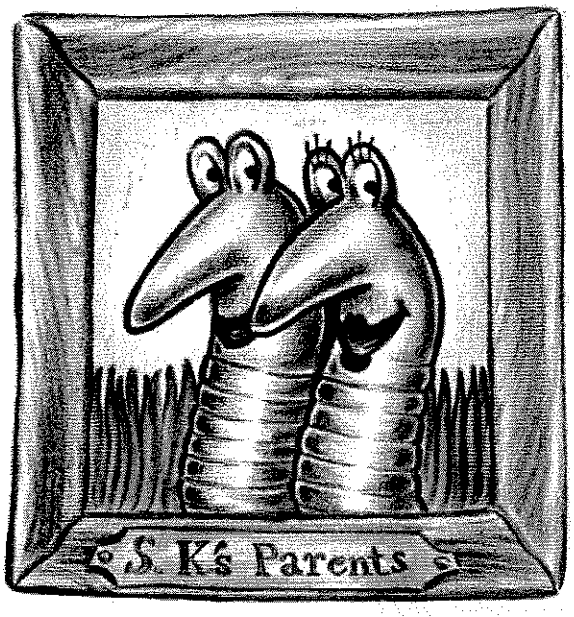
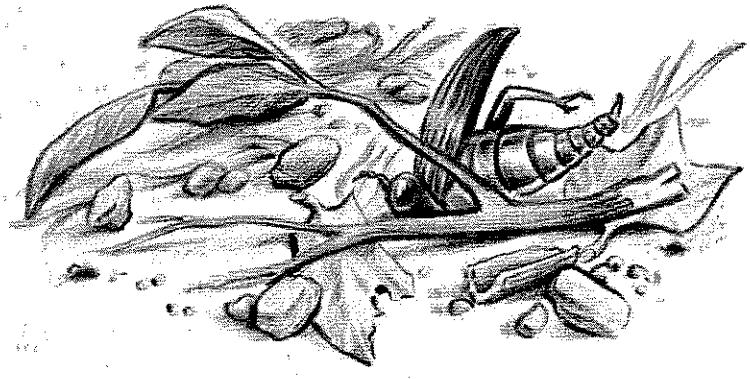
Question: Does soil have parents?

