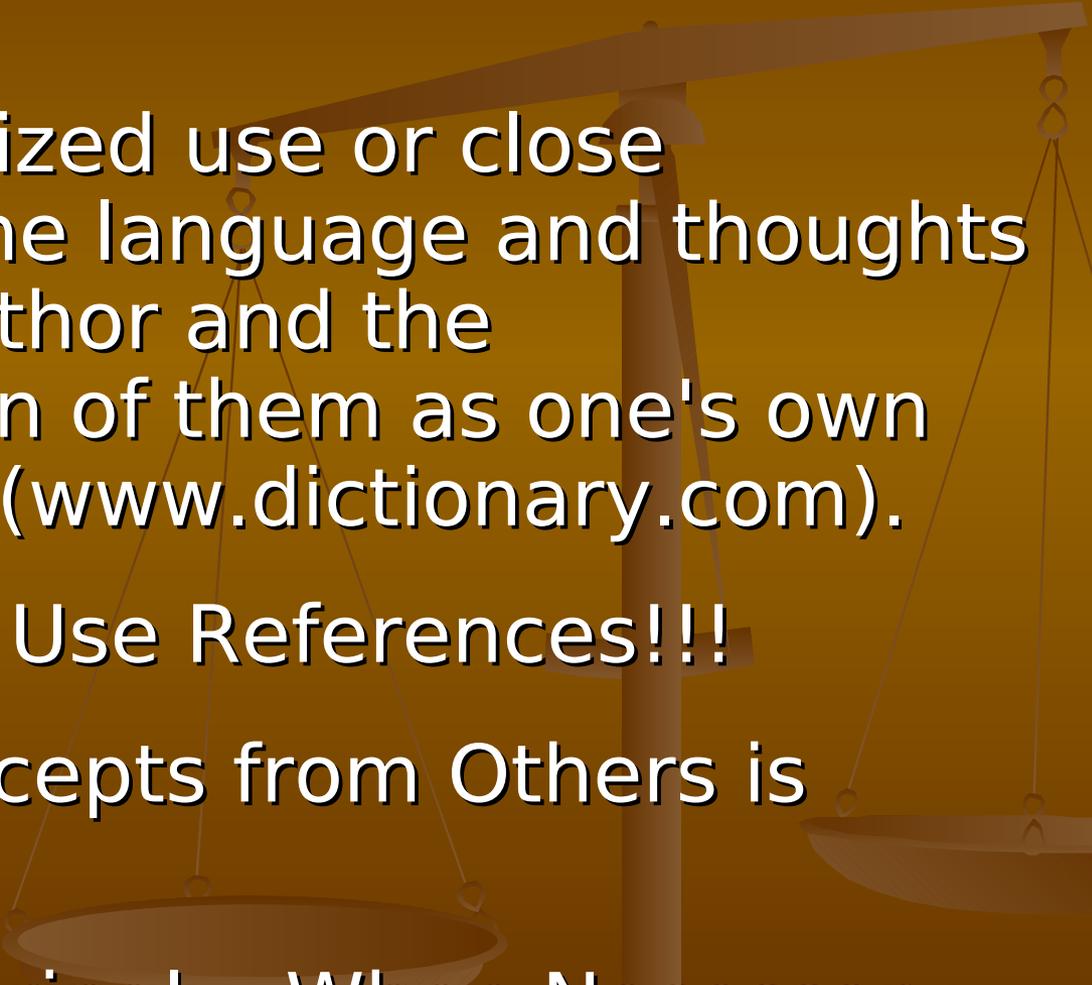
- Results
- Interpretations
- Research Speculations for Future Studies

