

# Is the “Right to Clean Water” Fake News? An Inquiry in Media Literacy and Human Rights

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In 2014, city and state officials switched the source of tap water for the City of Flint, Michigan, from a clean supplier to the polluted Flint River.

Almost immediately, residents of Flint — a majority-black city where 40 percent of the people live in poverty — started complaining about the quality of the water. City and state officials denied for months that there was a serious problem. By that time, supply pipes had sustained major corrosion, and lead was leaching into the water. The city switched back to its original water supply...but it was too late to reverse the damage to the pipes. High blood lead levels are especially harmful to children and pregnant women, and can cause “learning disabilities, behavioral problems and mental retardation.”

Source: Merritt Kennedy, “Lead-Laced Water in Flint: A Step-by-Step Look at the Makings of a Crisis” (NPR, April 20, 2016), [www.npr.org/sections/thetwo-way/2016/04/20/465545378/](http://www.npr.org/sections/thetwo-way/2016/04/20/465545378/).

The residents of Flint were left without usable tap water—or an official source of information they could trust, even as children were being poisoned with lead. Watching this news unfold, the rest of the nation began to wonder about the accuracy of information they were receiving about the quality of the tap water in their own local communities.

The tragic story of Flint has made it increasingly clear that the public needs to know how to evaluate sources of information. All of this is occurring in the age of “fake news,” which heightens our awareness of the challenge of determining veracity. Furthermore, a flood of information can be found at our fingertips 24 hours a day. A quick Internet search can glean information that supports your viewpoint (whatever side you may be on) and crushes the opposition. We might begin to wonder if there is such a thing as “truth,” and whether we can help students wade through the endless muck of false or misleading information to find it.

This article explores how to teach source evaluation to upper elementary students with a focus on the right to clean water that is recognized in a United Nations resolution of 2010, and based on the 1948 Declaration of Human Rights (**Sidebar A**, p. 4)

We begin with a discussion of how and why to evaluate sources with students in the elementary classroom, and we provide a graphic organizer that can be used to guide students through this process. Then, we discuss inquiry activities for the sixth grade that invite students to evaluate sources in order to answer an essential question, “Is safe drinking water a right?”

## Inquiry and the C3 Framework

The C3 Framework<sup>1</sup> describes an Inquiry Arc of Four Dimensions:

1. Developing Questions and Planning Inquiries
2. Applying Disciplinary Tools and Concepts
3. Evaluating Sources and Using Evidence
4. Communicating Conclusions and Taking Informed Action

Each dimension is scaffolded with the goal of students developing the ability to use disciplinary skills and habits of mind independently. Although the brief unit of study presented here incorporates each dimension, the article and lesson focus on

Dimension 3. Listed below are two learning goals from the C3 Framework that we focus on throughout the lesson:

D3.2.6-8. Evaluate the credibility of a source by determining its relevance and intended use.

D3.3.6-8. Identify evidence that draws information from multiple sources to support claims, noting evidentiary limitations.

### The Importance of Evaluating Sources

In 2015, the Stanford History Education Group embarked on 18 months of research during which they examined “civic online reasoning,” defined as “the ability to judge the credibility of information that floods young people’s smartphones, tablets, and computers.”<sup>2</sup> The group collected over 7,800 student responses after administering 56 tasks to middle, high, and university students in 12 states.

One task, administered to middle school students, provided the image of a website homepage and asked students to identify what was news and what was an advertisement. Students struggled with “native advertising,” which tries to sell products through what appears to be a news story. Although about 75 percent of the students could identify traditional advertising, about 80 percent were unable to identify native advertising, even though it was labelled “sponsored content.” The researchers contend that students in elementary school must be explicitly taught this skill.

