

# 2022 TEACHER TRAINING COURSE USING THE ENVIRONMENT IN THE CLASSROOM

## INTRODUCTION

Issues of pollution, climate change, endangered animals and alternative energy dominate the headlines, and will only become more important in coming years.

While teenagers may often feel powerless, student protests have shown that they feel strongly about these issues and giving them the ability to communicate about it in English may be a necessary step to form alliances.

Kahoot!

<https://create.kahoot.it/details/1ddad9c3-f75b-4bfc-ba4c-e6449cce0f9a>

## CLIL- PHYSICS: LOOKING AT ENERGY SOURCES

This handout looks at renewable energy sources and includes a listening comprehension exercise.

It looks at conjunctions to help them better present an argument as part of a discussion which could be an example of Cambridge B2 First speaking practice.

- Air travel is very bad for the environment; so, is it wrong to fly abroad for a holiday?
- Many plants and animals are going extinct. Is this a problem?
- Do you think individual action can save the environment?
- How is the climate likely to change in the future due to global warming?

[https://www.linguahouse.com/esl-lesson-plans/general-english/a-green-future/audioplayer/green\\_future\\_bemp3](https://www.linguahouse.com/esl-lesson-plans/general-english/a-green-future/audioplayer/green_future_bemp3)

## CLIL GEOGRAPHY

This activity will let your students get creative with recently acquired language.

After studying weather vocabulary, put them into pairs or small groups and get them to script a weather report which they can then act out.

Give them the example and let them have fun with it.

“International Weather Report - Simple Skits” - <https://youtu.be/gpBuaU5OPi8>

Using the vocabulary in the handouts, get your students to tell you any extreme weather they know: drought, flood etc

Watch the video and make notes on any of those which are seen in “Exploring extreme weather” - <https://youtu.be/7XlxQFzlxNO>

Research each example in more depth

Research each example in more depth

Come up with a weather report using extreme weather:

“Prepare yourselves for gale-force winds and don’t be surprised to see a cow fly by, it really will be that windy!”

Present to the class

Alternatively, they could make a project on one form of extreme weather. Causes, effects and preventative measures.

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## Literature – Dickens' Hard Times

Perhaps the strongest indictment seen in the Italian English Literature syllabus of the impact of pollution can have on humans comes from a book published way back in 1854.

Charles Dickens' tenth novel, *Hard Times*, is many things: a critique of Utilitarianism, a defence of the creative, humanistic mind against rote-learning, a searing indictment of exploitative employment practices.

However, one of the strongest passages comes at the beginning of Chapter 5. In this, the town in which the novel is set, and its inhabitants, are described. Here we see Dickens, the great English comic writer, at his most scathing – describing Coketown – a northern industrial town, possibly based on Manchester or Preston.

*It was a town of red brick, or of brick that would have been red if the smoke and ashes had allowed it; but as matters stood, it was a town of unnatural red and black like the painted face of a savage. It was a town of machinery and tall chimneys, out of which interminable serpents of smoke trailed themselves for ever and ever, and never got uncoiled. It had a black canal in it, and a river that ran purple with ill-smelling dye, and vast piles of building full of windows where there was a rattling and a trembling all day long, and where the piston of the steam-engine worked monotonously up and down, like the head of an elephant in a state of melancholy madness. It contained several large streets all very like one another, and many small streets still more like one another, inhabited by people equally like one another, who all went in and out at the same hours, with the same sound upon the same pavements, to do the same work, and to whom every day was the same as yesterday and to-morrow, and every year the counterpart of the last and the next.*

Some things to consider about this passage:

As always, Dickens names his towns like he names his characters – evoking positive or negative connotation. “Coketown” is obviously named in reference to “Coke”, a form of refined coal used in furnaces.

Dickens draws on similes and metaphors of savages, snakes and mad elephants to show the industrial process in a threatening, jungle aspect.

Repetition is used to emphasise the monotonous appearance of the town, and how this is reflected in the behaviour of the residents.