## ■ Evaluate

- What are the relevant factors?
- Strengths
- Weaknesses

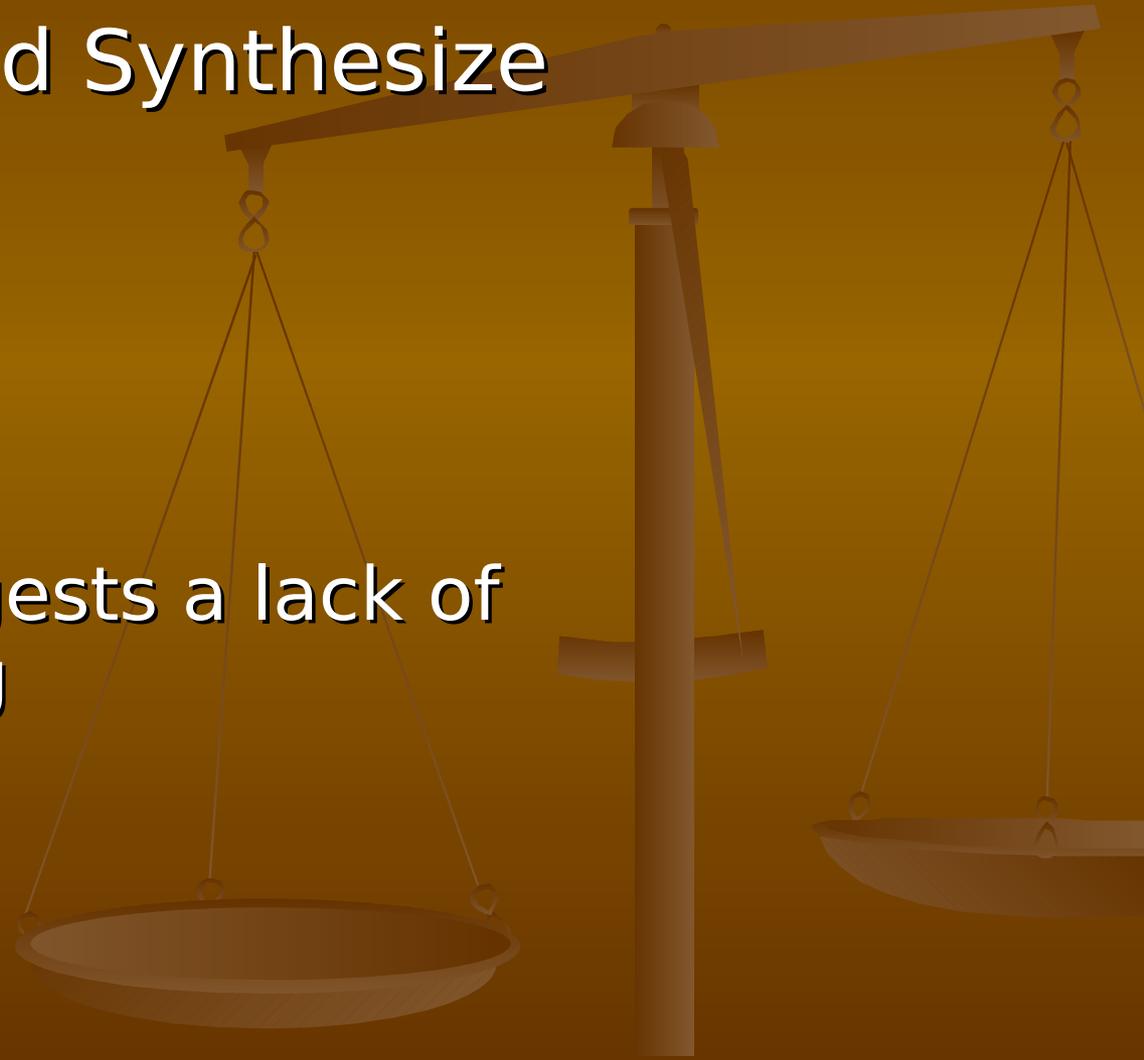


# Body: Paraphrase vs. Quote

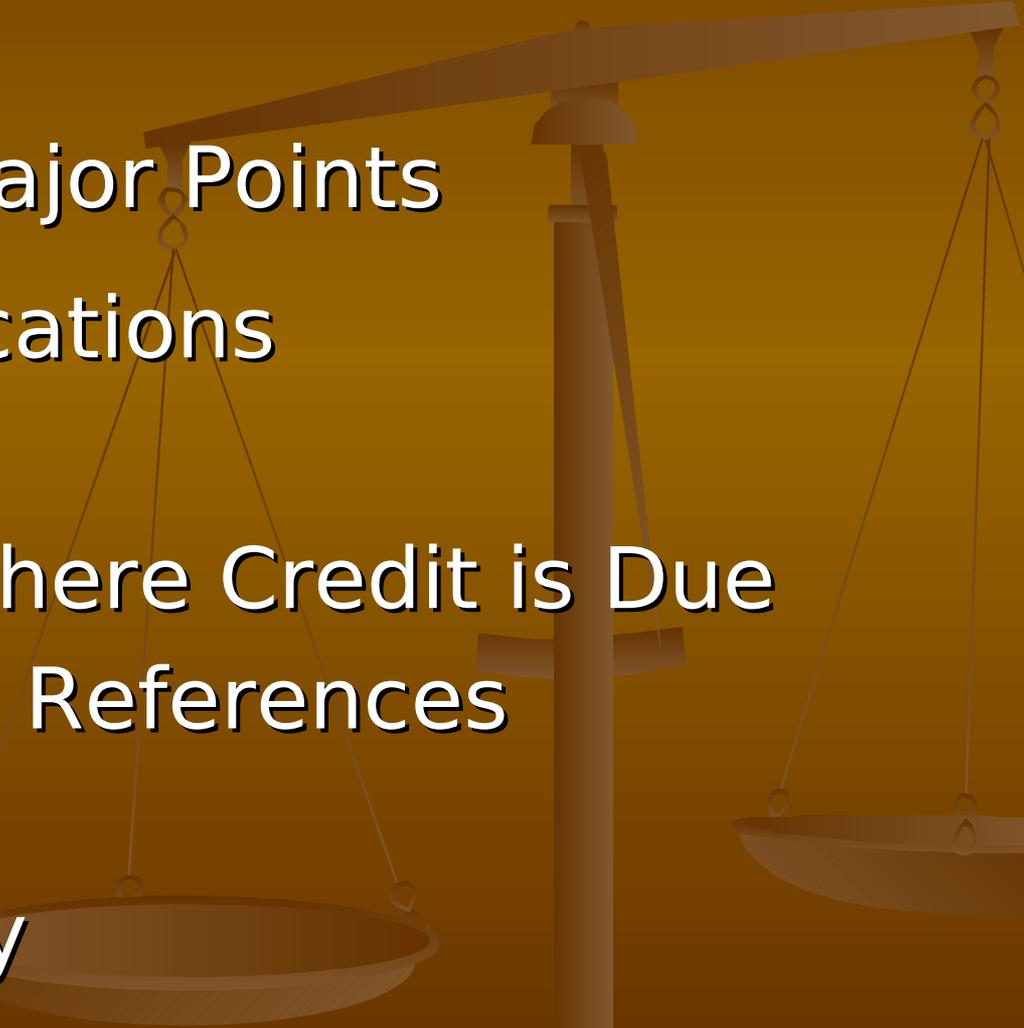
- Plagiarism
    - The unauthorized use or close imitation of the language and thoughts of another author and the representation of them as one's own original work ([www.dictionary.com](http://www.dictionary.com)).
    - DON'T DO IT; Use References!!!
  - Most Major Concepts from Others is Paraphrased
  - Use Quotes Sparingly; When Necessary
- 

# Body: Summarize and Synthesize

- Summarize and Synthesize
  - Concise
  - Articulate
  - Difficulty suggests a lack of understanding



# Structure: Conclusion and References

- Conclusion
    - Summarize Major Points
    - Discuss Implications
  - References
    - Give Credit Where Credit is Due
    - Double Check References
      - In-text
      - Bibliography
- 

# References

- <http://wilderdom.com/OEcourses/PROFLIT/Class3LieratureReview>
- <http://www.deakin.edu.au/library/findout/research/litrev.php>
- <http://www.utoronto.ca/writing/litrev.html>
- <http://www.lib.unimelb.edu.au/postgrad/litreview/finalchecklist.r>
- <http://dept.washington.edu/psywc/handouts.shtml>
- <http://dictionary.reference.com/browse/%20plagiarism>