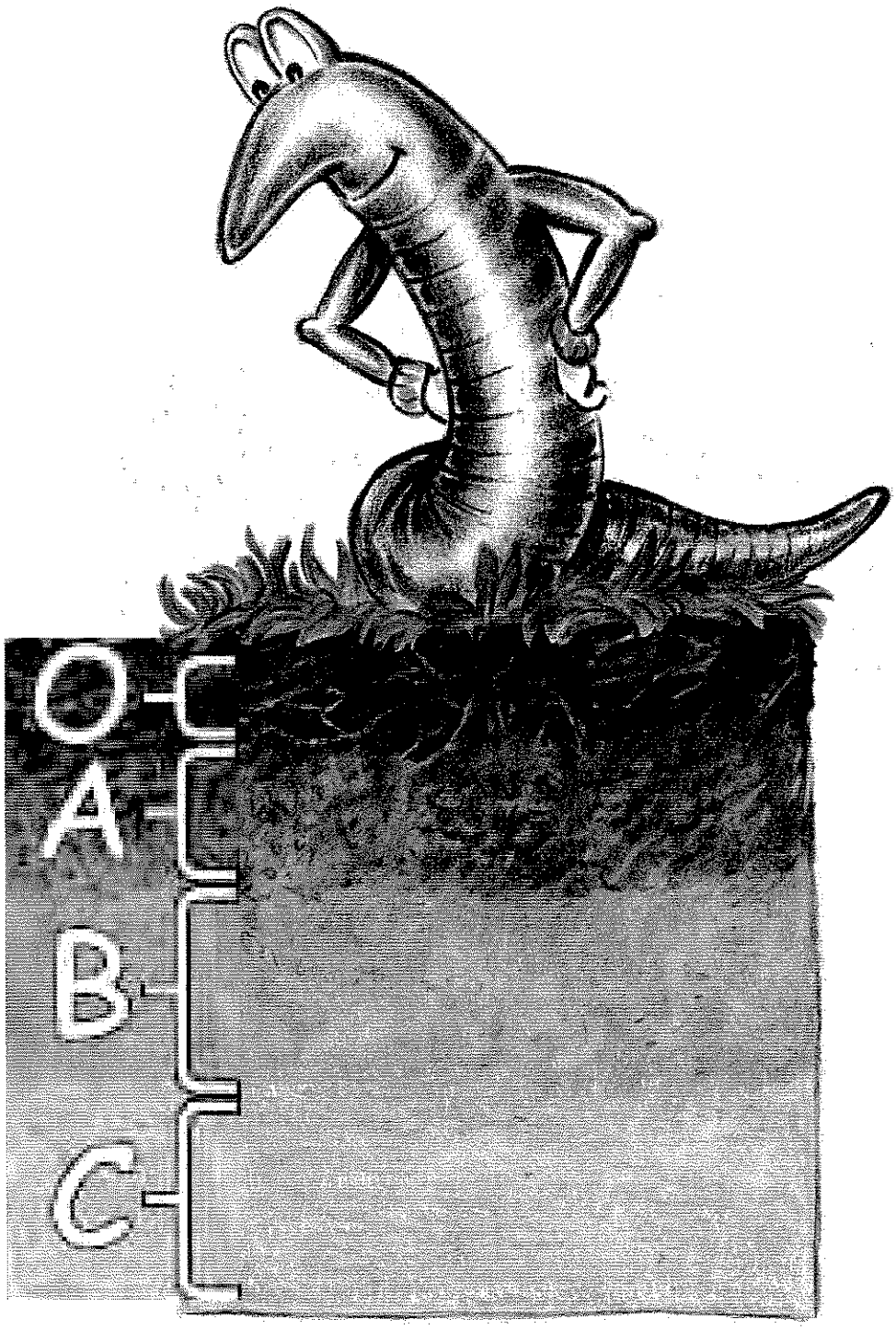




Answer:

Soil doesn't have a mom and dad. But it is made up of something called parent material-the basic stuff needed to make soil.

Question: What is the *horizon*?



Answer: **There are horizons in the soil named O, A, B, and C.**

"O" is the top horizon and is about an inch thick. It is made up of Organic matter dead stuff that breaks down to keep soil horizon "O"-so healthy.

