



Earth Matters

**"The earth is my mother
water is my blood;
The air is my breath
And fire is my spirit."**

– Native American verse

With Earth Day around the corner Teacher Plus brings you a range of activities for different age levels that focus on the environment.



How much power?

All of us are used to a number of electrical appliances in our homes. Have you thought about how much power would be consumed in one hour if you turned on every single fixed appliance in your house? Let's find out!

Walk around your house, room to room, make a note of all the fixed electrical appliances and fill out the table below. Find out how much power each appliance uses. The power consumption is usually marked on the appliance. An appliance that is marked as 60 watts, for instance, will use 60 watts of power in one hour. Some only have the amperage marked – in such instances, you need to multiply the amps by the voltage (which in India is 240 V) to get the wattage.

You can calculate the power used by each appliance using the following formula:

1 kilowatt = 1000 watts; When you use 1 kilowatt of power over one hour, you consume 1 unit of power.

Room	Lights			Fans		Appliances – large plugs		Appliances – small plugs		Other	
	No.	Watts	Power used	No.	Power used	No.	Power used	No.	Power used	No.	Power used
Kitchen	3	60 × 2 40 × 1	160 watts	1							
Total power used											

Most appliances are of course not turned on all day. Even refrigerators and television sets do not actually use the amount of power that is marked on them, because this power is consumed only when the mechanism is at work (e.g., when the compressor of the fridge is not working, it uses only 0.5 KW).

Now you can estimate how much is actually used each day by monitoring how many of the power points are working through the day and for how long.

Where can you make a difference and how?

Two dozen and counting!

Have you taken a careful look around you? You'll be amazed at the variety of things in your surroundings if only you look carefully. Walk around your school compound or a neighbourhood park and look for items on this list. Take some extra paper to draw a picture of each item you find.

1. Something wet
2. Something that is moving fast
3. Something green
4. Something that has branches but no leaves
5. Something hard
6. Something brown
7. Something orange or red
8. Something that floats
9. Something pointy
10. Something with cracks
11. Something noisy
12. Something with a strong smell
13. Something a cow could eat
14. Something a bird could eat
15. Something with thorns
16. Something slippery
17. Something soft
18. Something new
19. A plant with leaves
20. Something put here by people
21. Something cold
22. Something tall
23. Something short
24. Something hot



Bring your list back to class and talk about the different things you found. How many items did you discover? Did some things you find fit into more than one category? What was your favorite thing you found today? Why?

Why we need wind

A Native American Eco-Fable

Long ago, Klouskap lived with his grandmother, Woodchuck, in a small lodge by the ocean. One day Klouskap decided to hunt some ducks. So he took his bow and arrow and got out his canoe. Klouskap began to paddle out to the ducks, singing as he went along. A wind came up and forced his canoe around and blew him back to the shore. He began to paddle even harder and he sang a little harder but the wind blew him back to the shore again.

Frustrated, Klouskap went to his grandmother and asked her where the wind came from. His grandmother told him. "Far away, on top of the tallest mountain, lives a great bird called Wuchowsen. When he flaps his wings, he makes the wind blow." Klouskap asked his grandmother where he could find the mountain. She told him to face the wind and walk. Klouskap thanked her and began his journey.

He walked across fields and through deep woods and the wind blew hard. Klouskap came to the foot of the highest mountain and the wind blew even harder. He began to climb the mountain. As he approached the top, the wind was so strong that it blew all the hair and clothing off Klouskap's body. Klouskap took a deep breath. "GRANDFATHER!" he shouted. Wuchowsen stopped flapping his wings and answered, "Who calls me Grandfather?" Klouskap answered, telling the Wind Eagle that he was doing a very good job at making wind. Wuchowsen puffed his chest out in pride and made the wind blow so hard it almost blew Klouskap off the mountain top. Klouskap told Wuchowsen that he could do an even better job if he were to move to another peak. Klouskap took a carrying strap that he had made and wrapped it around the Wind Eagle. He picked him up and began to carry him to the other peak. On the way, they had to cross a deep crevice, and as Klouskap stepped over it he let

go of the strap and Wuchowsen fell in and was trapped.