Another task in that study asked 454 high school students to evaluate the trustworthiness of a photo at [imgur.com](http://imgur.com), a site where anyone can post an image. The photo, titled “Fukushima Nuclear Flowers,” showed a closeup of abnormally shaped flowers. There was no clear statement of who took the photo, when, or where. The students, were asked, “Does this post provide strong evidence about the conditions near the Fukushima

Daiichi Power Plant?” The researchers found, “By and large, students across [high-school] grade levels were captivated by the photograph and relied on it to evaluate the trustworthiness of the post. They ignored key details, such as the source of the photo. Less than 20 percent of students constructed ‘Mastery’ responses, or responses that questioned the source of the post or the source of the photo.” (p. 17)

The trend—revealing students’ lack of critical media literacy—was also seen in a study<sup>3</sup> in which undergraduate students were asked to evaluate a tweet by an advocacy group citing results from its own opinion poll as evidence that gun owners advocate stronger background checks. Only a few students recognized that an advocacy organization might deliver biased results (intentionally or not) if it is conducting its own opinion poll. Only a few students looked more deeply into the group posting the information, or clicked on the links in the tweet. Some searched using the group’s acronym, but not the full name of the group, and so they found little information about it.

This research study provided strong evidence that students need instruction about how to evaluate online information. Simply teaching students to ask questions, locate support, and make conclusions is not sufficient. For these reasons, evaluating sources is a primary focus of this lesson.

A key component of the Inquiry Arc is Dimension 3, “Evaluating Sources and Using Evidence.” Even young elementary students (by the end of second grade) should be able to evaluate whether a statement is a fact or an opinion. By the end of the fifth grade, they should begin to determine the credibility of sources and use evidence from multiple sources. Therefore, these skills must be foundational and taught from early elementary grades.

### How to Teach about Evaluating Sources of Information Online

We contend that source evaluation should be taught within the

#### SIDEBAR A: **Water is a Prerequisite for All Human Rights**

“On 28 July 2010, through **Resolution 64/292**, the United Nations General Assembly explicitly recognized the human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the realisation of all human rights. The Resolution calls upon States and international organisations to provide financial resources, help capacity-building and technology transfer to help countries, in particular developing countries, to provide safe, clean, accessible and affordable drinking water and sanitation for all.”

Source: [www.un.org/waterforlifedecade/human\\_right\\_to\\_water.shtml](http://www.un.org/waterforlifedecade/human_right_to_water.shtml)

#### **Article 25 from the 1948 Universal Declaration of Human Rights**

- (1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.
- (2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

Source: [www.un.org/en/universal-declaration-human-rights/](http://www.un.org/en/universal-declaration-human-rights/)

scope of an inquiry as opposed to stand-alone lessons. Doing so adds authenticity to the lesson because it demonstrates both the need and process of source evaluation when seeking answers to a specific question. To better support teachers and upper elementary students in source evaluation, we adapted a graphic organizer that focuses on specific parts of a website that commonly indicate its trustworthiness. Each row poses a clear question that provides guidance as students prepare to answer the question with “yes” or “no.” The graphic organizer is generic and can be used for source evaluation in a variety of lessons. Although this graphic organizer is a useful tool, please note that source evaluation must occur beyond the scope of a single list.

The teacher should model how to use a graphic organizer with an example or two, while thinking aloud about the evaluation process. Once the students seem comfortable with the tool, they can begin to use it first in small groups, and then independently. After this initial introduction, the graphic organizer could be used during instruction throughout the year to support students’ development of a critical eye when gathering information on the Internet.

After students have eliminated sources that do not seem reliable, the teacher introduces a discussion question, and students can begin gathering evidence to help answer that question. The lesson below follows this sequence.

### *Inquiry Lesson Plans*

This unit of study, designed for upper elementary students, is composed of four or five 30-minute lessons. The students will engage with the compelling question: “Is safe drinking water a right?” The learning objectives are that students will...

- Evaluate whether sources are credible according to their relevance and intended use.
- Analyze credible sources to support claims and note evidence.
- Engage in the inquiry process to answer the compelling question.
- Synthesize information from multiple sources to draw conclusions.