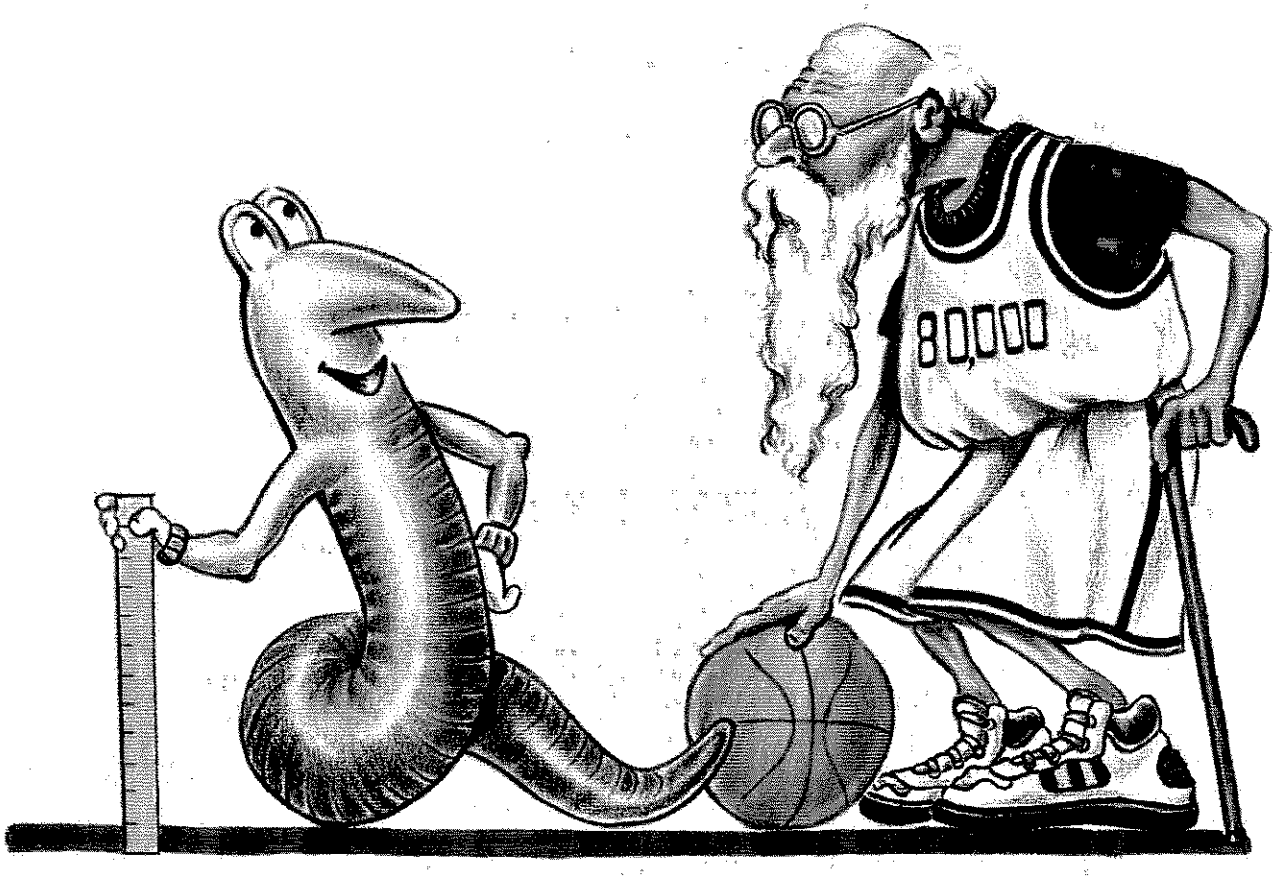
The "A" horizon is topsoil that's alive with roots, tiny microstuff like bacteria and fungi, and all kinds of critters like me.

The A horizon is "A-OK" with me.

The third layer is horizon B. Plants and animals have a tough time getting through B. Why? "B"-cause it's very hard.

See horizon C? You see, horizon C has less living stuff in it than O, A, and B. **C is parent material** that's made up of the rock and soil that formed the three layers above it.

Question: Does soil care about time?



Answer: Soil is never in a hurry. Especially when it comes to making more soil. In South Dakota, it can take 500 years to form one inch of soil. If people grew that slowly it would take 80,000 years to grow a basketball player. Incredible!

Question: Is soil made through magic?

Soil doesn't just appear.

A magician doesn't wave a magic wand and…poof! Soil shows up.

And, it's not made in a soil factory.

Answer:

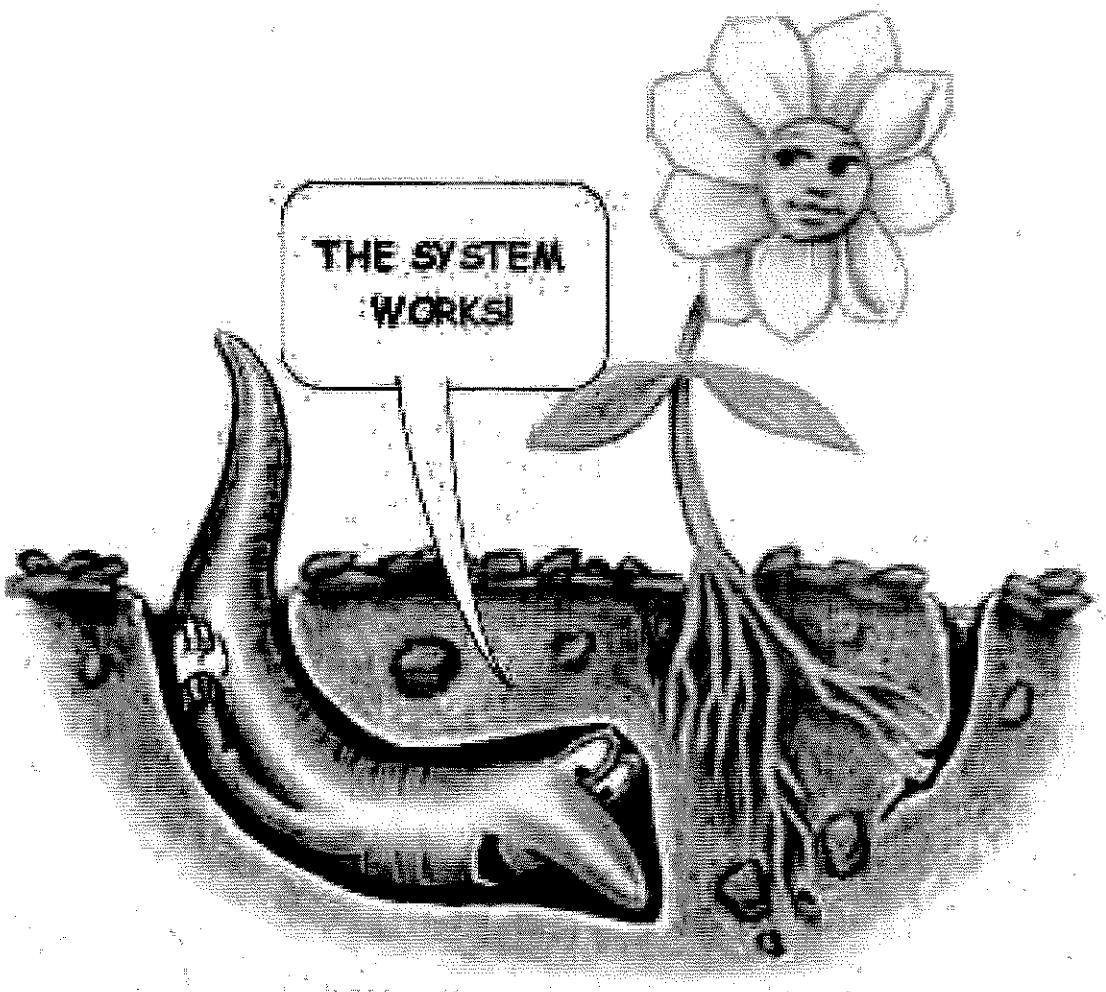
Soil comes from broken up pieces of rock and organic matter like dead leaves, tree limbs, and dead bugs.

Question: Why do plants like soil?

Answer:

Because they like to eat and drink. Soil has a lot of the things that plants need to satisfy their appetites. But, they are not hungry for pizza or banana splits. Those are too big to fit in the plant's roots. Plants have a hunger for nutrients with really strange names that you'll learn in high school.

Question: Do roots just help plants?