Klouskap returned home and all the way he felt no wind at his back. By the time he returned his hair grew long and he grew tall and was once again ready to hunt for ducks. He paddled out to the ducks but the air was very dry and still and he began to sweat. The water began to grow dirty and smell bad and there was so much foam on the water he could hardly paddle. Klouskap went to his grandmother's lodge to ask for help. She told him that the wind was needed to keep the air cool and clean. The wind brings the clouds that give us rain and they keep the water fresh and sweet. Without the wind life would not be good for the people. Klouskap thanked his grandmother.

Klouskap went back to the place where he had dropped the Wind Eagle and called out "UNCLE!" Wuchowsen asked "Who calls me Uncle." "It is Klouskap, Uncle. I am up here but who put you down there?" Wuchowsen told Klouskap that a very ugly boy with no hair had tricked him and dropped him in the crevice.

"Ah, Grandfath.....um, Uncle, I will get you out." Klouskap climbed down into the crevice and pulled Wuchowsen free and placed him back on the mountain. "Uncle," Klouskap said, "It is good that the wind blow sometimes and other times not." Wuchowsen looked at Klouskap and nodded. "Grandson, I hear what you say."

Klouskap learned that Wind is the carrier of thought and action, and is the breath of the earth.

Adapted from a traditional story of the Penobscot Indian Nation of North America, originally told by Jason K. Brown.

Comprehension

1. According to Klouskap's grandmother, who made the wind and how?

2. How did Klouskap trap Wuchowsen?

3. What happened when wind did not blow any more?

4. What did Klouskap do to bring back wind?

5. What lesson did Klouskap learn from his experience?

6. How does the wind keep the earth healthy?

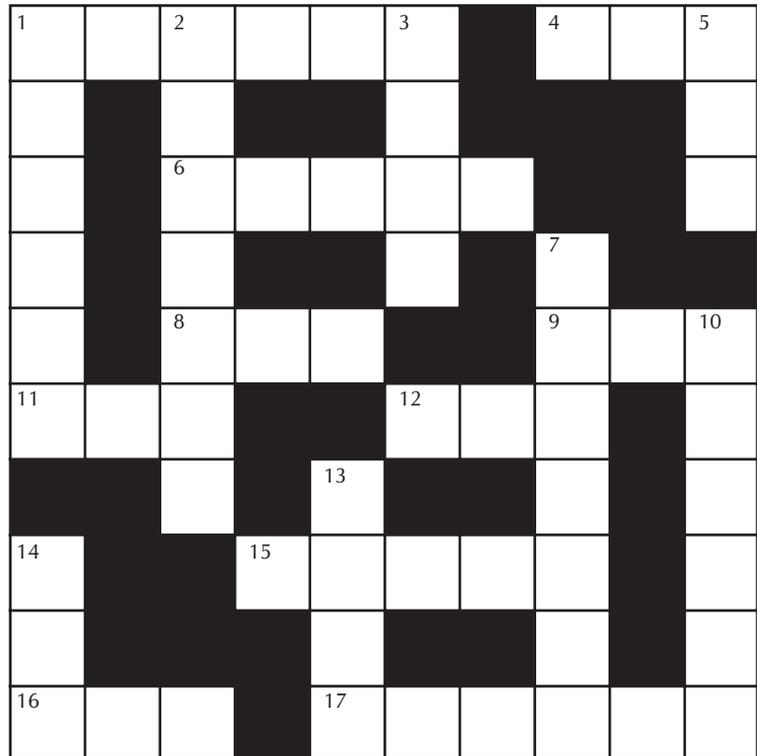
Note : We hope you enjoyed reading Klouskap's adventure to your students. You could discuss other similar fables from different cultures including ancient Indian stories or folk tales with an ecological theme to help your children understand the importance of conserving nature.

Cross your words and go green!

The words in the grid have something to do with the environment in some way – they come from, or are against or for nature and its forces. Relate the clues to ideas from the broad theme of the environment and you'll find the answers easily enough!