In addition to visual descriptions, smells, sounds, movements and felt sensations are evoked to expand the reader's experience of the town. The town is evoked in an immersive manner

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## Conclusions

Students really care about the environment – whether it is climate change activism, wild animals, or just clean beaches. They also have different ideas about solutions and priorities. Why not encourage an in-class debate?

The environment is a very common theme of Cambridge B2 First (and above) Writing and Speaking exams. Preparing students with some knowledge, vocabulary and expressions will maximise their chances of passing these exams.

Whatever your view about her, Greta Thunberg is a powerful force who just shows how a strong command of English can really help a young second-language speaker move on the world stage.

Brainstorming, task-based learning, songs, videos, news items: all of these are great ideas for using themes of the environment in the English classroom.

## USEFUL LINKS

Environmental Kahoot Quiz - <https://create.kahoot.it/details/1ddad9c3-f75b-4bfc-ba4c-e6449cce0f9a>

Listening for CLIL Physics - [https://www.linguahouse.com/esl-lesson-plans/general-english/a-green-future/audioplayer/green\\_future\\_bemp3](https://www.linguahouse.com/esl-lesson-plans/general-english/a-green-future/audioplayer/green_future_bemp3)

“International Weather Report - Simple Skits” - <https://youtu.be/gpBuaU5OPi8>

“Exploring extreme weather” - <https://youtu.be/7XlxQFzlxN0>

<https://www.englishclub.com/reading/environment/environment-vocab-quiz.htm>

[https://www.examenglish.com/vocabulary/b1\\_environment.htm](https://www.examenglish.com/vocabulary/b1_environment.htm)

<https://learnenglishteens.britishcouncil.org/topics/environment/term>

# CLIL PHYSICS LESSON

## RENEWABLE ENERGY

These pictures show vocabulary that we use to talk about renewable energy.

1. Which two items produce energy from the movement of water and wind?
2. Which two items describe how energy systems work in a house?
3. Which two items describe how well an energy system works?
4. Which two items use heat or light to produce energy?



solar panels



ground source heating



hydropower



wind turbines



install a system



produce electricity



reliable



break down

1. Have you installed solar panels in your home, or do you use other types of renewable energy to produce electricity?
2. Does your country produce lots of energy from the sun, wind or water?
3. How reliable do you think these types of energy are?

[https://www.linguahouse.com/esl-lesson-plans/general-english/a-green-future/audioplayer/green\\_future\\_bemp3](https://www.linguahouse.com/esl-lesson-plans/general-english/a-green-future/audioplayer/green_future_bemp3)

Listen to a podcast, "Energy of the future" and put these topics in the order that you hear about them.

fossil fuels \_\_\_\_

ground source heating \_\_\_\_

hydropower \_\_\_\_

solar panels \_\_\_\_

wind turbines \_\_\_\_

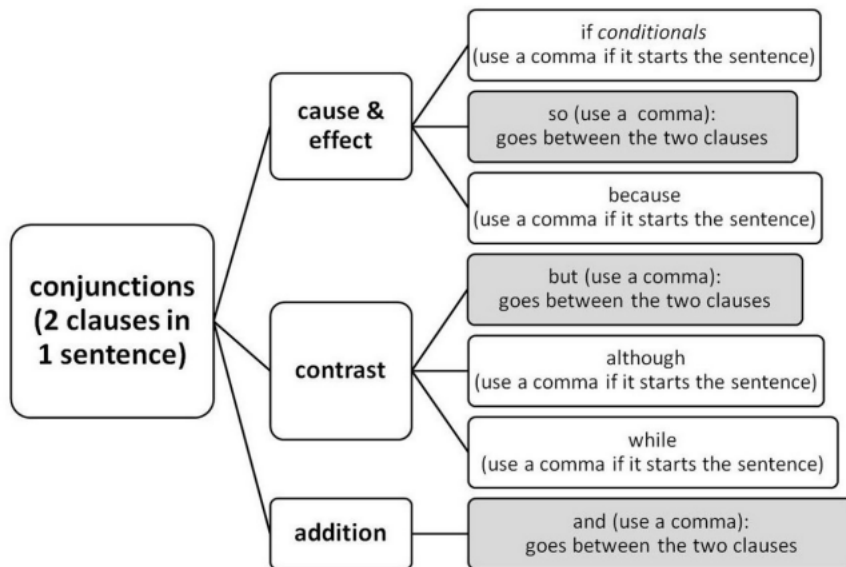
Listen again and decide if these sentences are true or false.

