



1. Look at the following pictures. Which of them illustrates a bigger source of pollution?

a) ()



■ vehicle emissions

b) (✓)



■ cattle farms

2. Read the following excerpt about pollution and check your answer to the previous activity. **Cattle farms pollute our planet the most.**

1. Meet the world's top destroyer of the environment. It is not the car, or the plane, or even George Bush: it is the cow.
2. A United Nations report has identified the world's rapidly growing herds of cattle as the greatest threat to the climate, forests and **wildlife**. [...]
3. The 400-page report by the Food and Agricultural Organisation, entitled **Livestock's** Long Shadow, also surveys the damage done by sheep, chickens, pigs and goats. But in almost every case, the world's 1.5 billion cattle are most to blame. Livestock are responsible for 18 per cent of the **greenhouse gases** that cause **global warming**, more than cars, planes and all other forms of transport put together.
4. Burning fuel to produce fertiliser to grow feed, to produce meat and to transport it – and clearing vegetation for grazing – produces 9 per cent of all emissions of carbon dioxide, the most common greenhouse gas. And their wind and manure emit more than one third of emissions of another, methane, which warms the world 20 times faster than carbon dioxide.
5. Livestock also produces more than 100 other polluting gases, including more than two-thirds of the world's emissions of ammonia, one of the main causes of **acid rain**.

Livestock: this collective noun can be followed by either a singular or a plural verb. The same happens to most of collective nouns.

6. **Ranching**, the report adds, is "the major driver of **deforestation**" worldwide, and overgrazing is turning a fifth of all pastures and ranges into desert. Cows also soak up vast amounts of water: it takes a staggering 990 **litres** of water to produce one litre of milk.
7. Wastes from **feedlots** and fertilisers used to grow their feed overnourish water, causing weeds to choke all other life. And the pesticides, antibiotics and hormones used to treat them get into drinking water and endanger human health.
8. The pollution washes down to the sea, killing coral reefs and creating "dead zones" devoid of life. One is up to 21,000sqkm, in the Gulf of Mexico, where much of the waste from US beef production is carried down the Mississippi.
9. The report concludes that, unless drastic changes are made, the massive damage done by livestock will more than double by 2050, as demand for meat increases.

litres: UK spelling.
liters: US spelling.

3. Read the article again and indicate the paragraph(s) where you can find the following information.

- a) Rearing cattle is a threat to forests. **2, 4 and 6**
- b) A warning about the future. **9**
- c) Rearing cattle is water-polluting. **7 and 8**
- d) Gases produced by livestock **3, 4 and 5**
- e) The answer to the question: Which pollutes our planet the most? **1**
- f) Details about the United Nations report on livestock and their impact on the environment. **3**

Fun facts

Herd is the collective noun used for quite a few animals, such as cows, elephants, deer, and zebras.

4. Choose the word or phrase that best replaces the words in bold.

- a) *A United Nations report has identified the world's rapidly growing **herds** of cattle as the greatest threat to the climate, forests and wildlife."
 - I. (✓) groups of bovine animals
 - II. () groups of birds
 - III. () groups of marsupials
- b) *Livestock are responsible for 18 per cent of the greenhouse gases that cause global warming, more

than cars, planes and all other forms of transport put together."

- I. () eggs produced on a farm
 - II. () means of transportation used on a farm
 - III. (✓) farm animals raised for food, labor, etc.
- c) *Burning fuel to produce fertiliser to grow feed, to produce meat and to transport it – and clearing vegetation for grazing – produces 9 per cent of all emissions of carbon dioxide, the most common greenhouse gas."
- I. () food for farm animals - crops
 - II. () crops - pastures
 - III. (✓) food for farm animals - pastures
- d) *And their wind and manure emit more than one third of emissions of another, methane, which warms the world 20 times faster than carbon dioxide."
- I. () flatulence – liquid waste
 - II. (✓) flatulence – solid waste
 - III. () breath – solid waste
- e) *Ranching, the report adds, is 'the major driver of deforestation' worldwide, and overgrazing is turning a fifth of all pastures and ranges into desert."
- I. (✓) grazing land
 - II. () mountains
 - III. () forests

2. Read about ways to protect the environment again and classify them into the following categories.

 Reusing Paper or plastic? [...] Give it away, don't throw it away [...] Use rechargeable batteries [...] 	 Reducing Conserve energy [...] Don't water the sidewalk [...] Don't do the dishes until you have a full load [...] Don't let the water run while you shave or brush your teeth [...] Take a short shower [...] Use both sides of the paper [...] 
 Recycling Recycle. If your community [...] 	 Protecting natural resources Plant a tree [...] Don't trash our streams [...] Use less fertilizer [...] 

