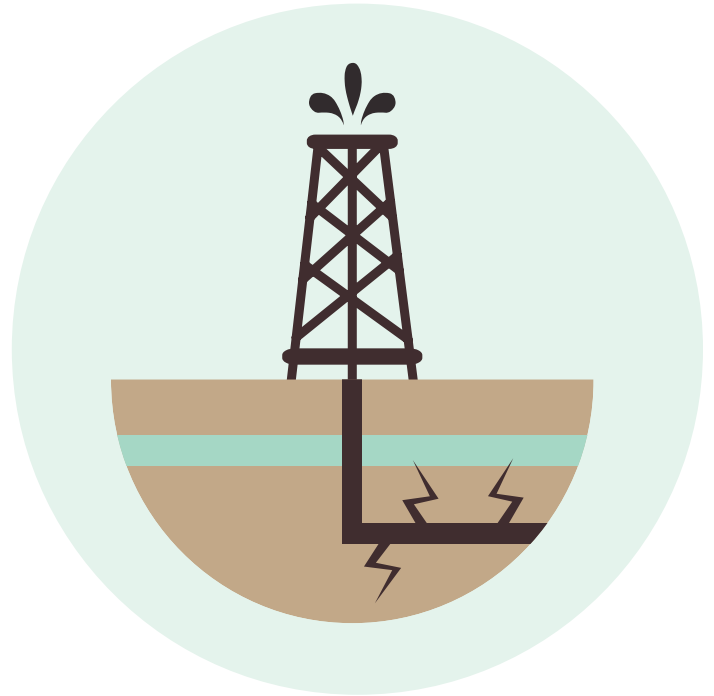


Fracking

"We are the Saudi Arabia of natural gas." —President Barack Obama



Pre-Reading

A. Warm-Up Questions

1. Do you know what "fracking" is?
If not, what do you think it is (based on the image)?
2. What are fossil fuels?
3. What's the difference between "clean energy" and "dirty energy"?

B. Vocabulary Preview

Match up as many words and meanings as you can.

Check this exercise again after seeing the words in context on page 2.

- | | |
|----------------------|---|
| ___ 1. hydraulic | a) to remove |
| ___ 2. extract | b) a deep opening under the ground |
| ___ 3. well | c) a time expression that describes something that was true in the past |
| ___ 4. used to | d) to disallow |
| ___ 5. controversial | e) replacing itself naturally |
| ___ 6. ban | f) related to the movement of water and pressure in a pipe |
| ___ 7. renewable | g) causing disagreement |
| ___ 8. thanks to | h) due to |
| ___ 9. get used to | i) accessible |
| ___ 10. recoverable | j) to become accustomed to |

Reading

FRACKING

Are we ripping the earth apart?

1. Fracking, technically referred to as “**hydraulic** fracturing,” is a technique for **extracting** fossil fuels from rock that is buried deep in the earth. First, a large **well** is drilled near a source of gas or oil. Then a mixture of water, sand, and chemicals is pumped into the well. This creates breaks in the rock where the fuel is located. The enclosed fuel is released, recovered, processed, and sold. Fracking is primarily used to recover natural gas.
2. While the technique has been around since the 1940s, governments **used to** think fracking was too expensive. Building roads, digging wells, transporting materials, and disposing of chemicals are all costly procedures. Fracking has become a booming industry in the US in recent years because the fossil fuels that are easy to access have been used up.
3. Fracking is **controversial** because of the environmental hazards. Firstly, fracking uses a lot of water! One well requires up to five million gallons of water. In addition, chemicals used in fracking pose a risk to air and groundwater. Nobody knows for sure what the long-term effects of these chemicals will be to humans. Traffic from tanker trucks also reduces air quality, and this is one of the primary concerns of environmentalists.
4. Many environmentalists think fracking ought to be **banned** worldwide. *Fractivists* want governments to focus on developing long-term energy solutions. Clean, **renewable** energy solutions include wind, water, and solar energy. But not everyone is opposed to the technique. **Thanks to** fracking, Americans are **getting used to** cheaper energy rates. Some studies suggest that there is enough **recoverable** natural gas to power America for the next 100 years.

Comprehension

Discuss these questions in pairs, and write the answers in your notebook.

1. What is fracking? Use your own words to describe this technique.
2. Why is fracking a booming industry in the US now?
3. How might fracking pose health risks to humans?
4. What word is used to describe people who are strongly against fracking?
5. How has fracking changed the US economy?

Vocabulary Review

Complete the sentences using vocabulary from page 1.
You may need to change the word forms.

1. Some environmentalists think disposable diapers should be _____ .
2. Humans are _____ hearing about severe storms and natural disasters.
3. _____ recycling programs, plastics are kept out of landfill sites in many countries.
4. Hundreds of tanker trucks carry water to each gas _____ .
5. Wind is an example of a _____ energy source.
6. The _____ of fossil fuels became a booming industry during the Industrial Revolution.

Grammar Review

USED TO

A. Reference

used to + base verb

The past expression “used to” means *something was performed repeatedly in the past (but not anymore)*. It may also mean *something was true in the past, but it is not true anymore*.

- We **used to** pay less for gas.

be used to + noun or gerund (-ing verb)

get used to + noun or gerund (-ing verb)

The expression “be used to” means *to be accustomed to*, while “get used to” means *to become accustomed to*.

- We **are used to** the noise from the drilling.
- We will **get used to** driving around the construction site.

