

Boofo's Nature News

Spring Edition



Hello boys and girls — Boofo Toad here again! What does conservation mean to you? Does it mean protection of natural resources? Does it mean using non-renewable resources wisely? Yes! It means both of these things. It is the careful protection of a natural resource. In this issue of Boofo's Nature News, you will be reading and doing activities related to soil and water conservation. Animals (like me) and plants and humans, too, depend on these natural resources directly or indirectly for life.

Soil and water can serve as habitats (homes). Many different insects, worms, bacteria, and microscopic creatures live in the soil and water. Also, animals such as fish, snakes, lizards, beaver, muskrat, toads (my personal favorite), and some birds live on, in, or near water. In the soil live moles, prairie dogs, snakes, and lots and lots of worms.

Since all living things depend on soil and water to live, it is important to take care of these resources and conserve them.

Developed & Published by:

**Sycamore Trails Resource Conservation
and Development Council, Inc.**

EDUCATION COMMITTEE

1007 Mill Pond Lane Suite B
Greencastle, IN 46135
(765) 653-9785

www.sycamoretrails.org



*Sycamore Trails is an equal opportunity employer
and service provider*



Who Am I?

Most people never give me a thought, but without me, life on Earth would be almost non-existent. I am an essential part of the foundation of life. Consider me as a natural resource that requires great care by you. Before I became what I am today, I was nothing more than a chunk of bare rock. How I came to exist is an interesting but very complex story which you may want to investigate further. But for now, a brief explanation will help you to know more about me.

The forces of nature working on my parent (that bare chunk of rock) for hundreds of years brought about countless changes which resulted in what I am today. In my present state, I do not even closely resemble my parent rock. However, I still retain a major part of my parentage, which is the mineral part of me. I am composed of four basic parts which are: (1) mineral matter (decomposed rock) (2) organic matter (decomposed plants and animals), (3) water, and (4) air. Even though I can be divided into only four basic parts, I differ greatly from one location to another. In Indiana alone, I can be categorized into hundreds of different types. Some of the ways in which I differ from place to place include: color, texture, chemical content, physical structure, ability to hold water and numerous other ways. I am not the same everywhere because of the various processes of nature which have brought me into existence. The kind of rock from which I came and how climate affected my parent are part of the reason I exist in many variations. Plant and animal life, topography and time are equally important in my formation. As a result of all of these factors at work in nature, I exist as a key to life. My name is Soil. Your future depends on how well you take care of me.

Here's the Scoop on Soil

Soil is one of the most important natural resources on earth. All living things depend on it for food. Our food-producing (arable) land is a limited resource. In fact, we can lose many acres of soil each year through urban growth, industry, and erosion. Yet, the world's population continues to grow. Because of this, the soil has many demands put upon it. Each person's food producing portion of land is becoming smaller and smaller. Therefore, more food must be produced for more people on less land. To make sure that we have good, fertile soil in the future, it is important to conserve soil now.



There are many ways that soil can be protected. Many conservation practices (practices which conserve soil) are being used by people with conservation jobs. Farmers conserve soil by leaving a cover of crop residue (residue left after crops are harvested) on the soil surface. This practice slows the impact of raindrops which can explode soil into the air where it can easily erode (be carried away from its original site). Farmers use other practices which can catch soil that has been displaced before it leaves the field. Foresters conserve soil by planting trees. Tree roots hold soil in place so that it has less chance of eroding. Developers of housing subdivisions also conserve soil by making sure that the soil surface is protected by either grass or mulch or both. They also use ponds which catch any sediment that may have been displaced by erosion.

Not only can people with careers in conservation conserve or protect soil, but *you* can, too, right in your own yard! You can plant trees and grasses, or other vegetation like flowers and shrubs. You can also cover any bare soil with a mulch of straw or wood chips or even pine needles.

Challenge: Try at least one conservation practice at home with your parents!