1. There are three differences between fossil fuels and renewable energy.
2. Solar panels have become much less expensive since the year 2000.
3. There are no problems with using wind turbines.
4. Ground source heating is perfect for producing electricity in cities.
5. Climate change can have a negative effect on hydropower.

# CLIL PHYSICS LESSON

## RENEWABLE ENERGY

This diagram can help you remember how to use these conjunctions.



Find and correct mistakes in some of these sentences. If the sentence is correct, put a tick ✓ next to it.

1. If you don't have a lot of space ground source heating energy isn't a good option.
2. Solar panels can't work at night, so they aren't as productive as other types of renewable energy.
3. Hydropower is a very old idea so it's reliable.
4. Because wind turbines can be dangerous to birds, so many people don't like them.
5. In the future, we will not have any more fossil fuels, but renewable energy will always be available.
6. Hydropower works 24/7 but it is expensive to build.
7. While wind turbines look beautiful to some people, they make a lot of noise.
8. Although climate change means there may be less rain in the future, hydropower won't always work.
9. Although solar power works in most parts of the world, takes up a lot of space.
10. There isn't always enough wind to move the turbines, and some people think they're ugly.

### Discussion

What do you think about renewable energy sources?

Should more money be invested in them?

Are there any drawbacks to using them?



# CLIL Physics Renewable Energy Teachers Key

These pictures show vocabulary that we use to talk about renewable energy.

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3. Which two items describe how well an energy system works?
4. Which two items use heat or light to produce energy?



solar panels



ground source heating



hydropower



wind turbines



install a system



produce electricity



reliable



break down

- 
1. Hydropower and wind turbines
  2. Install a system and produce electricity
  3. Reliable and break down.
  4. Solar panels and ground source heating
- 

Listen to a podcast, "Energy of the future" and put these topics in the order that you hear about them.

fossil fuels \_\_\_\_

ground source heating \_\_\_\_

hydropower \_\_\_\_

solar panels \_\_\_\_

wind turbines \_\_\_\_

Listen again and decide if these sentences are true or false.

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1. fossil fuels

2. solar panels

3. wind turbines

4. ground source heating

5. hydropower

Second listening:

1. F - there are two differences: fossil fuels will run out, and they also cause climate change.
  2. T - 80% cheaper.
  3. F - they can be noisy.
  4. F - you need a lot of room
  5. T - if it stops raining, then there won't be enough water in lakes or rivers to make hydropower work.
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# CLIL Physics Renewable Energy Teachers Key

**Presenter:** Hi everyone, and welcome to another episode in our mini podcast series, For Beginners. In the last podcast we discussed climate change. Following on from that, this episode is about how we can produce energy in the future. We're talking to Elliott Barnes, a renewable energy expert. Elliott, what's the difference between fossil fuels and renewable energy?

**Elliott:** There are two main differences. Renewable energy, like solar power, will never run out, but there is a limited amount of fossil fuels. In other words, we can completely use up all the oil and coal in the world, but we can never use all the sun's energy.

**Presenter:** What's the second difference?

**Elliott:** The second difference is that fossil fuels cause global warming or climate change while renewable energy is cleaner and safer.

**Presenter:** Great. So, you mentioned solar energy. Tell us more about that.

**Elliott:** Solar energy uses panels to catch sunlight and convert it to electricity. Solar power works in many parts of the world, and the cost of solar panels has gone down by 80% in the last 20 years. Because the price is now so low, it seems like a great future source of energy.

**Presenter:** Hold on! There's one big problem with solar energy! It doesn't work at night.

**Elliott:** You're right. Luckily, there are other types of renewable energy. Wind turbines can produce energy 24/7. These are cheap to operate, although they can be noisy.