The structure of a typical lesson is to have a whole-group introduction and discussion, followed by an inquiry activity that uses learning stations, and conclude with another whole-group discussion and possibly another activity.

#### *I. Introduction*

Engage students’ interests by asking why water is important. Allow students 5 to 10 minutes to discuss the question and write a response. Next, show students the infographic from

the United Nations, or distribute it to them.<sup>4</sup> (**Sidebar B**, p. 6 in this article)

Allow students another 5 to 10 minutes to discuss and reflect upon the infographic. Do students understand the terms and images in the graphic? Discuss with the class, “How much is a liter of water?” “What do the little numbers, such as (1), (2), and (3) on this graphic signify?” (They are note numbers that lead to references.) “What is a ‘Millennium Development Goal?’”<sup>5</sup> Have students revisit the question, “Why is water important?” Finally, introduce the compelling question: “Is safe drinking water a right?” Explain to students that in order to answer this question, they first need to evaluate what sources on this topic are credible.

#### *II. Evaluating Sources*

At this point in the lesson, students should begin to focus on how to evaluate sources. Distribute the handout “Ten Questions to Test the Reliability of Internet Sources” (**Sidebar C**, p. 7). Full citations to these sources are in **Sidebar D**, p. 8. The other handouts described here appear in the four-page **Pullout** of this issue of *SSYL*. Walk students through the top two websites listed on the “Reliable Sources Worksheet.” (**Pullout P1**) First, model how to evaluate these websites using the graphic organizer, filling in that chart accordingly. Then ask students to go through the rest of the twelve sources listed. They will need one copy of Pullout P1 for each website they evaluate.

After students have explored the twelve sources, help them determine which ones should be used for the inquiry. It may work better for your class to divide students into groups and allow each group to examine one or two sources. As students strive to evaluate each website, continue to refer to the graphic organizer and ask them to state their reasons for deciding whether to use a site, or avoid it, as a source of information. A total of 9 of the 12 sources that students evaluate seem most reliable to use for the inquiry activity. Three of the sources (Aquisana, Food Revolution, and Tapp) should be eliminated by the end of this activity, as they seem less reliable than the others.

#### *III. Inquiry with Stations, Worksheets, and Discussion*

After determining which sources should be used when discussing the compelling question, introduce the inquiry activity by reminding students of that question: “Is safe drinking water a right?” Explain that students will be addressing three supporting questions, but they will revisit the compelling question after each one. Remind them to continue to evaluate the perspective of the sources as they gather evidence. This part of the tasks can be completed at the various stations, or discussed with the whole class.

Three inquiry learning stations each have a handout to guide student work. (**Pullouts P2, P3, and P4**) As students evaluate each supporting question, they should fill out that station’s

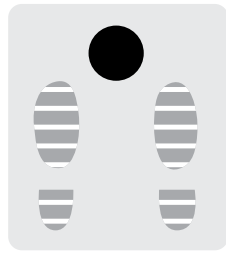
## SIDEBAR B



In **2010**  
the UN declared  
access to clean water  
and sanitation  
a Human Right



Millennium Development Goal  
**7** calls to “Halve, by 2015,  
the proportion of the population  
without sustainable access  
to safe drinking water  
and basic sanitation”



**2.6**  
billion people lack  
access to basic  
sanitation (3)



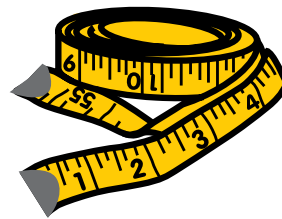
**884**  
million people  
in the world do not have  
access to safe  
drinking-water (3)

- (1) According to the World Health Organization (WHO)  
(2) According to the United Nations Development Programme (UNDP)  
(3) According to the WHO/UNICEF Joint Monitoring Programme (JMP)

# The Human Right to Water



Between  
**50 and 100**  
liters of water per person  
per day are needed  
to ensure most basic  
needs (1)



The water source  
has to be within  
**1,000**  
meters from home (1)



Water cost should  
not exceed **3** per  
cent of household  
income (2)



Collection time  
should not exceed  
**30** minutes (1)

UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC)

graphic organizer. The three supporting questions are

- What causes drinking water to become unsafe?
- Whose responsibility is it to provide safe water for residents?
- Do we have safe tap water in the United States?

