Video zone

Fake or fir? Your Christmas tree's carbon footprint

If you have a Christmas tree in your home, have you thought whether it's better to have a natural tree or an artificial tree? This video could help you to decide.

Tasks

Do the preparation task first. Then watch the video and do the exercises. You can also read the transcript.

Preparation task

Complete the sentences with words from the box.

absorb	carbon footprint	decompose	disposal	emissions
greenhouse gas	impact	landfill	miles	recyclable

1. Aeroplanes have an ..... on the environment – they have a strong effect.
2. Plants ..... carbon dioxide from the air – they take it in gradually.
3. Cars produce a lot of ..... – when you drive them, carbon dioxide goes into the air.
4. Your ..... is the total amount of carbon dioxide that your activities produce.
5. The ..... of rubbish can be a problem, especially if it can't be recycled.
6. Rubbish that can't be recycled is often buried underground in a ..... .
7. Vegetables ..... easily – they break down naturally into smaller parts.
8. Carbon dioxide is a ..... – we believe that it causes a gradual warming of the surface of the earth.
9. Most plastic bottles are ..... – they go through a special process so that the plastic can be used again.
10. In the UK we measure distances on roads in ..... – one mile is 1.6 kilometres.

Task 1

Match the sentences (a–h) with the groups (1–2).

Groups	Sentences
1. An artificial tree ..... 2. A natural tree	a. If it's grown in your area, it isn't transported far. b. If it's in a pot, you can use it again next year. c. If it's made in China, it's transported a long way to the UK. d. It can't be recycled, so it's usually buried under the ground. e. It's better for the environment to burn it than to bury it under the ground. f. The biggest effect on the environment is when it is made. g. The biggest effect on the environment is when you throw it out. h. You can reuse it year after year.

Task 2

Choose the correct answer.

1. About ..... of Christmas trees bought by British people are grown in the UK.
    a. 50%
    b. 75%
2. When a natural Christmas tree is growing, it has a ..... effect on the environment, because it takes in carbon and nitrogen.
    a. positive
    b. negative
3. When a natural Christmas tree is cut down, it has a ..... effect on the environment, because carbon goes back out into the air.
    a. positive
    b. negative
4. If a natural tree decomposes under the ground, it produces ....., which is a greenhouse gas.
    a. oxygen
    b. methane
5. You would probably have to reuse an artificial tree for ..... for it to have less effect on the environment than a natural tree.
    a. 10 years
    b. 50 years

6. The choice between a natural tree and an artificial tree ..... to your yearly carbon footprint.
    a. makes a big difference
    b. doesn't make a big difference
7. Buying ..... that is finally burnt produces the same carbon emissions as driving 12 miles.
    a. a natural tree
    b. an artificial tree
8. Buying ..... that is finally buried underground produces the same carbon emissions as driving 135 miles.
    a. a natural tree
    b. an artificial tree

Discussion

Which type of Christmas tree would you choose and why?

Transcript

It's the ultimate Christmas decoration and British people buy millions of them every year. But what impact does the Christmas tree have on the environment and should you go fake or fir? We're putting the Christmas tree to the test.

First up, the natural tree. Around seven million Christmas trees are bought in the UK each year, with roughly three-quarters being grown here. It takes up to 12 years to grow a typical Christmas tree. During this time it has a positive impact on the environment because it absorbs carbon from the atmosphere and nitrogen from the soil. But once the tree is chopped down, it slowly starts releasing emissions back into the atmosphere. Transporting a tree can contribute to its overall carbon footprint, so buying a tree that's locally grown can help keep its carbon footprint down. But the biggest potential environmental impact for a natural Christmas tree comes from its disposal. If your tree ends up in landfill, its carbon footprint will be a lot higher. That's because organic matter which decomposes away from oxygen produces methane, a greenhouse gas which contributes to global warming. It's much better if your tree gets incinerated – burnt – or composted. That can reduce its carbon footprint by up to 80 per cent compared with landfill. You can find out from your local council what happens to your Christmas tree once you throw it out and, of course, if you have the space, you can buy a potted Christmas tree, which you can keep over the next year and use again next Christmas.

So what about a plastic Christmas tree? Here, the biggest impact on the environment comes from production. Artificial trees are usually made out of a combination of metal and plastic, the production and processing of which can significantly increase the tree's carbon footprint. And most artificial trees are made in China, which means they have to be packaged and shipped to the UK. The good news is that you can reuse a plastic tree. So how many years would you have to keep it so that it has a lower environmental impact than buying a natural tree? Experts think it's about ten years, but that's a rough estimate that depends on a number of different factors such as the size of the tree. If you do decide to throw out your plastic tree, it's most likely to end up in landfill, as it's not currently recyclable.

Overall, your choice of Christmas tree has a relatively small impact on your annual carbon footprint. To give you a better idea, driving 12 miles in an average-size petrol car produces as much greenhouse gas emissions as buying a natural tree. Or 54 miles if that tree ends up in landfill. If you get an artificial tree, that's roughly equivalent to driving 135 miles.

Of course, there are other factors you might want to consider when you buy a Christmas tree. But in terms of environmental impact, reuse for artificial trees and disposal for natural trees are just two factors you might want to keep in mind.

Answers

Preparation task

1. impact
2. absorb
3. emissions
4. carbon footprint
5. disposal
6. landfill
7. decompose
8. greenhouse gas
9. recyclable
10. miles

Task 1

1. c, d, f, h
2. a, b, e, g

Task 2

1. b
2. a
3. b
4. b
5. a
6. b
7. a
8. b