3. What else can you do to protect the environment? Discuss with your classmates. Then write down your answer.

Answers will vary.

Sugestão de atividade para casa: questão 5 da seção **Challenge yourself**.

Did you know?

Ecological footprint is the concept by which we measure the amount of environment necessary to produce the resources we consume. By measuring your ecological footprint, it is possible to estimate how many planets it would be necessary if everyone led your lifestyle.



- f) *Wastes from feedlots and fertilisers used to grow their feed overnourish water, causing weeds to choke all other life."
 - I. () feed
 - II. (✓) strangle
 - III. () embellish

5. Complete the following sentences with the words from activity 4.

- a) The **livestock** sector is in crisis.
- b) Eww! I think I just stepped on **manure**!
- c) Don't hold the little chick like that. You're going to **choke** the poor thing.

- d) What's this smell? I think this cow just passed some **wind**.
- e) Large areas of rainforest are being cut down for **grazing**.

6. What would you be willing to do in order to help with the problem described in the article? Check all that apply.

- a) () Cut down on meat
- b) () Go vegan
- c) () Go vegetarian
- d) () Educate people about the impact of meat production on the environment

Estimule os alunos a justificar suas respostas e também apresentar outras soluções ao problema descrito no texto. Answers will vary.

1. What is the name of the place shown in the following picture? Discuss with your classmates. **Answers will vary.**



2. Listen to a teacher talking about the place shown in activity 1 and check your answer. **Track 19**

Guaira Falls

3. Listen again and mark the following statements true (T) or false (F). Correct the wrong ones. **Track 19**

- a) (T) None of the students were able to name the place in the picture.
- b) (F) The teacher points out students' wrong answers softly. **No, he uses expressions like "wrong by a mile", "way off".**
- c) (T) The teacher visited the Guaira Falls when they existed.
- d) (T) None of the students were born in or before 1982.

- e) (F) The Guaira Falls are also known as Eight Falls. **They were known as "Seven Falls".**
- f) (F) The Guaira Falls were destroyed by accident. **The Guaira Falls were destroyed so a hydroelectric plant could be built.**
- g) (T) The Guaira Falls belonged to Paraguay and Brazil.

- h) (F) There is a chance the Guaira Falls may be restored to life in the future. **No, because the rocks were dynamited for navigation.**
4. Read the sentences and phrases taken from the listening and answer the following questions.

Try again.	It's getting closer.
You can say that again.	I'll get to that in a second.
Way off.	Wrong by a mile.
I give up.	

Após terem completado o exercício, reproduza o áudio da atividade 3 novamente para que os alunos confirmem suas respostas.

- a) Which expression is used to say you'll be talking about something soon?
I'll get to that in a second.
- b) Which expression is used to encourage somebody not to give up?
Try again.
- c) Which expressions are used to say that somebody's answers are completely wrong?
"Way off" and "wrong by a mile".
- d) Which expression is used to say that somebody is not that far off from giving the right answer?
It's getting closer.
- e) Which expression is used to say that you agree with somebody?
You can say that again.
- f) Which expression is used to say that you no longer wish to keep on doing something?
I give up.

Após terem completado o exercício, desafie os alunos a, em duplas, criar um pequeno diálogo usando duas das expressões listadas no boxe da atividade 4.

5. Complete the following conversation between Hanna and Brian using three expressions from activity 4.

Hanna: This place is absolutely breathtaking.

Brian: **You can say that again**. Shall we take a selfie?

Hanna: Sure. Do you have a selfie stick?

Brian: No, but I've got long arms. Come on, get closer.

Hanna: Does it look good?

Brian: No, it looks shaky.

Hanna: Well, keep your arm still.

Brian: Come closer again. Say cheese!

Hanna: How about now?

Brian: Oh, man. I cut you out.

Hanna: What? **Try again**!

Brian: I'll take it with my other hand. Come here. Smile.

Hanna: So, how does it look?

Brian: **I give up**! I'll get somebody to take our picture.

6. In small groups, discuss the following question posed by the teacher in her class. **Answers will vary.**

Do we have the right to destroy something made by nature in the name of what we call "progress"?



■ The Hoover dam (US) was the highest dam in the world when it was finished in 1935.



■ "The Super pit" is Australia's largest gold mine.

Sugestão de atividade para casa: questão 2 da seção **Challenge yourself**.

Relative clauses

1. Relative clauses are used to identify, classify or add extra information about a person or thing. Observe the example sentences that illustrate two different kinds of relative clauses and answer the following questions.



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Non-defining relative clauses



a) Which relative clause gives extra information about somebody?

Ms. Tenenbaum, who works for WWF, is visiting our school on Monday.

b) Which relative clause is a comment on the whole main clause?

