

**ecoMentors Lesson Plan Template: Helping kids explore the planet! www.ecomentors.ca**

**Title: Air and Water in the Environment**

**Grade Level(s): 2**

**Time/Date:**

**School:**

**Teacher:**

**Directions to school, class:**

**Contact Info:**

**Ontario Curriculum Connection: Earth and Space Systems – Air and Water in the Environment**

Vocabulary: Words & Concepts your class may be learning, look these up yourself too!

**Environment** – the things around us that help us live

**Conserve** – to protect from loss or harm, to keep, save or reduce

**Evaporate** – when water changes from liquid to gas

**Materials and Equipment:** List these before and while you plan and revise so you're prepared.

- two clear glasses, one filled with water

- Old cotton cloth from your kitchen, a bit of plant soil from the classroom

What is your class accomplishing?: Learning & Activity Goals, Objectives

- **Demonstrate an awareness of the forms in which water and air are present in the environment, and describe ways in which living things are affected by water and air**
- **Describe the movement of air relying on their observations of its effects (e.g., tree branches swaying)**
- **Identify ways in which changes in temperature affect living things, including themselves**
- **Investigate the visible effects of air and water in the environment**
- **Describe ways which clean air/water are vital for meeting the needs of humans and other living things**
- **Describe the different uses of water and identify some that are essential for maintaining our health.**

**PROCEDURE**

The Spark: Introductions, Demonstrations, Show and Tell, Topic Intro (Break the ice!) ~5-10min

*Hello everyone. Can you all tell me your names and give an example of how people use air or water?*

Take the glass of water over to a sunny or warm spot in the classroom and dip your finger in the water, with your finger put a drop of water on the warm surface.

*What will happen to the little drop of water? Where does the water go? How long will it take the water to disappear into the air? How many students say the water will disappear in 15minutes? Write down '15minutes' and write down the number of students. How many students say the water will disappear in 30minutes (half an hour)? Write down '30minutes' and write down the number of students. Repeat for 45 minutes and 1 hour.*

Remember to check or ask students to check the drop of water every 15minutes.

*How can we see water in the air? (Rain, steam, fog)*

*Is there air in this classroom? Where is it? Is there air outside? How do we know there is air?*

Ask students to standup and take a deep breath of air. Breathe in through the nose and out through the mouth.

*Can you see any clouds in the sky? Are they moving?*

Brainstorming, Getting ideas, Connecting ideas (assess their knowledge!) ~10-20min

Ask students: *What are the different temperatures? Start at 'warm'*

Possibilities would be: Freezing cold, cold, cool, room temperature, warm, hot, boiling hot

Ask students: *What do you do when it is Freezing cold, cold, cool, room temperature, warm, hot, boiling hot?*

*What do animals and plants do when it is Freezing cold, cold, cool, room temperature, warm, hot, boiling hot?*

Activity, Game, Exercise, Debate, Puzzles, Problem Solving, Role Play ~10-30mins

Play a game of 'Hot and Cold', ask: *Would one student like to go outside while we hide the glass of water? If students are not willing you can always volunteer yourself and ask the teacher to work with the students to hide the glass of water.*

*"This glass of water was hidden away by you. Water is actually all around us and was used to make or keep many of the things you see around us. Can you look around the classroom and find an object that was made with water or needs water to keep it clean?"*

Activity, Game, Exercise, Debate, Puzzles, Problem Solving, Role Play ~10-30mins

**Clean air and water:**

*How does water and air get dirty? (How do humans make water and air dirty?)*

*Can someone come up to the board and draw out how people make water and air dirty? The other students will guess what it is. If you guess right, you can come up and draw.*

*Why do plants, animals and people need clean water? What happens if the water that we use is dirty? Do you know of any plants, animals or people that got sick because of dirty air or water?*

*Do you know how we make clean drinking water?*

Put a small amount of soil in the glass of water. Stir with finger, pen or anything else. Making sure the water looks nice and dirty. Tell the class: *Can we drink this water? This is polluted water, we want to make it clean and drinkable. What should we do first?* Discuss this with students.

Demonstrate filtration by putting the cloth over the empty glass, ensure the cloth dips into the glass so no water spills out. Slowly pour the 'polluted' water into the cloth and show the results of the glass. If you dare...you can drink the water. *Do you think we can drink the water now? Do we need to clean the water more? How do we do this?*

Activity, Game, Exercise, Debate, Puzzles, Problem Solving, Role Play(Pt. II or Cont...) ~10-30mins

**Water conservation:**

Divide the class in half. Explain to the class that the one half should think of ways how humans waste water. The other half should come up with a solution to conserve water. For every right answer the groups get a point. Keep track of the score on the board!

Encourage the students to come up with creative answers.

Contingency, Plan B, extra game or activity (Back up plan) ~5-10mins

**Water cycle:**

*Ok students, we are going to draw a picture of what happens with a drop of water. You have to draw everything that happens with this drop. You can give your drop of water a name too!*

*Think of the drop of water here in the class room: where does it go? How are clouds formed? Where does the water go after it has rained? Write these questions on the board to help them focus!*

Afterwards; discuss the drawings and summarize a simple water cycle. If you think the class is up to it: explain the terms evaporation, condensation and precipitation.

Review, Conclusion and steps towards continued action ~5-10mins

*What happened to our drop of water? How long did it take to evaporate? Where did it go?*

Make two columns on the board. One with the title '**Wasted Water**' and the other one '**Water Conservation**'. Ask the class: *How is water wasted everyday? How can we conserve water?*

*Which of the 'Water Conservation' solutions is reasonable? Why or why not? Discuss.*

Ask students: *How many of you from now on will exercise ...(name the solutions that students came up with on the blackboard and ask students to raise their hands or act out the solutions)*

Read out the following poem:

There are 2 things that we all must get:

Air that's pure and water that's wet.

They help us to live every day

But there's a problem in the way.

Pollution gives me quite a scare,

If it gets in the water or in the air.

Smog, oil spills, garbage, too,

But there are things that you can do.

Change your habits, use your wit,

And our environment will benefit

So make a plan and stick to it

Because every step helps a little bit.<sup>1</sup>

**References**

1. Teaching Green, the elementary years. Edited by Tim Grant and Gail Littlejohn  
<http://www.kidzone.ws/water/>

Great work ecoMentor! After use of Lesson Plan revise, add ideas and repeat!