Note:

be used (passive) + infinitive form

The verb “use” in the passive form becomes “be used” and should not be confused with the forms to the left.

- The trucks **are used** to deliver water to the site. (*Delivering water* is the main function of the trucks.)

B. Complete the Sentences

Fill in the blanks with the correct expression.

- We _____ the pollution in our city.
(are used to / used to)
- I used to _____ to work, but now I ride my bike.
(drive / driving)
- Fracking _____ be banned in my country.
(used to / is used to)
- The mixture _____ create pressure in the well.
(is used to / use to)
- We are _____ hearing the drilling.
(getting used to / use to)
- The president _____ care about the environment.
(used to / is used to)

Grammar Review cont.

C. Write Examples

Try writing your own examples of each form of “used to.”

Discussion

1. Why might people in rural communities be more opposed to fracking than people in urban centers?
2. What fracking regulations should governments impose?
3. Why do you think the author chose this subtitle for the reading?
What other subtitles can your class come up with?

Critical Thinking

Is it possible to estimate how much energy a country will use in the next 100 years? What factors must be taken into account?

Listening

Fill in the blanks as you listen to the recording.

FRACKING

Are we ripping the earth apart?

1. Fracking, technically referred to as “hydraulic fracturing,” is a technique for _____ fossil fuels from rock that is buried deep in the earth. First, a large well is drilled near a source of gas or oil. Then a mixture of water, sand, and chemicals is _____ into the well. This creates breaks in the rock where the fuel is located. The enclosed fuel is released, recovered, processed, and sold. Fracking is _____ used to recover natural gas.
2. While the technique has been around since the 1940s, _____ used to think fracking was too expensive. Building roads, digging wells, transporting materials, and disposing of chemicals are all costly procedures. Fracking has become a _____ industry in the US in recent years because the fossil fuels that are easy to access have been used up.
3. Fracking is controversial because of the environmental _____. Firstly, fracking uses a lot of water! One well requires up to five million gallons of water. In addition, chemicals used in fracking _____ to air and groundwater. Nobody knows for sure what the long-term _____ of these chemicals will be to humans. Traffic from tanker trucks also reduces air quality, and this is one of the primary concerns of environmentalists.
4. Many environmentalists think fracking ought to be banned worldwide. *Fractivists* want governments to focus on developing long-term energy solutions. Clean, _____ energy solutions include wind, water, and solar energy. But not everyone is opposed to the technique. Thanks to fracking, Americans are getting used to cheaper energy rates. Some studies suggest that there is enough _____ natural gas to power America for the next 100 years.

Answer Key

LESSON DESCRIPTION:

In this lesson, students read about the controversial technique known as “fracking.” The lesson includes vocabulary review exercises, comprehension questions, and discussion questions.

LEVEL: High Int – Adv

TIME: 1.5–2 hours

TAGS: discussion, environment, fracking, global warming, climate change, pollution

Pre-Reading

A. WARM-UP QUESTIONS

Have students work in small groups or as a class. Discuss the quote.

B. VOCABULARY PREVIEW

- | | | | | |
|------|------|------|------|-------|
| 1. f | 3. b | 5. g | 7. e | 9. j |
| 2. a | 4. c | 6. d | 8. h | 10. i |

Reading (and/or Listening)

Read individually, in small groups, or as a class. You can also play the listening as your students read along. A gap-fill version of the reading is available on page 6. Help your students with vocabulary and expressions that they are unfamiliar with.

Comprehension

- Fracking is a technique used to extract fossil fuels from deep places in the earth. Water and chemicals are pumped into wells to release the gas or oil.
- Fracking is a booming industry in the US now because traditional methods can no longer be used. Easy-access fossil fuels have all been used up.
- Fracking might pose health risks to humans because chemicals can be released into the nearby air and water during the process.
- The word used to describe people who are strongly against fracking is fractivists.
- Fracking has changed the US economy by making energy cheaper to buy.

Vocabulary Review

- | | | |
|------------|--------------|---------------|
| 1. banned | 3. Thanks to | 5. renewable |
| 2. used to | 4. well | 6. extraction |

(continued on the next page...)

Answer Key cont.

Grammar Review

A. REFERENCE

Check out our blog for tips on teaching the various forms of *used to*. You'll find tips on teaching *used to* with negative statements and question formation with the auxiliary "did": <https://ellii.com/blog/how-to-teach-used-to-in-6-easy-steps>

There is also a comparison chart and practice discussion questions on *used to*, *get used to*, and *be used to*: <https://ellii.com/blog/used-to-get-used-to-and-be-used-to>

B. COMPLETE THE SENTENCES

- | | |
|----------------|--------------------|
| 1. are used to | 4. is used to |
| 2. drive | 5. getting used to |
| 3. used to | 6. used to |

C. WRITE EXAMPLES

Answers will vary.

Discussion

Answers will vary. Can be discussed in small groups or pairs, or could be completed individually as written answers.

Critical Thinking

Answers will vary. Can be discussed in small groups or pairs, or could be completed individually as a written essay or oral presentation.

Listening

1. extracting, pumped, primarily
2. governments, booming
3. hazards, pose a risk, effects
4. renewable, recoverable

SPELLING NOTE:

This lesson shows the American spelling of the word *Centers*. Most other English-speaking countries spell this word this way: *Centres*. Make it a challenge for your students to find this word in the lesson and see if they know the alternate spelling.