

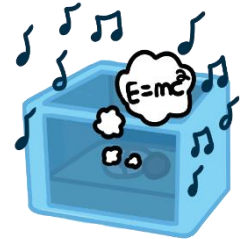


Lesson Plan: Myth vs Theory

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2 hours, 30 minutes



By the end of this lesson, you will be able to:

1. Adopt a “think like a researcher” mindset to evaluate myths you encounter in everyday life using evidence from peer-reviewed sources.
2. Summarize the results of an abstract in a peer-reviewed research paper.
3. Use keywords to search databases for peer-reviewed sources.
4. Differentiate myth from scientific theory.

Introduction: As you remember, prior to this lesson, we hosted a library session where we learned about the major sections of an APA style research paper, how to read a scientific abstract, and how to use databases such as Hunter OneSearch to search for primary research articles. Today, we will be applying what we learned to investigate some myths!

1. What is a myth?

- a. **Class poll:** True or false? Do not reveal results until after Mythbusters activity. *10 minutes*
 - i. “**True or false?** The easier that something is to learn, the easier it will be to remember.”

- ii. **“True or false?”** Opposites attract: We are more likely to form relationships with people who different to us than those who are similar.”
 - iii. **“True or false?”** Our memories are like video cameras that replay events just as they happened.”
 - iv. **“True or false?”** Listening to music from classical composers like Mozart makes babies and young children smarter.”
- b. **Think-pair-share:** Pair up with your neighbor and discuss what the word “myth” means to you. What are some examples of myths that you have heard before? *10 minutes*
- c. **Group discussion:** Discuss answers from think-pair-share with the class. What makes something a myth? *15 minutes*

2. Mythbuster extraordinaire!

- a. **Mythbusters activity:** The instructor should count off to make groups of 4 students each. Each group will be assigned one of the four myths previously introduced in the class poll to investigate using an abstract from a peer-reviewed research paper (*see attached worksheet*). The instructor will check in to discuss progress with groups at every step and announce transitions between steps. *30 minutes*
- i. **Step 1:** Pick a group name! Your group name will be written on the board when reporting your findings.
 - ii. **Step 2:** Within your group, assign four roles:
 - Interpreter:** Looks up any words in the abstract that the group does not understand. If the use of AI is permitted in-class, the interpreter may also use programs such as ChatGPT to explain difficult words or phrases, keeping in mind that information provided by generative AI is not always accurate.
 - Representative:** Shares group findings with the class.

Investigator: Search for evidence in your abstract that supports or goes against your myth.

Mediator: Facilitates group discussion.

- iii. **Step 3:** Read your assigned myth. The mediator will facilitate discussion of the following question: In your own words, what does this myth mean? Do you believe this myth?
 - iv. **Step 4:** Read the abstract below your myth. Circle any words that you do not understand and write them on your worksheet. Once everyone has finished reading, the interpreter will look up the definitions of these words.
 - v. **Step 5:** The mediator will facilitate discussion of the following question: What were the major findings or takeaways from the abstract that you read?
 - vi. **Step 6:** The mediator will facilitate discussion of the following question: Do the findings reported in this abstract support your myth? Why or why not?
 - vii. **Step 7:** The mediator will facilitate discussion of the following question: Was there a particular statement that led you to this conclusion? Do others in the group agree?
- b. **Mythbusting time!** Reconvene. The **representative** from each group will share their group's myth and state whether it was supported. The **investigator** will then share evidence from the abstract that supports this conclusion. The instructor should write each group's findings on the board. *15 minutes*
- c. **Group discussion:** What is the difference between myth and scientific theory? *10 minutes*
- d. **Group discussion:** Why are myths easy to believe, even if there is no evidence to support them? How much evidence do you need to disprove a myth? *15 minutes*

- i. Show results of class poll

3. Myth-Hunters: Using Hunter OneSearch

- a. **Introducing additional evidence:** In your mythbusting group, use Hunter OneSearch to find the full paper that you read an abstract from. *15 minutes*
 - i. Read the introduction, keeping the same roles. Did you discover any new evidence related to your myth?
- b. **Collecting keywords:** In your mythbusting group, come up with 5 keywords that you might use to search for another paper related to your myth and write them on the back of your worksheet. *10 minutes*
- c. **Myth-Hunters:** Use the keywords that you generated to find a different peer-reviewed primary research article that relates to your myth. *15 minutes*
- d. **Minute paper exit ticket:** Did this activity change the way you think about myths? What is one way that you could use what you learned today outside of the classroom? *5 minutes*

4. Homework: Time to exercise those mythbusting muscles!

- a. **Pick one of the following myths to investigate on your own:**
 - i. We only use 10% of our brains.
 - ii. It's always best to follow your intuition.
 - iii. People are either "right-brained" or "left-brained."
 - iv. Our personalities stop changing once we reach adulthood.
- b. **Myth-Hunting:** Use Hunter OneSearch to find a primary research article that relates to your myth and read the abstract.

- c. **Brightspace:** Answer the following questions on the BrightSpace discussion board:
- i. Which myth did you choose?
 - ii. Which paper did you find? Please include the reference in APA format.
 - iii. In one or two sentences, what were the major findings of the paper that you selected?
 - iv. Do these findings support your myth? Why or why not?
 - v. What would your next step be in investigating this myth?

Acknowledgments: The activities featured in this lesson plan were designed with the help of Katie Willgohs. All illustrations depicted are my own. The name of the activity featured in this lesson plan is a reference to the TV show, *Mythbusters*. All papers used in this lesson are referenced in APA style on the accompanying worksheet.