



Frame(s): Authority is constructed and contextual	Level: 200	Learning Objective: Students can identify how information resources vary in their quality and authority and recognize that different sources of information serve different functions in a scholarly context.
Duration: 50-75 minutes	Discipline: Environmental Science (adaptable)	Learning Outcomes for Lesson: Students will identify the features of a source that indicate its relevancy and reliability in a specific context and determine whether it is appropriate to use.

LESSON PLAN:

Flipped model: Prior to the session, students read: Achenbach, J. (2015). "[The Age of Disbelief](#)." *National Geographic*, 227(3): 30-47.

Instruction (5 minutes)

- Class begins with a brief discussion of what they learned from the reading. The article examines the disconnect between ideas within the scientific community, and the perception of the public at large.

Hands on group activity (20 minutes)

- Students break into groups of 2 or 3 and examine articles with different levels of authority and differing viewpoints on the same issue. In this example, students examine articles on the decline in bees.
 - ⇒ All students read "[Bees, lies, and evidence-based policy](#)" by Lynn Dicks.
 - ⇒ Students are given one additional article to read and evaluate
 - [Buzz over bee health](#)
 - [Bee Deaths Reversal](#)
 - [Assessment of the environmental exposure of honeybees](#)
 - ⇒ Students may use the internet to investigate their article and to locate information to help them evaluate the source.
 - ⇒ Students are advised to consider the author, journal, research cited in the article, and other characteristics of their resource.
 - ⇒ Students also use Google to find additional material on neonicotinoids and identify a source they determine to be authoritative.

Reporting back (10-20 minutes)

- Students report back on what they've found.
 - ⇒ Groups assigned to each of the three additional articles report their findings.
 - ⇒ Students vote for the most authoritative article, after discussing the purpose and viewpoint of each resource.
 - ⇒ Students compare this authoritative article with the purpose and viewpoints of other articles they found on Google. What conclusions have they come to about neonicotinoid pesticides? Do they feel a ban is warranted?

Wrap up (5-15 minutes)

- Students articulate what this means for their search techniques going forward. Would the results have been different/better using Google Scholar or a scholarly database?

Habits addressed by this lesson:

- Strive to find authoritative sources while understanding that context and format can make this determination complicated.
- Maintain an open mind when encountering different perspectives.
- Seek help when needed.