As they explore the sources, students should write notes in the “evidence and support” box. Each station is set up in a similar fashion. Give students time to explore each resource at each station. They can discuss the resources in small or large groups. Having reviewed the sources at a station, they should write a conclusion to address the supporting question based on their findings. After discussing what they learned from the sources and each supporting question, ask them the compelling question again

and have them revise their hypothesis based on their findings.

Finally, when they have addressed each of the supporting questions, students should complete the “Inquiry Graphic Organizers,” where they synthesize their findings for each supporting question into a final conclusion. After completing those handouts (Pullout 2, 3, and 4), bring the students together for a whole-class discussion of the supporting and compelling questions, as well as the credibility of their findings. You might ask questions such as: “What makes you think access to drinking water is or is not a right?” “How did the credible resources help you answer the question?” “Do you think your answer would have changed if you had used non-credible or untrustworthy sources?” “Why or why not?”

### Taking Informed Action

The final aspect of the Inquiry Arc is “Taking Informed Action.” After students have discussed the questions above, ask: “What

## SIDEBAR C: Ten Questions to Test the Reliability of an Internet Source

As you study one website at a time, select “Yes” or “No” to these 10 questions. The more “Yes” answers, the more reliable the website may be. The more “No” answers, the less reliable it probably is. Write the name and URL of the website here:

QUESTION	YES OR NO
1. Does it look high quality? If there are a lot of stolen images, ads, or looks unprofessional, it might be fake.	
2. Is it a reputable news outlet? If the news outlet is well-known, reputable, and trust-worthy, like NPR, CNN, or BBC, it is likely true. If you have never heard of the news outlet, look for more information online. Keep in mind, every news outlet has a perspective.	
3. Is there an “About Us” section and contacts? Reputable news outlets will give you background information such as policy statements and email contacts. This helps readers know who is publishing the article and contact them if they have questions. It shows that they stand behind their news.	
4. Is the author trustworthy? Look for the author’s name(s). Real news outlets will provide the name and you should be able to search for author information online. Fake news sources often do not include author names.	
5. Is the article fair, balanced, and reasonable? Although we knew that every article presents a unique perspective, fake news often tells one side of the story, sounds angry, or makes outrageous claims.	
6. Is the article well-written? Reputable news sources only publish articles that have proper punctuation, spelling, and grammar. Misspelled words, ALL CAPS, or lots of punctuation often signal fake news. (Example: WHAT !?!?!)	
7. Are the sources identified and reliable? Consider who provided information for the author. If much of the article relies on anonymous, unreliable, or uncited sources, it is likely fake.	
8. Are other news outlets writing about this? Usually, when a story breaks, lots of news outlets write about it. If you can’t find any other stories about this topic, it is likely fake.	
9. Is the author’s/publisher’s purpose to inform the reader? Informational pieces, such as news stories, do not attempt to sell a product. For example, an article about the dangers of dogs should not try to sell dog leashes.	
10. Do fact-checkers think it is true? If you are still unsure, visit fact-checking websites like <b>FactCheck.org</b> , <b>Snopes.com</b> , and <b>PolitiFact.com</b> .	