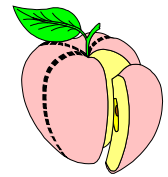
The Worm

by Ralph Bergengren

When the earth is turned in spring
The worms are fat as anything.
And birds come flying all around
To eat the worms right off the ground.
They like worms just as much as I
Like bread and milk and apple pie.
And once, when I was very young,
I put a worm right on my tongue.
I didn't like the taste a bit,
And so I didn't swallow it.
But oh, it makes my mother squirm
Because she thinks I ate that worm!



**Eat
the
Earth**



Try this experiment at home or in the classroom! You will need to use a sharp knife, so please have an adult present.

Materials: A large apple, a paring knife

Procedure:

1. Cut the apple into four equal parts. Three parts represent the oceans of the world. The fourth part represents the land area..
2. Cut the land section in half lengthwise. Now you have two 1/8 pieces. One section represents land such as deserts, swamps, the arctic and Antarctic, and mountain ranges.
3. The other 1/8 section represents land where man can live. Slice this 1/8 section lengthwise into four equal parts. Three of these 1/32 sections represent the areas of the world too rocky, too wet, too hot, or where soils are too poor for crop production, as well as areas developed by man and covered with homes, buildings, roads, parking lots, etc.
4. Carefully peel the last 1/32 section. This small bit of peeling represents the soil of our earth on which mankind depends for food production!
5. Think about what this soil is used for.

Sand Painting

Because sand can be dyed any color, it can be used to create beautiful paintings. As an artist uses paint on a canvas, you will use colored sand. The subject for this sand painting is a butterfly and an apple on a branch. Find pictures of these natural beauties, and decide what colors to dye your sand. Once you start working on this painting, you won't be able to put it down.

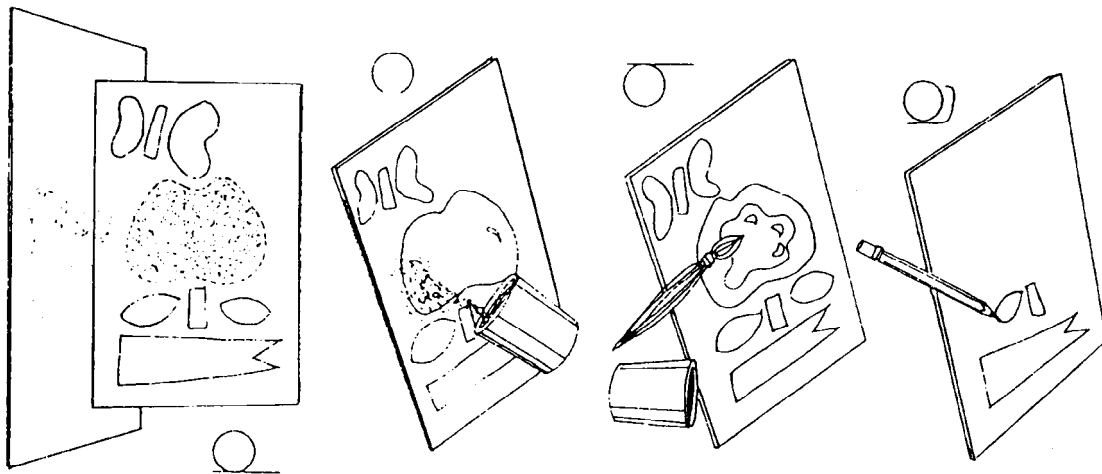
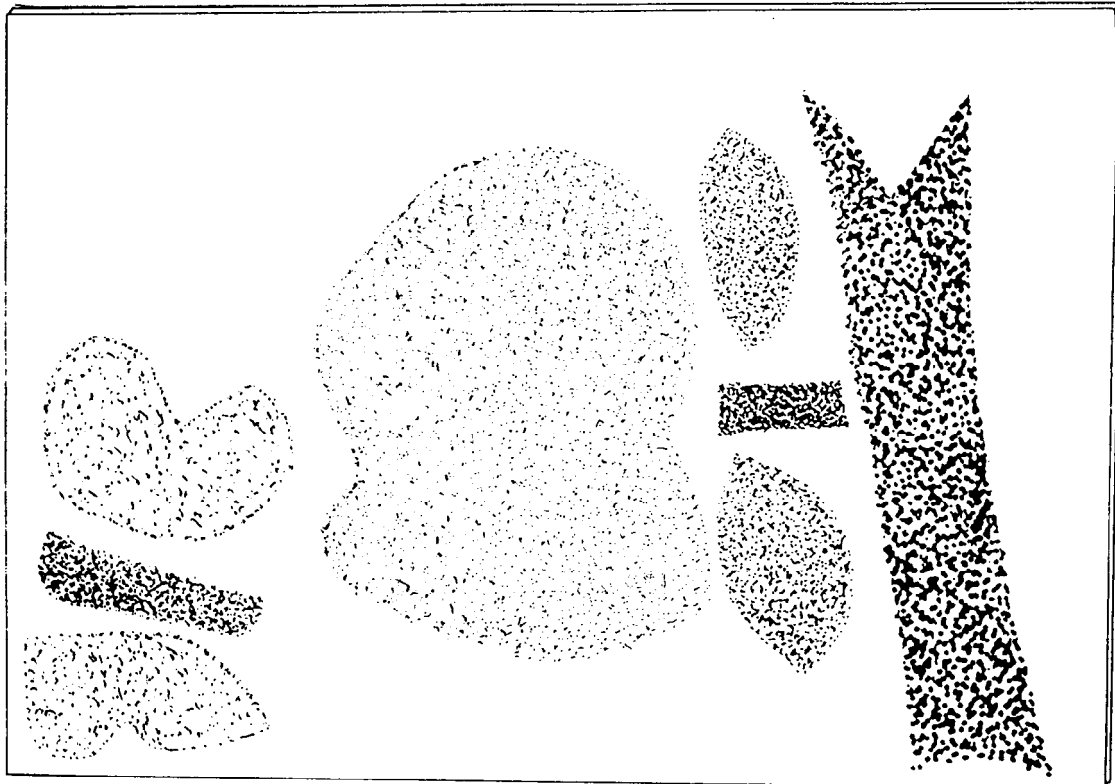
Instructions are on this side. Illustrations are on the other side.

