

### Lesson Overview

How many days are needed to teach this lesson?	4
Grade Level(s)	10/11
Subject(s)	Intro to Journalism
Lesson Summary	In this lesson, students will explore the dangers of lead exposure in the air and in water. They will first read and analyze the article " <a href="#">Living With the Risks of Childhood Lead Exposure: A Day in the Life.</a> " Then, they will measure the amount of lead in the air and water at various locations within their school. They will then interview multiple people in the school about their awareness of the dangers of lead exposure and whether they are concerned with the amount of lead in the school's air and water. Finally, students will create an action plan to address this issue.
Standards	<p><b><a href="#">COMMON CORE STANDARDS</a></b></p> <p><b>Reading Standards</b> STANDARD 1: Read closely to determine what the text says explicitly/implicitly and make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</p> <p>STANDARD 8: Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.</p> <p><b>Writing Standards</b> STANDARD 1: Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.</p> <p><b>Research Standards</b> STANDARD 6: Conduct research based on focused questions to demonstrate understanding of the subject under investigation.</p> <p>STANDARD 7: Gather relevant information from multiple sources, assess the credibility and accuracy of each source, and integrate the information in writing while avoiding plagiarism</p>
Pulitzer Center news story	<a href="#">"Living With the Risks of Childhood Lead Exposure: A Day in the Life."</a> by Michael Coren for Quartz

Notes on Context

My students come from various neighborhoods and boroughs of New York City, representing a diverse group of ethnicities. It will be interesting to see if the amount of lead in the air and water in their neighborhoods differs and what the reasons for this difference might be.

## Lesson Plan

### Lesson Objectives

By the end of this lesson, students will be able to...

- Analyze the effects of lead exposure on health, particularly in young people
- Measure and analyze levels of lead in school air and water using scientific tools and methods
- Conduct interviews to assess awareness and concerns about lead exposure among school community members
- Develop and present an action plan to address lead exposure in their school environment

### Focus Pulitzer Center News Story/Stories

["Living With the Risks of Childhood Lead Exposure: A Day in the Life."](#) by Michael Coren for Quartz

### Additional Stories

["Evanston's Lead Pipes Called an Environmental Justice Concern,"](#) by Adina Keeling for *the Evanston RoundTable*

["The Woman Risking Her Life to Save a Village from Lead Poisoning."](#) by Deborah Bloom for CNN

["Toxic Inaction: Oakland's Lead Funding Languishes as Residents Live With Serious Health Risks."](#) by Jasmine Aguilera and Cassandra Garibay for *El Timpano*

["9/11 Exposures,"](#) World Trade Center Health Program, *Centers for Disease Control and Prevention*

["9/11's long legacy: How the attack on the World Trade Center is still claiming lives."](#) by Cindy Augustine for *BBC*

### Lesson Steps

#### Day 1: Introduction to Lead Exposure and Article Analysis

##### 1. Hook/Introduction (15 mins):

- a. Begin with a class discussion: Ask students what they know about lead exposure and where it might be found in their environment. Briefly explain the health risks associated with lead, particularly for young people.
- b. Have students look at infographics [[.docx](#)][[.pdf](#)] that show different social determinants of health (education, job, transportation access) and respond to the listed questions in small groups or whole groups.

##### 2. Reading & Analysis (30 mins):

- a. Distribute copies of "[Living With the Risks of Childhood Lead Exposure: A Day in the Life.](#)" and the accompanying worksheet [[.docx](#)][[.pdf](#)]
- b. Have students read the article independently, highlighting key points on the effects of lead on health, behavior, and daily life.

##### 3. Class Discussion (15 mins):

In small groups or as a whole class, discuss the article by responding to the

questions below.

- What surprised you about the effects of lead exposure?
- How might lead exposure impact a student's learning and life experiences?
- Is this an issue that could affect your community? Why or why not?

