

Focus and Organization	Evidence and Elaboration	Conventions

4<sup>th</sup> Grade Informational Responses  
Weathering

Noelle

## How Soil Forms

Do you know how soil forms? Weathering and its influence on the formation of soil is interesting in many ways. Let me tell you some reasons why.

First, water and wind wear rocks away. The author states that rain, snow, and flowing water pound at the outer layer of the rock. Wind makes rocks bang into each other. Therefore, rocks break into tiny pieces that make soil.

In addition, ice breaks rocks into particles. The article points out that water seeps into cracks. When the temperature drops, water freezes into ice. The data suggests that ice takes up more space than water. The ice causes the cracks in the rocks from the water to grow. Over time, bits of rock break off into the form of soil.

Finally, living things break rocks apart. For example, tree roots are one of them. The roots snake into the rock. This causes the rock to crack. The pieces break apart to form soil.

In conclusion, weathering and its formation

of soil is interesting in many ways.  
Aren't you glad you now know how  
soil is formed?

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Mikayla # 13

Have you ever heard of weathering? Well, weathering is a process of breaking things down. Did you know that weathering and the Rock Cycle work together to form soil? You are about to find out how!

First, let's talk about the ways that weathering breaks down rocks into soil. Sun, wind, rain, ice, and plants help weathering happen. The text cites that one way that weathering breaks down rocks is by water getting into a rock and if the water freezes, the pressure from the ice pushes outward and cracks the rock apart into pieces. Another way that weathering break apart rocks is by a tree <sup>possible</sup> root growing into a <sup>can</sup> rock and as the root grows, the roots wedge the rock apart. The author wrote that this process can take a million years or even longer! Weathering can take a really long time to break apart a rock into soil because weathering is a pretty long process!

Now, let's talk about after the rock has been broken into pieces. After the rock has been broken down, microbes help decompose the remains of the living things that once lived

in the rock or on the rock before it was broken down. According to the text, after the has been created new plants start growing in the new fresh soil. The soil could also take millions of years to be created but if the soil was created in a warm, moist place, than the soil would be created much faster. Soil will take a lot longer to be created if it is made in a cold, and dry place. On page 1 it says that soil never stays the same because the soil could turn hard over time, or it could be created somewhere else than the first time. Soil is cool!

Did you ever know how interesting weathering and the Rock Cycle could be together? I think it amazing how weathering and the Rock Cycle work together to form soil? It is awesome how our world knows when to send weathering to break down rock into soil! What do you think?

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Why they

Do you know how rocks can turn into soil. Rocks and soil are insiting in many ways. Let me tell you why.

First, rocks can be weathered in many ways. This is called weathering. The article points out that weathering can take a long time over thousands or even millions of years. Weathering helps rock break down into soil. The author states that ice, wind, rain, and plants can all weather rocks down into soil.

In addition, there are mainly two ingredients in soil. As you may know the main ingredient is rock. Scientists call the part with the most rock parent rock. The author points out that in the soil there are many particles that used to be a huge rock. The other ingredient is humus. It is made of a mixture of dead plants and animals. There are many living things that eat parts out the dead plants and animals. The article states when they eat the dead plants and animals their waste becomes part of the soil. For example, plants and animals have nutrients the nutrients becomes part of the soil.

Finally, there are a lot of forces that can break down rocks. The first one is the sun. The sun beats down on the rock causing layers to expand. At night when the sun goes down the rocks shrink. As this keeps repeating it's self some of the rock will fall off. Ice

Whitney

break down the rock. A recent example water gets into cracks when the temperature drops to be very cold the water freezes making the rock break. Water and wind can break down rocks. Rain and snow pound on the rock. This causes the outer layer to fall off. The wind makes rock crash into each other. The last one is living things. For example, some tree roots can get into the rock making it crack open and particles fall off.

In conclusion, rocks and soil are truly amazing. Next time you're out in the dirt think out how all of that soil was a rock.

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## Soil

By Samantha

Have you ever wondered how soil is made? Soil is made by weathering. Weathering is the biggest step in the process of making soil. Soil is what we plant our gardens in and our flowers. Soil is very important to us.

What is weathering? Weathering is the process of breaking down rocks. Sun, wind, rain, ice, and plants cause weathering. According to the article, weathering is caused by things in nature. Another thing about weathering is when the water that can sometimes cause weathering freezes it expands and breaks the rock. The author states, as the water freezes, it pushes outward and cracks the rock. Weathering is caused by many things. Weathering is one reason we have our soil.

Soil is really cool. Soil has rocks, plant matter, animal matter, air and water in it. The text said, all soil is made up of pieces of rock, bits of plant and animal matter, air, and water. Soil is made up of lots

of things. Something else that is cool about soil is it forms more quick in warm places. According to the text, soil forms more quickly in warm, moist places. Soil is formed in really cool ways.