Things You Need

- pencil
- heavy white drawing paper
- sand
- paper cups
- boxed dyes or food coloring
- plastic spoons
- paper towels
- liquid white glue
- paintbrush

Let's Begin

1. With a pencil, draw the design shapes as you see them in the illustration on a sheet of heavy paper, Figure a.
2. Dye and dry the sand.
3. Pour liquid white glue into a paper cup.
4. Using the paintbrush, fill in one of the design shapes with glue.
5. Sprinkle one color of dyed and dried sand over the glue area, Figure c.
6. Repeat gluing design shapes and sprinkling on different colored sand in different areas of your design.
7. Let the painting dry.
8. When the painting is dried, tip it over a paper towel to remove any excess sand that did not glue in place, Figure d.



Water, Water Everywhere . . .

Water is one of the four elements (earth, air, fire, water). Without water we could not live on the earth because human beings, plants, and animals depend on water for life. Water can occur as a solid, liquid, or gas. Water falls from the atmosphere in the form of precipitation and seeps below the surface, creating reserves of groundwater that we tap for our use. To live healthy lives, we must conserve earth's plentiful supply of clean water. There is the same amount of water on earth today as there was millions of years ago. There also will never be any more water on earth than what there is now. Just think! We could be drinking water that was once part of a dinosaur!

The water we now have must be protected so that it does not become unusable because of pollution. The number one type of water pollution is *sedimentation*. Sedimentation happens when displaced soil (sediment) is washed

into a body of water, making it muddy and filling it up. With the use of soil conservation practices, sedimentation can be slowed down. We all want and need clean water to drink; therefore, we must be water-wise and conserve soil so that it cannot pollute water.



