

Water Shortage

Abstract:

People cannot live without water. Water is vital for life. However, the problems of global water shortages are getting more and more serious. We must face increasing water crisis and try our best to cope with it. In the lesson plan, first of all, students watch a film to further understand how water is an essential resource for life and why we have water crisis problem. Then, the class read an English news story. After reading it, they think critically and have a discussion in groups to find and analyze the reasons why water shortages occur and what measures they can take. After that, students write a composition to express their ideas about the topic. By being involved in the activities and tasks in the learning process, students not only improve their English listening, speaking, reading, and writing abilities, but also develop their problem-solving thinking and critical thinking. What's more, they raise public awareness of water issues.

Objectives:

1. Students improve their listening, speaking, reading and writing abilities.
2. Students examine the problems of water shortages and find some effective solutions.
3. Students develop problem-solving thinking and critical thinking.

Grade level: 11st-12nd graders

Time required: 100 minutes

Materials:

1. classroom computer
2. projector
3. pull down screen
4. Worksheets for each student
5. films from *Youtube*

Teaching procedure:

1. Download the film: *Water Crisis* or link to *Youtube* (<http://www.youtube.com/watch?v=BkNY78B2Jio>) and play it in class.
2. Ask some questions about the film, such as
 - A. Why do we need water?

- B. What is the topic of the film?
 - C. How does the water crisis affect us?
 - D. What can we do with water crisis?
3. Give out a news story (Appendix A)
 4. Have students read the story and the teacher explains the meanings of words/sentences.
 5. Ask students some questions about the news story.
 6. Spend a few minutes talking about how they felt about the water shortage in the story they read in pairs.
 7. Ask two or three volunteers to share their opinions or comments.
 8. Give them a big hand.
 9. Organize students into group of 4 to do group discussion.
 10. Hand out the Worksheet 2 (Appendix B) and complete it.
 11. Discuss the reasons of water shortage and think about the possible ways to save water. Make sure everyone in the group has a chance to share.
 12. Share their answers in class and write down them on the board.
 13. Evaluate what was said and vote on the best ones.
 14. Ask students to write a composition about water shortage (120-150 words) after class. (Appendix C). Encourage them to apply the ideas in discussion and to gather more information via the Internet, magazines, newspapers, and resources from the library to their writing.
 15. Tell them to present their compositions in the bulletin board or class blog/homepage next week.

Assessment:

1. Class participation: 40% (Students attendance, constructive participation and oral responses during class)
2. Assignments: 60% (including accuracy of information, organization, grammar, mechanics, and creativity 50 %; effort 10 %)

Suggestions:

1. This lesson plan may be applied to other topics in class. For example, natural disasters, and environmental protections.
2. Suggested Follow-up activities (depending on your time and needs):
 - A. Search the Internet and find information/films on the water shortages around the world. Talk about what you discover with your classmates.

- B. Write a diary entry for a day in your life. Note down all of the times you use water. Did you make use of the water? Could you have saved it? Discuss this with your partner(s).
- C. Write a poem or create a song about how to save/conserve water.
- D. Choose several of the words from the news story. Use a dictionary or Google's search field (or another search engine) to build up more associations / collocations of each word.
- E. Create a play about the topic to act it out in class.
- F. Search some newspaper article (in newspaper layout), front page story on: water shortage, water issues, drought, or other environmental issues.
- G. Do the video presentation – reporter bringing exclusive news on a water issue of importance.
- F. Make a Power point presentation on an important water issue.

References:

1. **Documentary Film 'Flow' Sounds Alarm on Worldwide Water Shortage**
<http://www.manythings.org/b/e/337>
2. **Global Water Shortage is Happening Now**
<http://www.youtube.com/watch?v=zdY5kM7GZaQ&feature=related>
3. **BBC News**
<http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/755497.stm>
4. **Water Crisis**
<http://www.youtube.com/watch?v=BkNY78B2Jio>

Appendix A

Dawn of a thirsty century

By Alex Kirby

BBC News Online environment correspondent

The amount of water in the world is limited. The human race, and the other species which share the planet, cannot expect an infinite supply.

Water covers about two-thirds of the Earth's surface, admittedly. But most is too salty for use.

Only 2.5% of the world's water is not salty, and two-thirds of that is locked up in the icecaps and glaciers.

Of what is left, about 20% is in remote areas, and much of the rest arrives at the wrong time and place, as monsoons and floods.

Humans have available less than 0.08% of all the Earth's water. Yet over the next two decades our use is estimated to increase by about 40%.

Water shortages set to grow

In 1999 the United Nations Environment Program (UNEP) reported that 200 scientists in 50 countries had identified water shortage as one of the two most worrying problems for the new millennium (the other was global warming).

We use about 70% of the water we have in agriculture. But the World Water Council believes that by 2020 we shall need 17% more water than is available if we are to feed the world.

GETTING WORSE

- Growing populations
- Inefficient irrigation
- Pollution

So if we go on as we are, millions more will go to bed hungry and thirsty each night than do so already.

Today, one person in five across the world has no access to safe drinking water, and one in two lacks safe sanitation.

Today, and every day, more than 30,000 children die before reaching their fifth birthdays, killed either by hunger or by easily-preventable diseases.

And adequate safe water is key to good health and a proper diet. In China, for example, it takes 1,000 tones of water to produce one tone of wheat.

Inefficiency behind water crisis

There are several reasons for the water crisis. One is the simple rise in population, and the desire for better living standards.

In China it takes 1,000 tones of water to produce one tone of wheat

Another is the inefficiency of the way we use much of our water. Irrigation allows wastage on a prodigal scale, with the water trickling away or simply evaporating before it can do any good.

And pollution is making more of the water that is available to us unfit for use. The Aral Sea in central Asia is one of the starkest examples of what pollution can do, to the land as well as the water.

Increasingly, governments are seeking to solve their water problems by turning away from reliance on rainfall and surface water, and using subterranean supplies of groundwater instead.

But that is like making constant withdrawals from a bank account without ever paying anything into it.

Looking for solutions

And using up irreplaceable groundwater does not simply mean the depletion of a once-and-for-all resource.

Rivers, wetlands and lakes that depend on it can dry out. Saline seawater can flow in to replace the fresh water that has been pumped out.

Pumping groundwater is like making constant withdrawals from a bank account without ever paying anything into it

And the emptied underground aquifers can be compressed, causing surface subsidence - a problem familiar in Bangkok, Mexico City and Venice.

There are some ways to begin to tackle the problem. Irrigation systems which drip water directly onto plants are one, precision sprinklers another.

There will be scope to plant less water-intensive crops, and perhaps desalination may play a part - though it is energy-hungry and leaves quantities of brine for disposal.

Climate change will probably bring more rain to some regions and less to others, and its overall impact remains uncertain.

But if we are to get through the water crisis, we should heed the UNEP report's reminder that we have only one interdependent planet to share.

It said: "The environment remains largely outside the mainstream of everyday human consciousness, and is still considered an add-on to the fabric of life."

Story from BBC NEWS:

<http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/755497.stm>

Published: 2000/06/02 09:30:01 GMT

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Appendix B

Worksheet 2

In pairs / groups, discuss and write down the reason of water crisis and ways of saving water. Then, make a mini presentation for the rest of your class.

Class:

Name:

No.

Reasons of water crisis	Ways of saving water

Appendix C