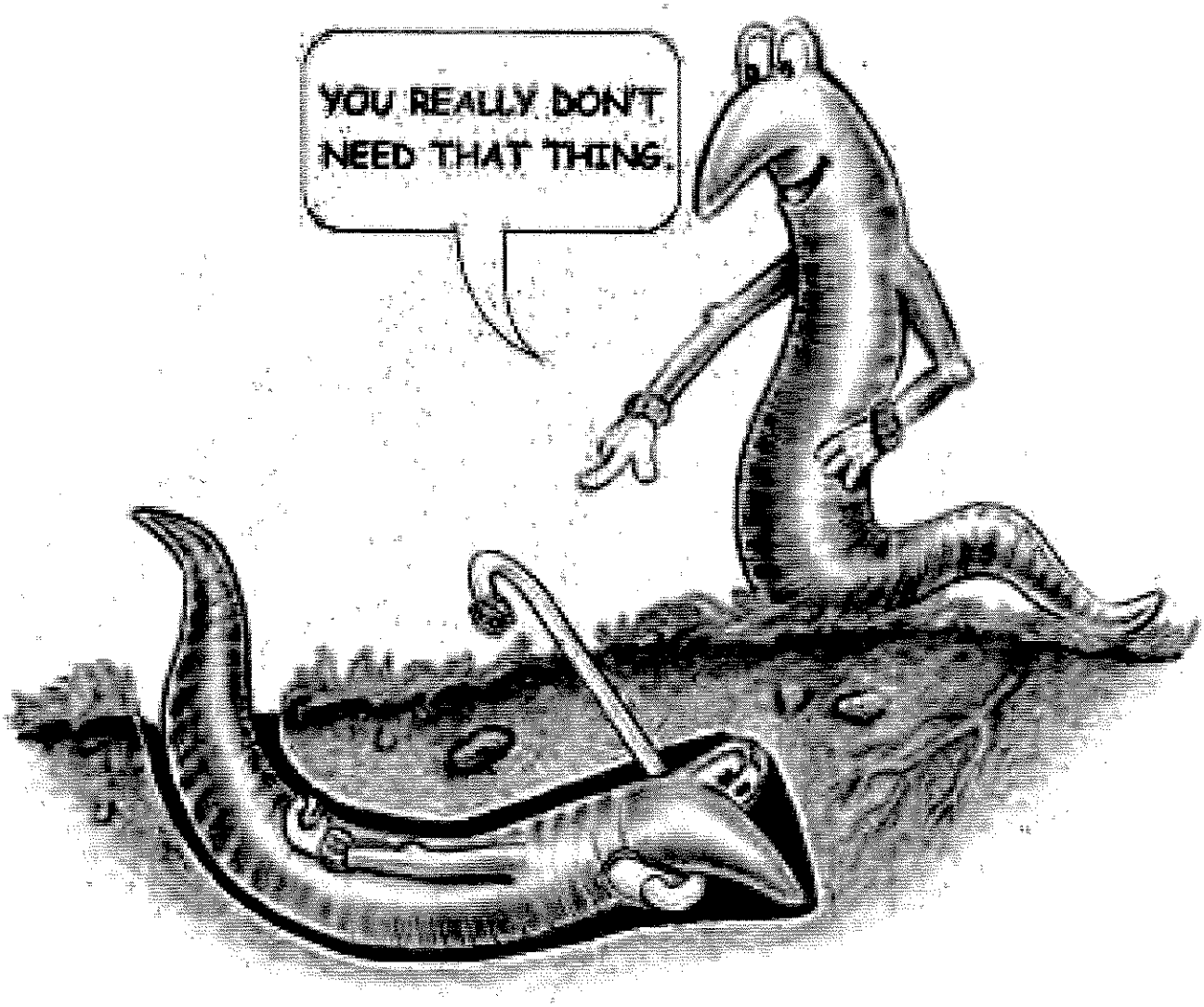
Answer: No way! Roots *love* helping others. They drain water from the soil and keep the soil from staying too wet. And, when the soil gets too dry, roots draw up water. This water has all kinds of good stuff in it that living things need to stay healthy. Roots help make soil, too. They split rocks into pieces that later become soil.

Question: How does water stay in the soil?

Answer:

When water gets into the soil, it can go into openings in the soil called *pores*. Pores are spaces in the soil that come in different sizes. The bigger the pore, the more water that soil can hold.

Question: How does air get into soil?



