FOREST LEARNING

Students

INNOVATIVE WAYS OF KEEPING THE HOME FIRES BURNING

When we use fossil fuels, such as petrol to go for a drive, or natural gas to take a hot shower, we create carbon dioxide ('CO2'). Carbon dioxide is a greenhouse gas.

Many scientists believe that greenhouse gases are making the earth too warm. Our carbon footprint is the total amount of CO2 we create. We can think of CO2 as 'energy waste' and we produce this energy waste every day. For example, every time we use energy that comes from fossil fuels, we create CO2 and make our carbon footprint bigger. A big carbon footprint is bad for the planet.

Activity 1 – How Big Is My Carbon Footprint?

https://www.youtube.com/watch?v=8q7_aV8eLUE

Watch the video: Simpleshow explains the Carbon Footprint, then fill in the table below.

The following table shows five daily activities that you or members of your household do or don't do most of the time. For each activity, decide whether A or B applies to you and place a tick in the small or big carbon footprint column that you think best matches your answer.

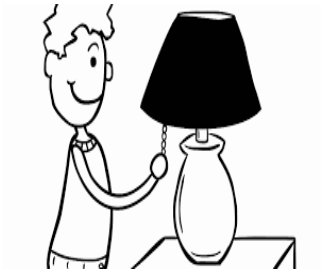
Then, think of three more activities that you or members of your household do or don't do most of the time and add them to the table.

Activities you and/or your household do most of the time….	**A – 1 point** 	**B – 2 points** 
1. To get to school, you A) Walk or bike ride , or B) Go by bus or car	Walk or bike ride	Go by bus or car

2. After your clothes are washed, they are A) Put into the clothes dryer, or B) Hung out on a line to dry		
3. When you do your homework after school, you A) Switch on a light to see better, or B) Sit by a window to see in the natural light		
4.When it's a hot day, you A) Open the windows to get some fresh air, or B) Switch on the air conditioner		
5. When you have finished using the computer for the day, you A) Shut it down, or B) Leave it on		

How many little carbon footprints did you score out of ten? _____

Which habits might you be able to change in your household to reduce your carbon footprint? Note them in the space below



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Activity 2 – Wood Pellets

http://youtu.be/w_i1TR8GaG0

Watch the video 'Going Bush – Innovative ways of keeping the home fires burning' and answer the following questions:

1. Beginning with the letter 'W', the new forest mill in Tasmania turns WHAT into wood pellets? _____
2. According to Rob Douglas, from 'Pellet Fires Tasmania', pellet heaters are one of the CLEANEST or DIRTIEST forms of combustion heating in the world? _____
3. According to Rob, WHICH COUNTRY has one of the toughest emission standards in the world?

   _____
4. According to Rob, some countries in WHICH TWO CONTINENTS banned wood heaters many years ago?

   _____
5. Rob says that pellet heaters have extremely LOW or HIGH emissions? _____
6. Nick says the wood pellets contain WHICH THREE INGREDIENTS? _____
7. According to Doug Massey, a Senior Manager for Forestry Tasmania, WHAT have they extracted from the sawdust to make the wood pellets? _____
8. Doug says there is also a LOW or HIGH ash content in the pellets? _____
9. According to Dr Matt Wood, a technical analyst in product development, WHAT makes up half the weight of timber? _____
10. Matt says making engineered wood products uses a lot less energy than making WHICH TWO PRODUCTS?

    _____

Activity 3 – A look At The Alternatives

Wood pellets are refined, compressed, cylindrical particles used for heating and are defined as renewable energy.

Working in pairs, do some online research and find three other energy sources for heating a home and find out whether they are renewable or non-renewable sources of energy:

1. _____ renewable or non-renewable? _____
2. _____ renewable or non-renewable? _____
3. _____ renewable or non-renewable? _____

Activity 4 – The Pro's and Con's

The narrator of the video, 'Going Bush – Innovative ways of keeping the home fires burning', tells us wood pellets are turning waste into 'good energy'. But some scientists say converting wood – even wood *waste* – to energy still has a negative impact on our environment.

Working in pairs, do some online research on wood pellets and list some of the environmental advantages and disadvantages of using wood pellets to heat our home instead of other products:

Advantages:

_____

_____

_____

Disadvantages:

_____

_____

_____

Activity 5 – Your Thoughts

Working in pairs, out of all the energy sources for heating a home you have learnt about in this lesson, which one do you think leaves the biggest carbon footprint? Why?

_____

Which one leaves the smallest carbon footprint? Why?

_____

About ForestLearning

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