

Claim, Evidence, Reasoning

Directions: At the end of every scientific or engineering investigation, a claim or conclusion is made about the question or problem explored. A successful claim is supported by sound, relevant evidence and reasoning that clearly links the evidence to the claim based on known scientific concepts.

Select a news article of your choice from the Science News archive (www.sciencenews.org) or Science News Explores archive (www.snexplores.org), read it and review it using the prompts below.

Identify: Use the article to discuss and answer the following questions.

1. A claim is an assertion of something as a fact, which may or may not be supported by evidence. What is one scientific claim made by the scientists as described by the article?
2. Claims often serve as answers to questions. What scientific question might the scientists' claim attempt to answer?
3. Evidence is the scientific data that are given to support a claim. What information does the article give as evidence?
4. Reasoning is the explanation of why the evidence supports the claim. What reasoning is given in the article?

Rate and revise: Along with the questions below, use the claims, evidence and reasoning rubric provided by your teacher to analyze and rate the scientific argument reported in the article.

1. How well does the claim answer the scientific question you identified? Explain your reasoning and rate the claim using the rubric provided.

2. Does the evidence provided do an adequate job of supporting the claim scientifically? Why or why not? Rate the evidence using the rubric provided.

3. Does the reasoning clearly link the evidence to the claim using known scientific principles? Explain and highlight any missing links in the reasoning. Rate the reasoning using the rubric provided.

4. Are there other plausible claims that could explain the scientific question you identified? Explain, and give an example.

5. What additional evidence could be given or explored to support the claim?

6. What types of scientific background knowledge would be useful to further explore the scientists' claim?

Compare: Select another news article of your choice from the [Science News archive](#), read it and review it using the prompts above. Then compare the news article with the [Science News article "Climate change may raise the risk of deadly fungal infections in humans. One species already is a threat."](#) Note that the story is categorized as a "soapbox." Soapboxes have historically been used as informal platforms to stand on while giving speeches.

1. Explain the similarities and differences of the scientific explanation given in each article. How do you think this relates to how the articles are labeled?