Arnold is an animal rights activist, which is very interesting.

c) Which relative clause is used to define something or someone that is being talked about?

I like the bag that is made of canvas. / I like the one which is made of plastic. / Sylvia is the girl who started [...]. / Yes, she is the girl that was on TV last night.

d) Which kind of relative clause are commas used with?

Non-defining relative clauses.

2. Observe the example sentences again and complete the rules concerning the use of the pronouns that, which, and who within relative clauses.

Which is used for things and also to refer to the whole of a previous clause.
That is used for people and things in defining relative clauses.
Who is used for people in defining or non-defining relative clauses.
Who and which are used in non-defining relative clauses.

Did you know?

• In defining relative clauses, relative pronouns can be omitted if they are followed by a noun or pronoun. If relative pronouns are followed by a verb, they must be kept. Study the following examples:

This is the car (that) I want to buy.

I want to buy a bag that is made of canvas.

↓
omission is not possible

3. Use a relative pronoun to join each of the following pairs of sentences. Indicate when the pronoun can be omitted.

a) She is the girl.

She adopted the stray dog.

She is the girl who/that adopted the stray dog.

b) Do you remember the protesters?

We met the protesters on our way to San Jose.

Do you remember the protesters (who/that) we met on our way to San Jose?

c) The battery was rechargeable.

I bought the rechargeable battery.

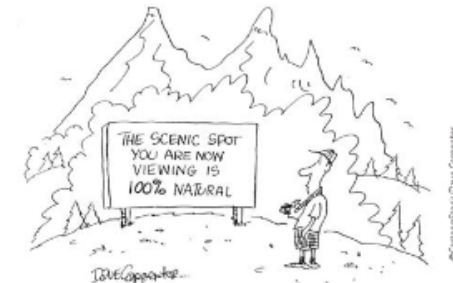
The battery (that) I bought was rechargeable.

d) He is a biologist.

He works for an NGO.

He is a biologist who/that works for an NGO.

4. What is true about the sentence in the following cartoon?



a) () It's a non-defining relative clause.

b) () The relative pronoun that's been omitted is who.

c) () The relative adverb that's been omitted is where.

d) (✓) The relative pronoun that's been omitted is either that or which.

e) () No relative pronouns have been omitted.

5. Fill in the blanks with the words listed in the box below.

who whom where when
why whose which

- a) This tree is 100 meters tall, which is taller than the building I work in.
b) I want to live in a city where nature and development walk hand in hand.

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- c) We want to know the reason why you threw that plastic bag on the floor when there are trash cans all around you.
d) The day when humans truly realize that nature is finite may be too late.
e) I have never met anybody who visited the Guaira Falls when they existed.
f) I want to buy a car whose CO₂ emission is insignificant.
g) The person whom you met last night is the person responsible for the environmental policies in our city.

6. Read the following sentences and insert commas where necessary. *Retorne com os alunos a formação de non-defining relative clauses e o uso de vírgulas.*

- a) The trees that are being cut down take years to grow.
b) The woman who threw paper on the floor got called out. The one who picked it up and threw it into the trash can was applauded by passersby.
c) My brother, who studies environmental engineering, belongs to an NGO that plants trees on weekends.
d) The car which emits a lot of CO₂ into the atmosphere is the old one.
e) Let's look at pictures of the Guaira Falls, which were drowned in 1982.
f) He's going camping with Sandy, who has nature on the brain.

7. Use the relative pronouns in brackets to write sentences containing non-defining relative clauses.

- a) Maria took a 45-minute shower today.
The fact that Maria took a 45-minute shower today made me very unhappy. (which)
Maria took a 45-minute shower, which made me very unhappy.
- b) Paula is using rainwater to wash the sidewalk.
Paula is very conscientious. (who)
Paula, who is very conscientious, is using rainwater to wash the sidewalk.
- c) My father is an environmental engineer.
He lives in Rio de Janeiro. (who)
My father, who lives in Rio de Janeiro, is an environmental engineer.
- d) Marcos has finally understood the consequences of global warming.
His house was blown away by last week's tornado. (whose)
Marcos, whose house was blown away by last week's tornado, has finally understood the consequences of global warming.
- e) Roberta has been educating the people of our city about water conservation for 15 years.
I had the pleasure to meet her last month. (whom)
Roberta, whom I had the pleasure to meet last month, has been educating the people of our city about water conservation for 15 years.
- f) There is a spare bicycle in the garage.
You can use the spare bicycle to go to work. (which)
There is a spare bicycle in the garage, which you can use to go to work.

Sugestão de atividades para casa: questões 1 e 3 da seção Challenge yourself.

Língua Inglesa

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