

Fracking: Lesson Plan

Topic	
Hydraulic fracturing, best known as fracking, is a technique where a liquid mixture of water, chemicals, and sand is injected at high pressure into rocks, such as shale. This causes cracks to form in the rocks, releasing gas and oil to the surface where they can then be collected. The process is known to have adverse effects on the water supply and quality, air quality, and more.	
Possible subjects/classes	Time needed
Environmental Studies, Public Policy/Civics, Government, US History	30-45 min

Objective: <i>What will students know/be able to do at the end of class?</i>
Students will be able to... <ul style="list-style-type: none"> ● Explain the general process of fracking. ● List some of the growing concerns surrounding the practice.
Key Concepts & Vocabulary
Fossil fuel industry, horizontal drilling
Materials Needed
Worksheet, Student Internet Access, Poster-making materials
Before you watch
Turn & Talk: How are crude oil and natural gases collected? What do you think are the impacts of such collection methods on the environment?
While you watch

Complete the *While You Watch* section of the Worksheet.

After you watch/discussion questions

1. Do you think fracking should be more heavily regulated or outlawed? Why?
2. Why do you think current fracking regulations are so lacking despite the harm fracking has helped cause?
3. What are some alternatives to fracking? How do you think they compare against fracking?

Activity Ideas

- **Research It!:** Have students get into groups of three or four and then research different fracking laws. Teachers can either have groups look into different fracking laws at the global or state levels depending on the instructor's preference. look into different fracking laws that exist. Some state examples are Pennsylvania, Texas, Oklahoma, Ohio, New York, and Maryland. Some nations with different fracking laws are Canada, the US, the UK, Ireland, Scotland, and Germany. Assign each group one state or nation and have them investigate its fracking regulations. Afterward, have groups share their research findings with the class.
- **Poster PSA:** Have students work with a partner to make a poster informing voters about the dangers of fracking. Posters should list three specific negative effects of fracking and one concrete action their audience can take to help remedy the situation.
- **Journal Entry:** What's one stricter regulation you think needs to be implemented if a government is to allow fracking to occur? Have students independently write a short one to two page reflection on the prompt. Students should provide strong reasoning and evidence to support their claim.

Fracking: Worksheet

While You Watch: Fully and succinctly answer the following questions in a short phrase or sentence.

1. What's the name of the drilling process that usually takes place before fracking occurs?
2. What is fracking fluid used to do?
3. Name two specific environmental concerns surrounding the fracking process.

Short Answer: Fully and succinctly answer the following questions in two to four sentences.

1. Briefly define fracking.
2. Why is fracking used?
3. List four environmental impacts of fracking.

4. Which of the above listed impacts do you find most concerning? Why?

Essay Questions: Fully answer the following questions in five to eight sentences.

1. Why do you think there are so many loopholes and exemptions for fracking in US regulations? Provide your reasoning.
2. What do you think about the fracking debate? Defend your answer.