Science in the News (Part 1)

Claims and Evidence

“The evidence does not lie…”

The girl did her research and found the evidence to support her claim.

Her dad MUST be an alien! Right?

VIDEO LINK

Claims vs. Models

CLAIMS

- An answer to a question
- An assertion based on results of an investigation
- Requires justification to support the claim

MODELS

- An explanation of a phenomenon
- A hypothesis that leads to new questions
- Predicts or describes how and why a phenomenon occurs

EVIDENCE is the foundation for both claims and models!

THE MEL PROJECT

Familiar Instructional Strategies

Claim-Evidence-Reasoning

- Claims: A proposed answer to a question
- Evidence: The information used in an argument to support the claim
- Reasoning: Justification that links the claim and evidence.

Supporting Claims with Evidence: Scientific Reasoning

Scientific Reasoning:

- Connecting claims to evidence
- A form of scientific argumentation
- Ability to engage in social conversation about the validity of conclusions

Scientific LIteracy:

- Ability to understand and apply scientific concepts, processes
- Knowledge to make informed decisions and participate in civic and cultural life
- Relies on Scientific Reasoning

The Importance of Scientific Literacy

Think-Pair-Share

How often do you (or your students) see claims made that **seem to be** backed by scientific evidence?

How can you tell what is real and what is not?

Why is scientific literacy important?

How do you know when something is reliable?

Have you ever seen diverging health claims? What helps you decide what to believe?

What can we learn from these articles?

Measles Truth & Consequences

Global measles cases almost double in a year

What are the claims?

What is the evidence?

Use Graphic Organizer to compare and contrast!

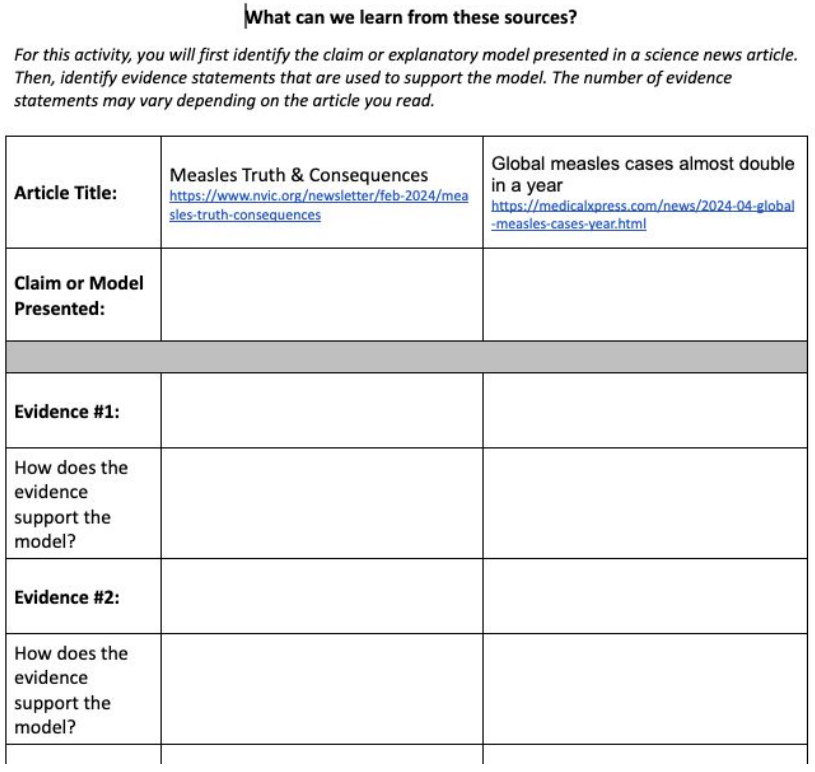
What can we learn from these articles?

What are the claims?

What is the evidence?

Complete graphic organizer to compare and contrast!

10 minutes - individual
5 minutes - small group



What can we learn from these sources?

For this activity, you will first identify the claim or explanatory model presented in a science news article. Then, identify evidence statements that are used to support the model. The number of evidence statements may vary depending on the article you read.

Article Title:	Measles Truth & Consequences https://www.nvic.org/newsletter/feb-2024/measles-truth-consequences	Global measles cases almost double in a year https://medicalxpress.com/news/2024-04-global-measles-cases-year.html
Claim or Model Presented:		
Evidence #1:		
How does the evidence support the model?		
Evidence #2:		
How does the evidence support the model?		

What did you find out about the claims?

What claims were made in each?

What evidence was presented?

Does the evidence relate to your claim?

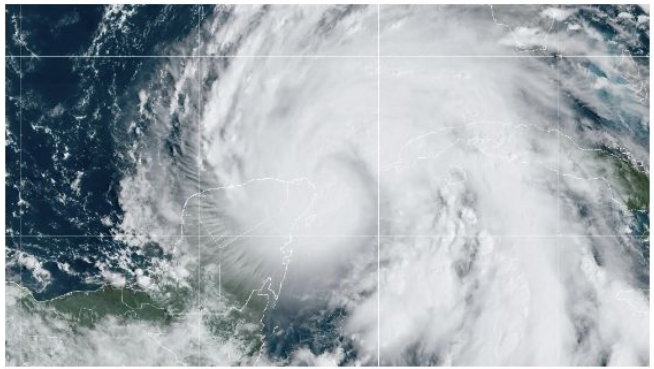
What can you conclude?

What are your takeaways?

What do you do with this?

Hurricane Helene Was Engineered. Geoengineering Expert's Bombshell: Claim of Human Manipulation Behind Deadly Storm

Geoengineering researcher Dane Wigington suggests Hurricane Helene's destructive path may have been manipulated by frequency transmissions and weather modification technologies.



What is the impact of Lateral Reading?

What is Lateral Reading?

Did anyone do any LR on any of these articles? What made you take this approach?

How might LR impact your thinking/reasoning about the information presented in sources?

Applying Lateral Reading

What to know about the study linking a popular artificial sweetener to cardiovascular disease?

Debunking the Erythritol Study

What does Lateral Reading tell us about these articles?

What did you find out?

What are the sources for each?

Are any biases presented or implied?

How would you evaluate the credibility of the sources

Did Lateral Reading impact the credibility of either article?

What can you conclude about the claims and evidence presented?

How does Lateral Reading support scientific literacy and student learning in science?

How does LR connect content areas?

If you had to pick one article to read, which one would it be?

How do we get our students to evaluate sources?

Can you think of engaging ideas/activities to promote Lateral Reading in:

- The science classroom?
- The ELA or SS classroom?
- Other subject areas?

How can students identify biases or establish credibility in a source?

How do you teach students about credibility and when to distrust a site?

Why is this important for developing scientific literacy?

ACKNOWLEDGEMENTS

This research project is supported by the US National Science Foundation (NSF) under Grant Nos. 2201012, 2201013, 2201015, 2201016, 2201017, 2201018, and 2346657. Any opinions, findings, conclusions, or recommendations expressed are those of the authors and do not necessarily reflect the NSF's views.