



project **WET**  
WATER EDUCATION TODAY

## A Plume Problem (aka A Grave Mistake)

### Tips for Educators Using this Lesson at Home

*Note: This lesson is called “A Grave Mistake” in the Project WET Curriculum and Activity Guide 2.0. We renamed it “A Plume Problem” for this student self-paced lesson to prevent ruining the discovery moment of the lesson.*

This lesson is correlated to Grades 5-12 and recommended for middle school and high school aged children. The lesson is correlated as written in the *Project WET Curriculum and Activity Guide 2.0*. Correlations are meant to show how activities support a standard, performance expectation and/or three-dimensional learning. NGSS correlations are provided in detail in a separate document to demonstrate how the content of this activity provides a three-dimensional learning experience. Common Core State Standards correlations for grade spans assume that teachers will be familiar with the standards for their respective grade level(s) and be able to apply them judiciously.

**Summary:** Students will analyze data to solve a mystery and identify a potential polluter by:

- analyzing data to trace the flow of contaminants in groundwater.
- researching historical practices to solve today’s water issues.

**Common Core:** *ELA:* RH.6-12.7; RST.6-12.4; SL.6-12.1; SL.6-7.2; *Math:* 5.G.2

**NGSS:** 5-ESS3-1, MS-ESS3-3, MS-LS2-4

1. Instruct students to go through the digital lesson at their own pace. They must complete the Student Copy Page Community Map as they move through the training. You may also want to ask them to take pictures or video logs of the activity as they complete it.
2. Students can download the Community Page and the assigned [Smithsonian article](#) during the digital lesson. If they cannot print at home, they can still complete the lesson within the online course.
3. Give students the link to the digital lesson: <https://lessons.projectwet.org/plume-problem/>

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## Home Water Lessons

4. Students will go through the lesson at their own pace. They will print or photograph the proof of completion at the end of the course to submit to you. They also have the option of saving their results which they can download and turn in.
5. Engage students in online interactive discussion after the lesson. Were they surprised by the source of pollution? Discuss how not having enough data can lead to the wrong conclusions.
6. What did students learn in their research of other historical practices that have led to contamination of water?

### **Tips for Parents Using this Lesson at Home**

1. Give your child the link to the digital lesson: <https://lessons.projectwet.org/plume-problem/>
2. Allow them to go through the digital lesson at their own pace. They should print and complete the lesson on the Community Map as they move through the training.
3. You and your child can download the student page Community Map during the digital lesson. If you cannot print at home, you can still complete the lesson.
4. Afterwards, discuss if they were surprised by the source of pollution? How can not having enough data lead to the wrong conclusions.
5. What did your child learn in their research of other historical practices that have led to contamination of water?