Adapted from: [blogs.proquest.com/wp-content/uploads/2017/01/Fake-News1.pdf](https://blogs.proquest.com/wp-content/uploads/2017/01/Fake-News1.pdf)



types of action can we take as a class?” When planning activities, try to allow the project to be as student-driven as possible. Ask students what they think the biggest needs are, both locally and elsewhere. Then, explore ways they might make a difference. Here are some ideas to discuss with your principal, and then consider doing with your students:

- Write your local health officials to obtain information about the quality of water in your school or community. You could begin by looking at a water bill to find out the name of the agency that supplies water to your school.
- Join a campaign to help make fresh drinking water available for people in a specific community overseas. For example, The Water Project has “in-country teams that build water wells, sand dams, spring protections, and other water solutions.” Visit <https://thewaterproject.org/why-water/solving-the-water-crisis>
- Design a school-wide public service announcement (PSA) campaign about the necessity of clean drinking water for good health. The Pacific Institute, for example, has a campaign to make drinking fountains more available in public spaces. Visit <https://pacinst.org/make-public-drinking-water-fountains-great/>.
- Trace the source of your local water. Is there a reservoir, lake, or water tower? What local waterways provide the water to fill those large “vessels”? Then join a clean-up day at a local stream, in collaboration with a conservation organization. Many Sierra Clubs, for example, sponsor stream cleanups in counties across the country. Find a local chapter by searching on “Sierra Club” and the name of your state or county. As you remove litter from the stream, count how many plastic bottles were discovered by the volunteers cleaning the banks.<sup>7</sup>

### **SIDEBAR D: The Safety of Tap Water (Teacher Key of Sources and Citations)**

These are the full citations to the “sources to evaluate” on Pullout P1, listed in the order that they appear on that student handout. Students evaluate all thirteen websites, and should, in conclusion, judge these three to be less reliable: (1) Aquasana.com; (5) Food Revolution.org; and (10) Tapp.org.

1. Aquasana (n.d.). “Is Your Tap Water Safe from Unregulated Contaminants? What You Need to Know,” [www.aquasana.com/info/education/is-your-tap-water-safe](http://www.aquasana.com/info/education/is-your-tap-water-safe).
2. M. Kavanagh, “5 Nonprofits that Make Clean Water a Global Reality” (March 8, 2019), [www.classy.org/blog/5-nonprofits-make-clean-water-global-reality](http://www.classy.org/blog/5-nonprofits-make-clean-water-global-reality).
3. Environmental Protection Agency, “Healthy Schools, Healthy Kids” (EPA, 2017), [19january2017snapshot.epa.gov/schools\\_.html](http://19january2017snapshot.epa.gov/schools_.html).
4. EPA, “Basic Information about Your Drinking Water” (EPA, 2018), [www.epa.gov/ground-water-and-drinking-water/basic-information-about-your-drinking-water](http://www.epa.gov/ground-water-and-drinking-water/basic-information-about-your-drinking-water). Suggested links: (A) “Basic Information” and (B) “Safe Drinking Water Act.”
5. L. Oberst, “‘Erin Brockovich’ Carcinogen Found in the Drinking Water of more than 75% of Americans: Is Your Water Toxic?” (FoodRevolution.org, September 23, 2016), [foodrevolution.org/blog/food-and-health/chromium-6-in-drinking-water](http://foodrevolution.org/blog/food-and-health/chromium-6-in-drinking-water).
6. Koshland Science Museum, “Safe Drinking Water is Essential” (American Association for the Advancement of Science, 2007), [www.koshland-science-museum.org/water/html/en/Overview/Why-is-Safe-Water-Essential.html](http://www.koshland-science-museum.org/water/html/en/Overview/Why-is-Safe-Water-Essential.html).
7. S. Brink, “What Makes Water Unsafe? Not the Color, Taste, or Smell: #Worldwaterday.” (National Public Radio, March 22, 2016), [www.npr.org/sections/goatsandsoda/2016/03/22/471408630/what-makes-water-unsafe-not-the-color-taste-or-smell](http://www.npr.org/sections/goatsandsoda/2016/03/22/471408630/what-makes-water-unsafe-not-the-color-taste-or-smell).
8. M. Fox, “Lead in water: Study shows many schools have far too much” (NBC News, January 9, 2019), [www.nbcnews.com/health/health-news/lead-water-study-shows-many-schools-have-far-too-much-n956851](http://www.nbcnews.com/health/health-news/lead-water-study-shows-many-schools-have-far-too-much-n956851).
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10. Tapp Water, “Can I drink the U.S. tap water?” (TappWater, 2019), [tappwater.co/us/can-i-drink-us-tap-water](http://tappwater.co/us/can-i-drink-us-tap-water).
11. Unilever, “Providing Safe Drinking Water” (Unilever, 2019), [www.unilever.com/sustainable-living/improving-health-and-well-being/health-and-hygiene/providing-safe-drinking-water/](http://www.unilever.com/sustainable-living/improving-health-and-well-being/health-and-hygiene/providing-safe-drinking-water/).
12. United Nations, “The Human Right to Water and Sanitation” (U.N., 2014), [www.un.org/waterforlifedecade/human\\_right\\_to\\_water.shtml](http://www.un.org/waterforlifedecade/human_right_to_water.shtml).