**Presenter:** I've seen those. I kind of like the way they look. Are there any other options?

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**Elliott:** Another type of energy that works all the time is ground source heating, which uses heat from the earth.

**Presenter:** I think I've heard of that. My neighbour installed a system like that for heating her house.

**Elliott:** Yes, it's becoming very popular. It's very reliable because it almost never breaks down.

**Presenter:** Are there any problems?

**Elliott:** Well, yes, there are. You need a lot of land to heat one home, so it's not very useful in cities. Before we finish, let me just talk about hydropower.

**Presenter:** In other words, using moving water to produce electricity.

**Elliott:** Yes. This is a very old idea, and it's safe and reliable. The problem is that climate change can affect how well hydropower works.

**Presenter:** In what way?

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**Elliott:** Well, if it stops raining and rivers or lakes dry out, there's not enough water to move the turbines.

**Presenter:** Interesting. We're out of time now, so we're going to have to stop talking and say good-bye. Thanks so much for listening.

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# CLIL Physics Renewable Energy Teachers Key

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1. The comma is missing after *space*.

2. Correct.

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3. The conjunction is wrong. These ideas are not related by cause and effect. A better choice of conjunction would be *and* or *but*.

4. We can't use *because* and *so* in the same sentence; choose one or the other.

5. Correct.

6. We need a comma before *but*.

7. Correct

8. The conjunction is wrong. These ideas are not related by contrast. A better choice of conjunction would be *because*.

9. The second clause is missing the subject: *it*.

10. Correct.

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## **Cambridge B2 First Speaking Part 4 questions**

- Air travel is very bad for the environment; so, is it wrong to fly abroad for a holiday?
  - Many plants and animals are going extinct. Is this a problem?
  - Do you think individual action can save the environment?
  - How is the climate likely to change in the future due to global warming?
-





# EXTREME WEATHER

What is extreme weather? Do you know any examples?

Make notes of the weather which you see in the video

<https://youtu.be/7XlxQFzlxN0>



Choose one of the following examples of extreme weather and research more information.

## Hurricane

Hurricanes are very large, rapidly rotating storms, with very strong winds and thunderstorms. Each year several make landfall and can cause considerable damage to property and loss of life. They are also known as typhoons or tropical cyclones.

## Tornado

Sometimes called a twister, a tornado is a rapidly rotating column of air that reaches between the base of a storm cloud and the Earth's surface.

## Heatwave

A heatwave is a long period of hot weather, which may be accompanied by high humidity.

## Wildfires

Sometimes called brush fires, bushfires or forest fires, a wildfire is an uncontrolled fire in a natural area. It can be caused by a combination of very hot and dry weather, with fires being started either through lightning strikes or human activity.

## Blizzards

A blizzard refers to a cold, strong wind that is laden with snow which significantly reduces visibility (this means a blizzard makes it very hard to see things that are further away).

## Sandstorm

Sometimes called a dust storm, sandstorms happen when very strong winds blow up sand and/or dust from an area that is extremely dry. They are common in deserts.

Write a weather report **or** do a project looking at causes, effects, and preventative measures.

“It’s going to be super windy today folks, with chances of flying cows in the countryside with the hurricane moving inland. So, hold onto your hats if you need to go outside and watch out for flying trampolines as we have gale-force winds...”