Another thing that can be done to conserve water is to cut down on the amount of water we use in our every day lives. In Bofo's article, "How Much Water Do We Use in a Day?" there are listed amounts of water that are used by the average family in a day. Try to think of ways that you can use less water while doing these activities.



RECIPE FOR WATER



Step 1 - Pour 5 gallons of water in a bucket. (This represents all the water on earth.)

Step 2 - Remove 2 ¼ cups from the bucket and put in bowl #1. (This represents all the fresh water on earth — water left in the bucket is salt water.)

Step 3 - Take 1 ¾ cups of water out of bowl #1 and place it in container #2. (This represents water that is inaccessible to us - locked up in polar ice caps, glaciers, top soil and suspended in the atmosphere.)

Step 4 - Remove 5 drops of water from bowl #1 and place it in container #3. (This represents the fresh water that is available and usable to man. What is left in bowl #1 represents expensive, inaccessible and polluted water.)

Servings: **FIVE DROPS** - - - - - it's hard to believe that of all the water on earth only 5 drops out of 5 gallons is fresh water available and usable to us!!



How Much Water Do We Use in a Day?

Taking a bath or shower	15-30 gallons
Watering the lawn	180 gallons
Washing the dishes	15-60 gallons
Washing clothes	30 gallons
Flushing the toilet	4-7 gallons
Brushing teeth	1 gallon
Drinking	1/2 gallon



WORD FIND



C	A	S	A	L	T	J	O	P
O	C	E	A	N	N	D	R	O
N	E	M	I	N	E	R	A	L
S	O	I	L	X	M	I	H	L
E	R	T	Y	S	I	N	S	U
R	E	T	A	W	D	K	E	T
V	O	V	F	O	E	W	R	E
E	E	T	L	R	S	I	F	T
Q	A	G	M	M	S	L	B	J

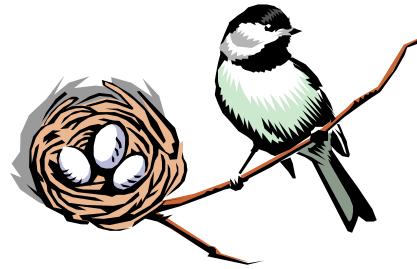
Find the following words in the puzzle to the right:
conserve, drink, fresh, mineral, ocean, pollute,
salt, save, sediment, soil, water, worm

Wacky Water Words

Unscramble the clue words to complete the sentences.

1. All living things need _____ to live.
tewra
2. When water evaporates, it travels into the air and becomes part of a _____.
dlocu
3. Less than 1% of all the water on earth is _____ water.
sefrh
4. We _____ water in the liquid form.
ikrdn
5. Check for leaks and save hundreds of _____ of water a day.
lonsalg
6. You'll save water by taking a quick _____.
horsew
7. Wash bikes and cars with a _____ and sponge _____ instead of a running hose.
kectub
8. Ask your _____ to look for ways to conserve water.
mfaiyl

LOOK...



But Don't Touch!

With the coming of spring, thousands of animals are building nests and dens where they will raise their young. You may even be lucky enough to see a fawn grazing with its mother, a baby rabbit scurrying around in the grass, or a bird that has just hatched out of its egg.

If you happen to see a wildlife baby that seems to have been abandoned by its parents, please don't take it home and try to care for it! Wildlife parents often leave their babies safe in nests or dens while they look for food. Wild animals were designed with amazing survival skills.

Many times the parents will stay hidden as long as a stranger is near that might harm them or their babies. Even if you don't see the parents, they could still be very close, waiting for you to leave.



If you see a baby animal that is clearly injured, cover it with a cloth, gently place it in a box, and contact your Department of Natural Resources Conservation Officer or Soil and Water Conservation District. They can give you the phone number of a licensed wildlife rehabilitator who is trained to nurse the animal back to health and release it again. Even rehabilitators don't keep wild animals as pets. They are hard to care for and can carry many diseases. While they are fun to watch, wild animals are meant to live where they are — in the wild!