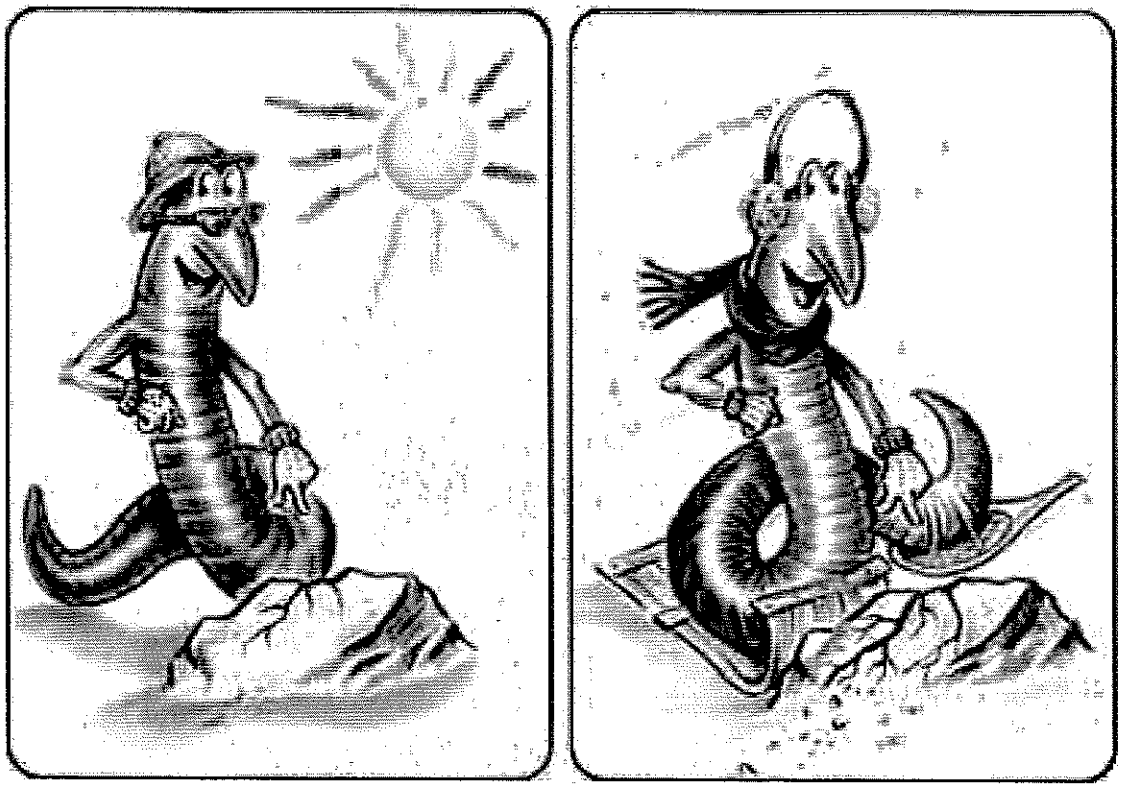
Answer: The pores strike again! Air gets down into the soil through the same pores that let in and hold water. The burrows that I, S.K.Worm, and my fellow earthworms dig let in air, too. That's good news for under grounder critters who need air.

By the way, I don't have lungs for breathing. I breathe through my skin.

Question: Do soils come in different colors?

Answer: **They sure do! Soils can form in black, red, yellow, white, brown, and gray.**