### Day 2: Lead Testing in the School Environment

1. **Safety Briefing (10 mins):** Explain the importance of safety when using lead testing kits. Review instructions for the kits, emphasizing the importance of accuracy and cleanliness during testing.
2. **Lead Testing Activity (30 mins):**
  - a. Divide students into small groups and assign them various locations around the school (e.g., water fountains, cafeteria sinks, bathroom sinks, windowsills, hallways).
  - b. Provide each group with a testing kit and instructions on how to collect samples from both water sources and air (following manufacturer instructions for safety).
3. **Data Recording (20 mins):** After testing, groups should record their findings in a shared document, noting the location, type of test (water or air), and results.

### Day 3: Interviews and Data Analysis

1. **Interview Preparation (15 mins):** Use the template [[.docx](#)][[.pdf](#)] to guide students on developing interview questions that will help assess the school community's awareness and concerns about lead exposure.
  - a. Discuss the following:
    - What's the point of an interview?
    - What makes an interview interesting?
    - What ethics are involved in interviewing?
    - Truly listening with empathy statements vs. Q&A sessions
    - Explore this article from "[How to Talk to People, According to Terry Gross,](#)" on interviewing, or use this article to prepare for your support of students
  - b. Some sample questions include:
    - Are you aware of the health risks associated with lead exposure?
    - How concerned are you about potential lead exposure in our school?
    - What actions would you suggest to minimize or prevent lead exposure?
2. **Conducting Interviews (30 mins):** Have students interview a variety of school community members, including students, teachers, administrators, and maintenance staff.
3. **Recording Responses (15 mins):** Each group should summarize their interview findings, noting common themes, concerns, and levels of awareness among the interviewees.

### Day 4: Developing and Presenting an Action Plan

1. **Analyzing Data & Developing Solutions (20 mins):**
  - a. Using their findings from the lead testing and interviews, each group should identify key concerns or areas where awareness is lacking.
  - b. Guide students to brainstorm possible solutions or actions the school could take to reduce lead exposure.

2. **Creating an Action Plan (20 mins):** Each group should outline an action plan that includes:
  - A summary of the problem (levels of lead found, awareness levels)
  - Specific actions to reduce or address lead exposure in the school
  - Recommendations for raising awareness among students and staff
  - Suggestions for regular testing or preventive measures
3. **Presentations (20 mins):** Have groups present their action plans to the class. Encourage students to provide constructive feedback, focusing on feasibility and effectiveness.
4. **Reflection & Wrap-Up (10 mins):**
  - a. Conclude with a reflective discussion:
    - What was the most surprising part of this activity?
    - How can students advocate for a healthier school environment?
  - b. Discuss next steps if students wish to share their findings with the school administration.

### Performance Task

Using the findings from the lead testing and interviews, students should present on their key concerns about both lead levels in their community and awareness of the lead issue in their community.

#### Enrichment Performance Task(s):

Students craft a detailed exposè in the school newspaper discussing the issue of lead in the air and in the water in the school environment

### Assessment

#### Formative Assessment(s):

- Participation in discussions and activities
- Completeness and accuracy of lead testing and interview notes

#### Summative Assessment(s)

Create and share a rubric evaluating the following tasks...

- Student analysis and thoughtfulness in action plan presentations
- Written articles

## Teacher Closing Reflection

### Tell us about you, your students, and your community.

I work in a small high school in the financial district on the lower tip of Manhattan. Students commute to the school from all five boroughs of NYC. Students in the school come from a diverse range of backgrounds. I have been teaching ELA in the school for three years. In the past three years, my colleague and I have started an after-school newspaper club where we would write and publish stories on a website. This year, I am teaching two sections of Journalism class. This is my first year teaching Journalism. The students are mostly native speakers, although there are a few for whom English is not their first language. The students are a mix of 10th and 11th graders.

### Tell us about your lesson.

After reading "[Living With the Risks of Childhood Lead Exposure: A Day in the Life.](#)" I noticed some situational commonalities that I felt would resonate with my students. The article deals with a community in proximity to an airport. In addition, most of our school's water fountains were not available for use until this year due to toxins found in the water. I wanted my students to experience the process of investigative journalism and what they, as journalists, could do to help their community be better informed and prepared to take necessary action. I also wanted this learning experience to be hands-on. We learned about lead testing and then went out to test for lead in the water and in the paint of rooms and hallways. Students also interviewed teachers, administrators, staff, and other students to get their perspective on how safe our school was from lead exposure. Students then discussed what the school members should do to ensure the school remains safe from toxic exposure.