The opening page of “The Full Picture of Our Lead Problem,” a colorful graphic resource with drawings by Perrin Ireland, published by the Natural Resource Defense Council (April 25, 2016), with words by Perrin Ireland and Brian Palmer, at [www.nrdc.org/stories/full-picture-our-lead-problem](http://www.nrdc.org/stories/full-picture-our-lead-problem).

## Conclusion

This inquiry is designed for upper elementary students, but can be adapted to accommodate different ages or needs. For younger learners, teachers might select sources with simpler text or use the sources as guided reading passages to allow for more student support. Furthermore, when evaluating the sources, the C3 Framework only requires younger students to focus on “fact or opinion,” rather than the in-depth analysis presented in this lesson. Additionally, teaching the lesson in small groups, as a whole class, or including resources in a variety of media, languages, and formats allows further adaptation. Teachers can provide more (or less) support to the exploration of resources, discussion, and conclusions, depending on student needs, abilities, and prior knowledge.

The unit can be integrated with language arts and science skills and content. Throughout the inquiry students are critically reading to gather information and synthesizing findings to write conclusions. The Socioscientific Issues (SSI) framework asks students to examine current social issues within their scientific contexts.<sup>6</sup> In this case, students could learn about public water filtration and sources, the health implications of water quality, or the impacts of pollution on our water supply.

We have developed the lesson to be easily adaptable and integrative in order to support teachers as they help students develop critical media and source evaluation skills. The lesson

presented here asks students to use these skills in an authentic way to explore a critical topic: the right to clean water. 🌍

## Notes

1. NCSS, *The C3 Framework for Enhancing Studies State Standards: Guidance for Enhancing the Rigor of K-12 Civics, Economics, Geography, and History* (Silver Spring, MD: NCSS, 2013).
2. S. Wineburg, S. McGrew, J. Breakstone, and T. Ortega, “Evaluating Information: The Cornerstone of Civic Online Reasoning,” *Stanford Digital Repository* (2016), [purl.stanford.edu/fv751yt5934](http://purl.stanford.edu/fv751yt5934).
3. “Teaching a Stealth Information Literacy Class on Reading *The New York Times*: Native Ads” (Depauw University), [libguides.depauw.edu/c.php?g=685410&p=4868178](http://libguides.depauw.edu/c.php?g=685410&p=4868178).
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5. “UN Millennium Development Goals,” [www.un.org/millenniumgoals/](http://www.un.org/millenniumgoals/).
6. D. Zeidler, T. Sadler, S. Applebaum, and B. Callahan, “Advancing Reflective Judgement through Socioscientific Issues,” *Journal of Research in Science Teaching* 46, no. 1 (2009): 74–101. doi.org/10.1002/tea.20281.
7. Steven S. Lapham, “Bottled or Tap? A Controversy for Science, Economics, and Society,” *Social Education* 73, no. 5 (September 2009): 236–239.

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