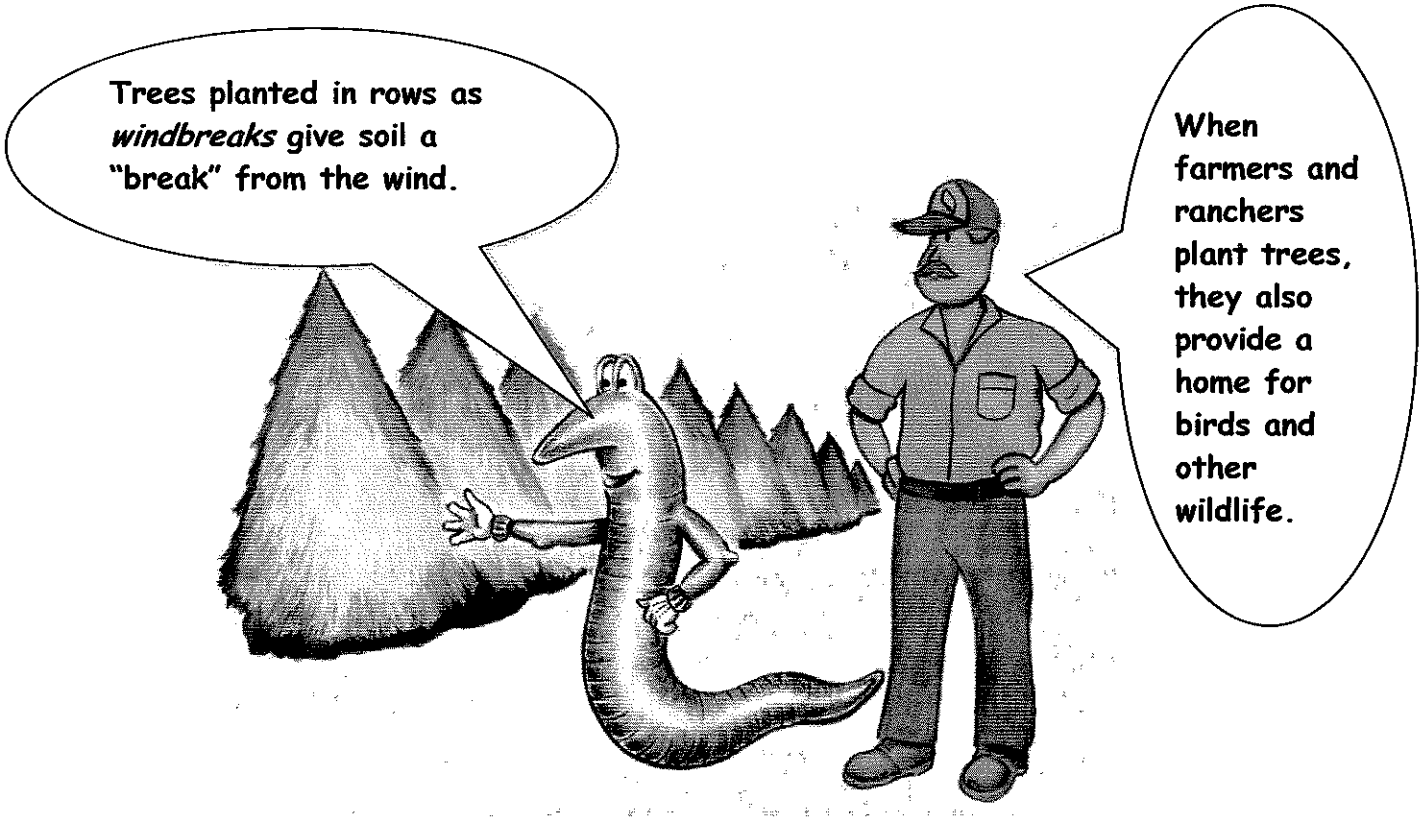
Question: What does the weather do to soil?



Answer: Weather helps make soil. When the weather gets hot, rocks can get bigger. When the weather turns cold, rocks can get smaller.

When rocks expand and contract often, they crack and break up into small pieces that break into even smaller pieces. When they get really small they turn into soil. Rain and ice can also get into rocks and break them apart. So, believe me, the weather does help make soil. And that's no "snow job."

Question: Can we keep the soil from washing and blowing away?



Answer: **Yes!**

There's *soil saving* going on right now. People are using plants and grass to hold the soil in place. Farmers and ranchers keep their soil on the land so they can keep on growing food for us. Take a look around to see if you can recognize all of the ways that farmers and ranchers keep their soil at home.

Question: What is soil conservation?

Answer: It's smart. Soil conservation is the best way to make sure that we have the land we need to live on or, in my case, *live in*. If you see your soil washing or blowing away, protect it with grass or plants.

Call my pals at the NRCS or the conservation district. They'll tell you all you need to know to get things going and growing!