ACROSS

1. The element that is black as coal yet bright as diamonds! (6)
4. A pesticide that was widely used to spray crops and repel mosquitoes (3)
6. A bipedal vehicle, a revolution too! (5)
8. At the poles, it's made of ice (3)
9. The source of a bright form of energy (3)
11. One of our primary fuels (3)
12. A disease recently attributed to the birds! (3)
15. Patkar, champion of the displaced in Narmada Valley (5)
16. The international body responsible for global health (3)
17. In the air, in water, in our foods, they're poison! (6)



DOWN

1. A movement started by tree huggers? (6)
2. Do this, and things will last longer (7)
3. A river and the cradle of an ancient civilisation (4)
5. The green variety of this is said to make a healthy cuppa (3)
7. A giant tidal wave (7)
10. It seems like winter ... never end in the northern regions (6)
13. A form of energy measured in calories (4)
14. As you ..., so you shall reap – seeds, grain, or deeds? (3)

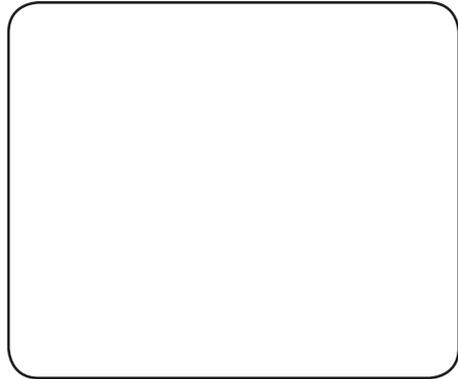
Take a leaf out of nature's book

Do you know how many different kinds of plants and trees grow around your school or your home? Catalogue all the plant species in your immediate surroundings? If your school does not have any plants, then walk around your home and see what you can find. Create a small 'herbarium' of pressed leaves and flowers. Keep a record of what you find using this form and draw a typical leaf, flower and fruit in the box.

1. Common name

How can you identify it?

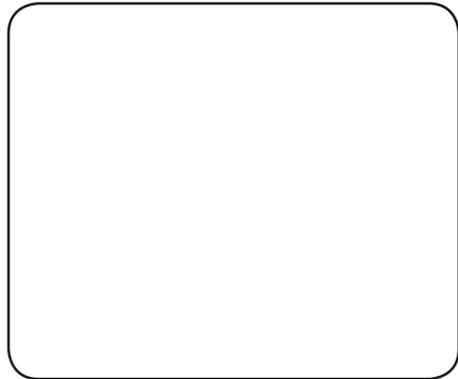
What is it used for?

A large, empty rounded rectangle with a black border, intended for drawing a typical leaf, flower, or fruit of the plant identified in the first section.

2. Common name

How can you identify it?

What is it used for?

A large, empty rounded rectangle with a black border, intended for drawing a typical leaf, flower, or fruit of the plant identified in the second section.

3. Common name

How can you identify it?

What is it used for?

A large, empty rounded rectangle with a black border, intended for drawing a typical leaf, flower, or fruit of the plant identified in the third section.

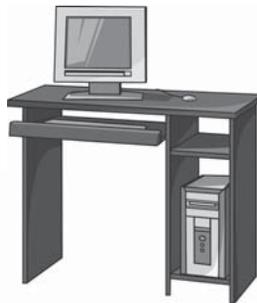
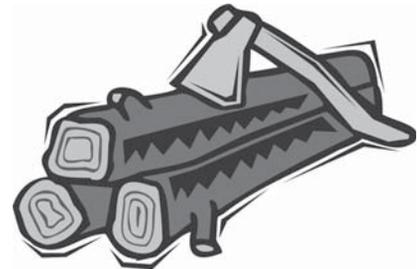
Note: Find the local and scientific names of the plant/flower/fruit you draw.

Reduce, reuse, recycle, renew!

Look at the items on this page.

- Mark a circle around the things you can use less of (reduce).
- Draw a square around those you can reuse a few times at least.
- Draw a triangle around the things that you can recycle.
- Mark with a star things you can grow again, or make more of, over time (renew).

Do you know of other things that you can put into these groups?



- Across**
1. carbon
 4. DDT
 6. cycle
 8. cap
 9. sun
 11. oil
 12. flu
 15. Medha
 16. WHO
 17. toxins

- Down**
1. Chipko
 2. recycle
 3. Nile
 5. tea
 7. tsunami
 10. nights
 13. heat
 14. sow

Crossword Solution