	A	B	C	D	E
1	<b>Group members names</b>	<b>Location(floor, room number, place tested)</b>	<b>Paint/Water</b>	<b>Insert Picture</b>	<b>Did your test detect lead?</b>
2	Melody , Sung Ho , Issac	13th floor	water		No lead
3	Alivia, Daliah, Genesis, Jacob	12th floor	water		nope
4	Madeline, Katerine, Mia, Sean, Jac	10th floor	water		Yes
5	Alexandra, Farida, Maritza, Ayden	7th floor	water		No lead detected.
6	Ali Meraj, Yoni, Anthony	8th floor	Paint		No lead detected.
7	Jaden	9th floor	Paint		
8	NatalieS	8th and 9th floor	paint		
9	Nazifa	9th floor	water		
10	William	8th floor	Paint		
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Image 1 of 2 of lead testing data.

### Tell us about what your students learned while engaging with the lesson.

- Students learned about the Social Determinants of health and how they impact an individual's health in the future.
- Students learned how to read and interpret an infographic.
- Students learned how to read and analyze an article. They learned how an article is organized.
- Students learned how to reach out to an individual to request an interview and how to create questions

for the interview.

- Students learned how to interpret results and how to be careful about drawing conclusions based on a limited number of results.
- Students learned to conduct background research on their topic and to incorporate that knowledge in their writing. They learned how to take their story idea and flesh it out in detail. They learned how to write a lead and nut graph for a story. Students learned how to incorporate quotes in their story.

The most important thing that they learned is to dig deeper into an issue. To not just skim the surface but to uncover issues that no one wants you to know about. To ask uncomfortable questions. To pursue and persist. To use their platform as journalists to inform the community. To write without bias.

As one of the students wrote in her reflection, "... I have learned that the staff and students mainly have issues with lead because of the water fountains. Many students forget to buy or bring their water bottles, which causes them to worry mostly about the lead in water since they need it to stay hydrated." This shows that the student understands the larger issue, which is that possible lead in water fountains can lead to students and staff not drinking water and not being hydrated. Also, not everyone is able to bring a water bottle or have access to clean water.

Group members names	Location(floor, room number, place tested)	Paint/Water	Result(insert picture)	Did your test detect lead?
Lauren, Chloe, Aliana, Jordalys, Brianna, Jan Carlos, Jeremiah	9th floor and 10th floor	Paint/Water		water and paint has no lead.
Gisleini, Emma, Misael		3 Water		No there is no lead within the water.
Mohammed, Fernando, Reggie, Nat, Thomas	12th floor	Paint		Paint has no lead.
Kelly, Leticia	11 floor	Water		water has no lead
Griselys Naelle	11th floor	Paint		There is slight evidence of lead
Samara	7th	Water		My test did not detect lead.

Image 2 of 2 of lead testing data.

**Tell us about what you learned by creating and teaching this lesson.**

I have learned that students really enjoy hands-on learning. Everyone was engaged when students had a chance to test the paint and water for lead. All students wanted to see what their results meant, which shows that it is important to balance theoretical knowledge with specific actions.

I think in the future I would want to maybe read and analyze an extensive feature article to model what goes into the process, but then have students write articles on topics that interest them. Because all the students were focused on the topic of lead exposure, it created issues with students basically writing the same articles and doing the same research as everyone else. Also, students would interview the same teachers (science teachers) for their articles.

Because we didn't have positive test results for lead in our school, it seemed that the story would be a

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non-starter.. It felt at times as if we were creating a story where no story exists. Toward the end of the learning experience, I pivoted to allow students to choose their own story topic that was inspired by the process we went through with lead testing, and it went a lot better once students were writing on topics in which they had an interest.

About Vadim Feyder:

Vadim Feyder is an ELA educator. His 4-day lesson plan reached 50 10th and 11th-grade students at Leadership and Public Service High School in New York City, New York.