



Sustainability in the News

OBJECTIVES

Students will:

- Understand the importance of evaluating sources.
- Learn methods for determining whether a source is reliable.
- Analyze sources for reliability.
- Identify a reliable source for a stated purpose.

OVERVIEW

After learning about the importance of evaluating sources, students will use the C.A.R.S (Credibility, Accuracy, Reasonableness, Support) method to help determine whether a source is relevant and reliable. Next, groups will research a given sustainability topic to find an article to present to the class, articulating characteristics that make it reliable.

TIMING

1 session (approximately 45 minutes)

MATERIALS NEEDED

- Device with internet access, one per pair of students
- **Evaluating Sources Using C.A.R.S.** student handout, one per student
- **Credibility WebQuest** student handout, one per pair of students
- **Exit Ticket** student handout, one half-sheet per student

ESSENTIAL QUESTIONS

- Can I identify potential bias in the works of others?
- Can I distinguish between fact, fiction, and opinion?
- How can I find relevant and reliable information about sustainability topics online?

PROCEDURE

Engage

1. Introduce the activity's essential questions. Consider having them written on a board or a large poster sheet. Reinforce that the goal of today's lesson is for students to

feel confident discussing these questions by the end of the session and empowered to be critical consumers of information they find online.

2. In the first few minutes of class, engage students in the upcoming lesson by asking one or more of the following questions:
 - Can you trust the information you find on the internet?
 - How do you know whether you can trust a source of information?
 - Where is the best place to go to find reliable information?

Learn

3. Tell students that with the increased dependency on the internet, social media, and online resources, evaluating sources of information is becoming increasingly important to make sure that the information they are using is true, unbiased, and current.
4. To help students better understand types of bias, share the difference between explicit and implicit bias.
 - Explicit Bias: The person is very clear about their intentions and goals.
 - Implicit Bias: This type of bias often happens with the person being unaware of how it impacts understanding and action.
5. Distribute a copy of the **C.A.R.S.** student handout to each student and guide them through each letter of the acronym. Ask students to read each section and pause after each to clarify and ensure they understand that these are questions they can ask themselves to make sure that the source of information they are looking at is reliable. Encourage students to reflect on whether they use these strategies to assess the information they are reading or researching. After reading, consider a few of the following discussion questions:
 - Why might these strategies be challenging?
 - Do you think most people use these strategies when reading information online? Why?

Apply

6. Distribute one device and **Credibility WebQuest** student handout to each pair of students.
7. Provide students with 5–10 minutes to explore the websites listed and use their **C.A.R.S.** student handout to evaluate whether each is a reliable source.
8. Invite volunteers to share their conclusions about each website and clarify misconceptions as they arise.

Challenge

9. Help bridge this understanding by sharing that new information about our climate and sustainability continues to be updated daily. Explain to students that sustainability means maintaining a certain rate or level. What it means regarding the environment is to avoid using *all* of a natural resource with the goal of keeping the environment balanced. Emphasize

that sustainability means that the current generation works to meet its own needs without affecting the ability of future generations to meet their needs.

10. Help bridge this understanding by sharing that information about our climate and sustainability that is ongoing seems to happen weekly. This new information can sometimes feel overwhelming. One way to feel empowered is to practice verifying and checking information, along with knowing how they can feel confident enough to talk about the issues.
11. Ask students to pick a topic they are curious about related to sustainability. Examples include—but are not limited to—air quality, water resources and use, food waste, agriculture, energy production and use, recycling, greenhouse gas emissions, green buildings. Tell them they are going to practice finding accurate and relevant information on their topic with support.
12. Instruct students to use an approved search engine to find a reliable source on their assigned sustainability topics. They should use their **C.A.R.S.** student handouts as checklists to evaluate their sources and be prepared to articulate the characteristics that they believe make the source reliable.
13. As time allows, give students the opportunity to share their source with the class and explain their reasoning for choosing it as a reliable source. Encourage students to pose questions or share where they struggled to confirm the accuracy of information, or if they had questions about content. One way to strengthen the ability to critically consume information is to slow down, check other sources, and ask questions about what you are reading.

Reflect

14. Distribute an **Exit Ticket** Student Handout to each student and ask them to reflect on the activity's essential question by completing a confidence rating. Collect them as students leave and use responses to determine their level of understanding. Consider taking time in a future session to address misconceptions, highlight key takeaways, or share interesting insights brought up on the tickets.

EXTENSION IDEAS

- Distribute the Family Connection activity for students to bring home to extend their learning and include their families in a meaningful action.
- Provide students the opportunity to complete a research project on their assigned sustainability topic, incorporating a required number of credible sources.
- Work with teachers across content areas to incorporate **C.A.R.S.** credibility evaluation into students' academic experiences.

NATIONAL CONTENT STANDARDS AND FRAMEWORKS

C3 Framework

Gathering and Evaluating Sources

- D3.1.6-8. Gather relevant information from multiple sources while using the origin, authority, structure, context, and corroborative value of the sources to guide the selection.

Next Generation Science Standards

- **MS-ESS3-D.** Global climate change

Common Core State Standards in English

- **CCSS.ELA.W.8** Gather relevant information from multiple sources and assess the credibility of each source.

Science and Engineering Practices

- Analyzing and Interpreting Data
- Engaging in Argument from Evidence

C

Credibility

- Is the author a credible source? How do you know?
- Is the website .edu, .org, or .gov a reliable educational resource?
- Does the source have grammatical errors or dead links?
- If it is a website, is it overrun with ads?
- Perform a quick lateral search of other websites to confirm the information. Is the information similar or different?

A

Accuracy

- Does the source provide a publishing or copyright date?
- Was it published more than five years ago?
- Are there other sources that agree?

R

Reasonableness

- Does the author appear to be biased?
- Does the author try to get you to agree with their opinions?
- Is the information balanced?
- Is there a conflict of interest?
- What is the purpose of the article? (to inform, persuade, sell, etc.)

S

Support

- Does the author support their work with research and/or other sources?
- Can the author's sources be checked? Are they credible?
- Is there a way to contact the author with questions or to verify information?

ARE ALIENS REAL?

Directions: Visit each website and determine if it is a reliable source of information to answer the question. Using your C.A.R.S. checklist, provide two or three reasons to support your determination.

Website	Reliable?	Reasons
https://tinyurl.com/y6a4e556	Reliable Not Reliable	
https://www.seti.org/	Reliable Not Reliable	
https://tinyurl.com/384rudzi	Reliable Not Reliable	
http://www.ufos-alien.co.uk/	Reliable Not Reliable	
https://tinyurl.com/5n87eeen	Reliable Not Reliable	

Rate your confidence in your ability to independently complete each action.

Action	Very Confident	Somewhat Confident	I Still Need Help
I can identify potential bias in the works of others.			
I can distinguish between fact, fiction, and opinion.			
I can find relevant and reliable information online.			



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