

Topic: Sustainability

Lesson 2: Bottled water	KS or Year Group: KS 3
Resources: <ol style="list-style-type: none">1. Internet access2. Resource 2 – Bottled water environmental factsheet	Outcomes: <ul style="list-style-type: none">• Students learn about the issues surrounding bottled water.• Students are able to debate in class whether bottled water is a waste of money and environmental resources.

National Curriculum

Key Processes: 2.1a, 2.1b, 2.1c, 2.2a
Range and Content: 3e

Lesson 2

Following on from the taste-test experiment in the previous lesson, students now use the internet to look at the ways in which bottled water is marketed. If there is no difference in taste, what are the benefits of bottled water according to the advertisers? Looking more closely at the environmental impact of the market in bottled water, students are asked to advocate 'for' and 'against' positions in a class debate. The lesson ends with a vote on the question: is bottled water a waste of money and environmental resources?

Main activity

Activity 1:

- Using the internet, guide the students to a small selection of adverts for bottled water. If you are unable to access the internet in class, print out or photocopy advertisements from the press or internet in advance.
 - Key adverts the class could use include:
 - <http://www.youtube.com/watch?v=LQ4RfILjjKw> (Drench Spring Water)
 - <http://www.visit4info.com/details.cfm?adid=22023&version=6> (Evian)
 - <http://www.youtube.com/watch?v=7oWf6TI3LTk> (Perrier)
- Or, alternatively, just go to YouTube and key in a brand name.

Bottled water - Lesson 2

- Ask the students to think of adjectives that come to mind when they watch each advertisement, e.g. 'glamorous', 'cool', 'funny', etc.
- Given that there is no discernable difference in taste between tap water and bottled water, why might making these associations in the consumer's mind be particularly important for the bottled water industry?

Activity 2

- Split the class into groups of four. Give a copy of **Resource 2 – Bottled water environmental factsheet** to a pair from each group. Ask them to prepare an argument that the bottled water industry is a bad thing.
- Ask the other pair in each group to argue that the bottled water industry is a good thing. They can use any argument of their own choosing (e.g. 'what if people are outdoors and unable to get to a tap?'), plus any other facts that they are able to unearth via research (e.g. 'the bottled water industry employs about 20,000 people in Europe').
- You could also direct students to the environmental policy pages of the manufacturers' websites, such as:
<http://www.evian.com/us/> (choose Evian & the environment tab at the top)
<http://www.highlandspring.com/#/about-highland-spring/environment/> (Highland Spring)
<http://www.volvic1for10.co.uk/> (Volvic's campaign to build wells in Africa)
If you do not have internet access in class, you will need to print out a sample of these pages in advance.
- Ask each group to hold a brief debate on the issue in front of the class. For each group, ask the class to vote on which side won the debate. When all the groups are finished, take a whole class vote on the question: 'is bottled water a waste of money and environmental resources?'

Plenary

Summarise the main points in the debate about bottled water.

Extension activity

Ask the students to think about possible solutions to this problem. There are, in fact, bio-degradable bottles on the market. Are the students able to find any more information about these bottles on the web?

Summary of learning

- Student learn key ideas in the debate about the bottled water industry.
- Students develop awareness about imagery in advertising.

Resource 2 – Bottled water environmental factsheet

- 200,000 tonnes of carbon dioxide are produced by the bottled water industry every year. 57,000 trees would have to be planted to take in the 200,000 tonnes of carbon dioxide.
- Around 25% of bottled water is simply reprocessed municipal water (i.e. water from a tap). Both Aquafina and Dasani (Coca-Cola's bottled water brand) are from municipal water systems.
- 93% of mineral water comes in plastic bottles that take decades to bio-degrade.



- 0.1 pence = the cost of a litre of tap water in the UK. 95 pence is the average cost of a litre of bottled water in the UK.
- The environmental impact of bottled water has been estimated to be more than 100 times that of tap water.
- In the production of mineral water (water that comes from a bore hole or spring), tapping springs and aquifers (water trapped underground) even on a small scale can alter the movement of sediment in nearby streams, which can in turn disrupt the food supply for fish and other wildlife.
- 200,000 tonnes of plastic is transferred to China to be put in land-fills there.
- Once the bottle is created and filled with water, large amounts of fossil fuel are expended delivering the water from its source to end user by means of ground transportation. Overall, the average energy cost to make the plastic, fill the bottle, transport it to market and then deal with the waste would be like filling up a quarter of every bottle with oil.