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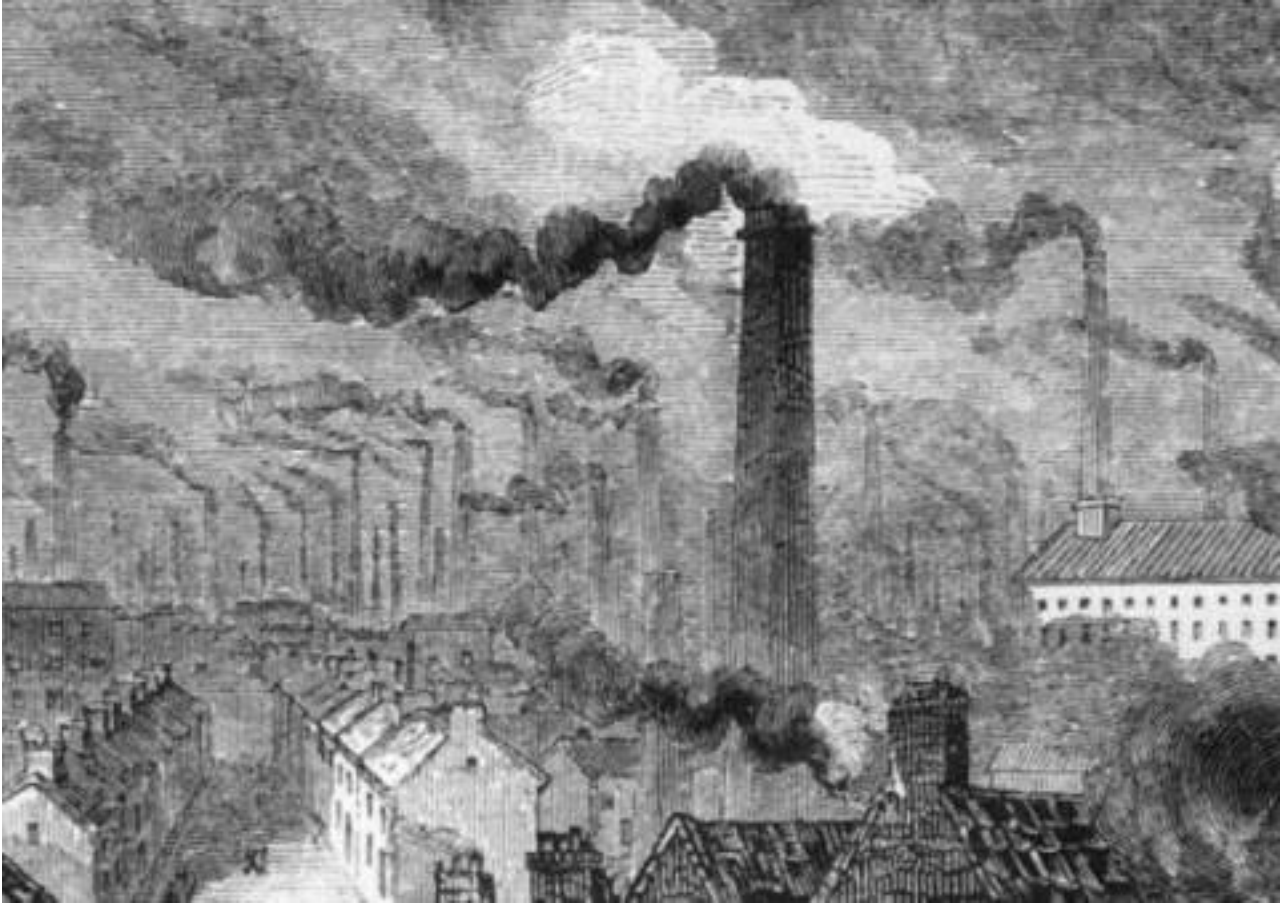
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# Charles Dickens – Hard Times (1854)

## Description of Coketown from Chapter 5



It was a town of red brick, or of brick that would have been red if the smoke and ashes had allowed it; but as matters stood, it was a town of unnatural red and black like the painted face of a savage. It was a town of machinery and tall chimneys, out of which interminable serpents of smoke trailed themselves for ever and ever, and never got uncoiled. It had a black canal in it, and a river that ran purple with ill-smelling dye, and vast piles of building full of windows where there was a rattling and a trembling all day long, and where the piston of the steam-engine worked monotonously up and down, like the head of an elephant in a state of melancholy madness. It contained several large streets all very like one another, and many small streets still more like one another, inhabited by people equally like one another, who all went in and out at the same hours, with the same sound upon the same pavements, to do the same work, and to whom every day was the same as yesterday and to-morrow, and every year the counterpart of the last and the next.

In this passage, identify

- Similes of metaphors of threatening animals and people (straight underline)
- Repetition of words or phrases (circle)
- Sounds, smells, movements, or physical sensations (wavy underline)