How does weathering effect soil? Weathering effects soil because it creates one of the main parts of soil rocks! According to the text, soil has rocks in it. Weathering effects soil by helping it create by breaking down the rocks used in soil. Another way weathering effects soil is it helps with the foundation of soil if soil did not have rocks in it would not have a good base. Weathering helps with the soils foundation. Weathering is a huge part of making good, rich soil. Weathering is very important.

As you can see we need weathering and soil. Weathering helps soil to rich and good. Weathering is a lot more important then you thought. So go outside and explore nature's soil.



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Samuel

Have you ever wondered how soil is formed? It has things that were broken down into it. Weathering is a big influence on soil because it breaks things down. Soil is formed by many things. If you have picked up a handful of soil, you have probably seen bits of rock, dirt, and plants. Those are some of the things in the soil. This is how they are added.

First, this is how rock and plants are broken down. Rocks are usually broken down by a cycle called weathering. What do you think, is rock or water stronger? What about plants? Which is stronger, rock or heat? If you said rock you are wrong and this is why. According to the text, the intense heat on a summer day, after a while, breaks the rock! And when water is frozen it expands and makes cracks in the rock. The author stated that ice takes more space than water. The plants roots dig deeper in the rock searching for water and break the rock down. That is how rock is broken down into the soil.

Second, all the other things need to be added before we have soil. When the biotic things in the dirt make tunnels, plants drop leaves and other things into the dirt. They get decomposed, or broken down, into little wood chips and dirt. In the text, the author stated that air and

water get in through the holes. Earthworms, fungi, and bacteria's waste also is added. According to the text, after many years the little rocks and wood pieces get even smaller. Then it gets mixed together. That is how the dirt, rocks, plant, and animal matter gets mixed together.

In conclusion, there are many things in the soil that take time to decompose then get mixed with each other. Weathering brakes down most of the things in the soil. Living things are also a factor in making soil. That is how rock, plant and animal matter are made into soil. ■

Samuel

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Tyler #20

Imagine a world without soil. Without rocks that's what it would be like. Sand forms by weathering and erosion. Erosion is caused by more than weather though. These paragraphs <sup>is</sup> ~~is~~ <sup>are</sup> going to rock you through how rocks turn into sand.

The first way sand is formed is weathering. Water and wind help but there not the only weather. According to the text, sun, wind, rain, and ice cause weathering. Ice causes rocks to crack though. The author stated, that water seeps through little cracks and at night when it is cold the water turns to ice and expanse the crack. Those are ways that weather breaks down rock.

Soil also forms some other ways. Did you know that plants break rocks too? One detail from the text is, the roots of plants seep into cracks and grow and break it apart. The sun helps break rocks into sand too. According to the text, the sun heats the surface of the rock and causes the outer layer to expand. At night it's cool so the rock shrinks. After that cycle happening over and over again the outside layers of the rock break off and turn to soil. Those are ways how rocks turn to soil.

Those are the ways that rocks turn into sand. Sun, wind, rain, ice, and plants. Those are only some of the ways that rock break to sand.

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## WEATHERING

By Kash

Do you know what weathering is? Weathering is really cool. Let me tell you about weathering.

First, Weathering is the breaking down of rocks. Weathering is when things like plants, wind, and other things break rocks. Ice is one of the things that is known as weathering. Water gets into cracks in the rock and then the water freezes and expands. By doing so the rock breaks.

Next, Weathering causes soil to form. Weathering breaks down rocks into particles. Soil is made up of 25% air, 25% water, 5% organic matter, and 45% minerals. Those rock particles are made up of minerals so those rocks are part of that 45% minerals.

Last, If it wasn't for weathering life wouldn't be the same. If the wasn't for weathering then there wouldn't be soil. If there's no soil then plants couldn't grow. Then there would be no air and we would die!

In conclusion, Weathering is really cool. Now do you like weathering?

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By: Kambrie

Imagine if you were soil for your whole life. Do you even know what soil is? It takes many years and is formed with many steps. I am going to tell you about weathering and how the soil is formed.

Soil is very cool to learn about and especially how it is formed. First, it takes up thousands of years and has many pieces of rock in it. According to the text, the outer layers of rocks break off. That then makes is mush together and then creates the soil. This process can take thousands of years to just form the soil. The author stated, plants and insects nutrients are also in the soil. Plants and animals feed on the remains and then the soil uses it's wasted of the nutrients. This process is very cool to learn about.

Now we are going to talk about the weathering. One thing about weathering is that sun, wind, rain, ice, and plants cause weathering. According to the text, when rocks are at the bottom of the earth's

surface breaking it down in several ways is also weathering. There are a few ways that weathering can happen. One other way that weathering happens is that plants grow on rocks sometimes. The author stated, that means the roots seek out of the rock and water and nutrients go there. That cause the rocks to wedge apart. There is a few examples of how weathering can happen.

In conclusion, there are many ways that soil is formed. Also the weathering that helps make the soil also. There are many cool things to learn about with soil and weathering that helps with making the soil.