

1. The nuclear debate

Following the radiation leak at the Fukushima nuclear power plant in Japan, caused by the terrible earthquake and tsunami that hit the country on March 11, this lesson discusses some of the pros and cons of nuclear power.

Level

Intermediate and above (equivalent to CEF level B1 and above)

How to use the lesson

1. Start by asking your students what they know about the situation at the Fukushima nuclear power plant in Japan following the radiation leak in March. Does your students' country have a nuclear energy program, and if so, what do the students know about it? Apart from nuclear power, how many sources of energy (e.g. to create electricity or power cars) can your students name in English? Where do they think most of the world's energy comes from right now? (The correct answer is that most of it comes from fossil fuels. Oil provides the highest proportion, followed by coal and natural gas.) Do your students know what renewable energy sources are, and can they provide examples? Encourage them to think of advantages and disadvantages of each source of energy.
2. Hand out Worksheet A and give the students five to ten minutes to read through the text, encouraging them to look up new vocabulary. Tell them they are going to answer a series of questions on the text, but that they shouldn't write anything down at this stage.
3. Divide the students into pairs and hand out Worksheet B. Ask them to work together to complete the two different types of comprehension questions in Exercises 1 and 2.
4. Check answers in open class.
5. Keeping the students in their pairs, ask them to turn over their copies of Worksheet A, or to hand them back to you temporarily. Then ask them to attempt Exercise 3 on Worksheet C, which contains the text from Worksheet A with twenty incorrect words that they have to identify and correct. The words containing the mistakes are all in bold, as are five other words that are correct. Point out that the mistakes are all grammatical or lexical, and that no correction requires them to write more than one additional word.
6. Check answers in open class.

Answers:

Exercise 1

1. D 2. F 3. T 4. F 5. T 6. D 7. T 8. D 9. D 10. T

Exercise 2

1. on the east coast
2. *Pros:* a very small amount of nuclear fuel can create a huge amount of energy; nuclear power plants don't push greenhouse gases into the atmosphere
Cons: Chernobyl and Fukushima, i.e. the risk of accidents; the fact that nuclear waste stays radioactive for hundreds of years; the possible consequences of a terrorist attack
3. They won't run out; they are less risky than nuclear power; they produce far fewer greenhouse gases than burning fossil fuels.
4. Because, when fossil fuels begin to run out, we will never produce enough renewable energy to fill the gap.
5. mostly crops

Exercise 3

3. Ukraine 4. permanently 5. range 6. out 7. radioactive 8. burning
9. coal 10. warming 11. greenhouse 13. forever 14. resources 15. out
16. provides 17. hydropower 18. crops 19. solar 21. risky 22. fewer 23. fill
24. worrying

Words in bold that are correct: 1. consequences 2. leak 12. atmosphere 20. hope
25. solution

2. Related websites

Send your students to these websites, or just take a look yourself.

http://www.msnbc.msn.com/id/42029294/ns/technology_and_science-science/

An interactive diagram with text explaining how nuclear power plants work, from MSNBC Science. Accessible to intermediate level.

<http://curiosity.discovery.com/topic/energy-conservation/pros-cons-nuclear-power-pictures.htm>

An explanation of some of the pros and cons of nuclear power, with accompanying dramatic pictures in a slideshow format. Accessible to intermediate level.

<http://www.npr.org/2011/03/16/134535204/japan-triggers-shift-in-u-s-nuclear-debate?ft=1&f=1025>

An NPR article (March 2011) on the possible shift in opinion on the nuclear debate in the USA following the Fukushima crisis in Japan. Challenging for intermediate level.