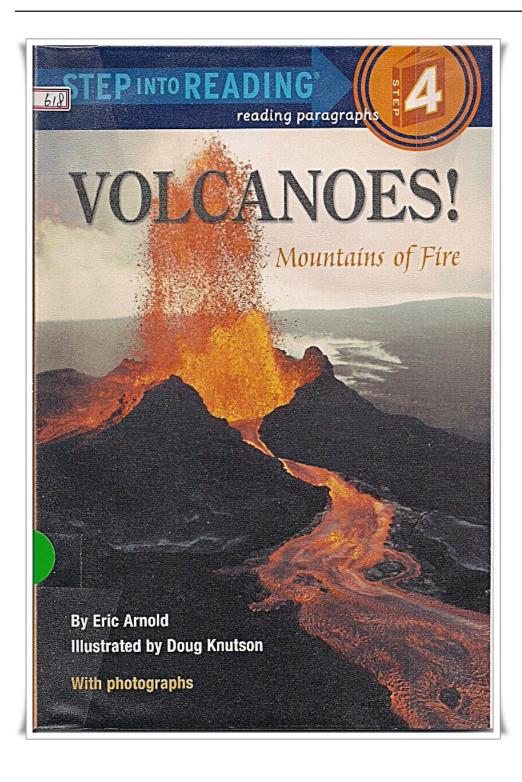
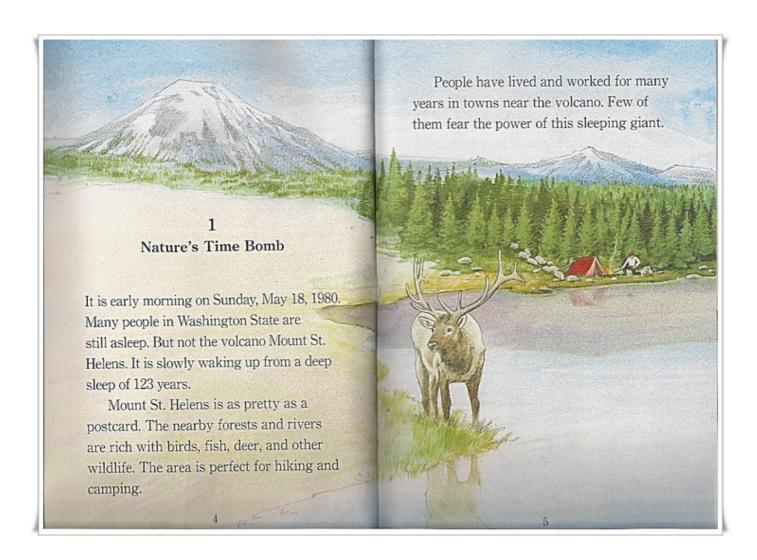
Volcanoes

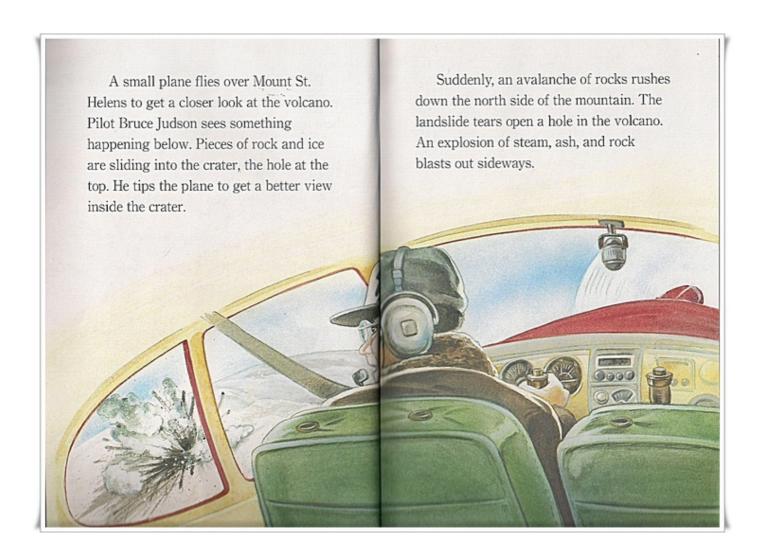
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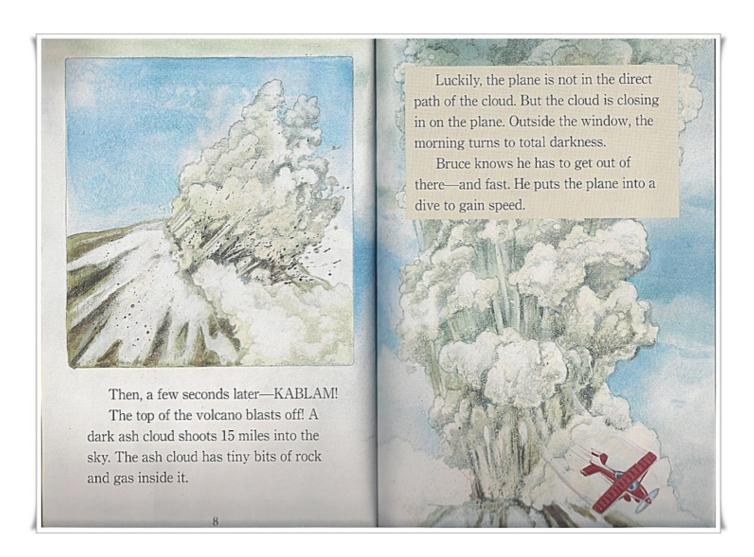
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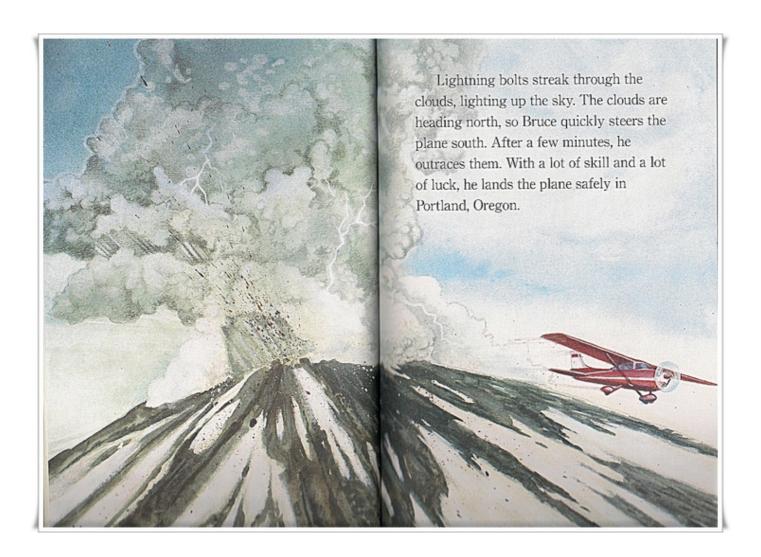
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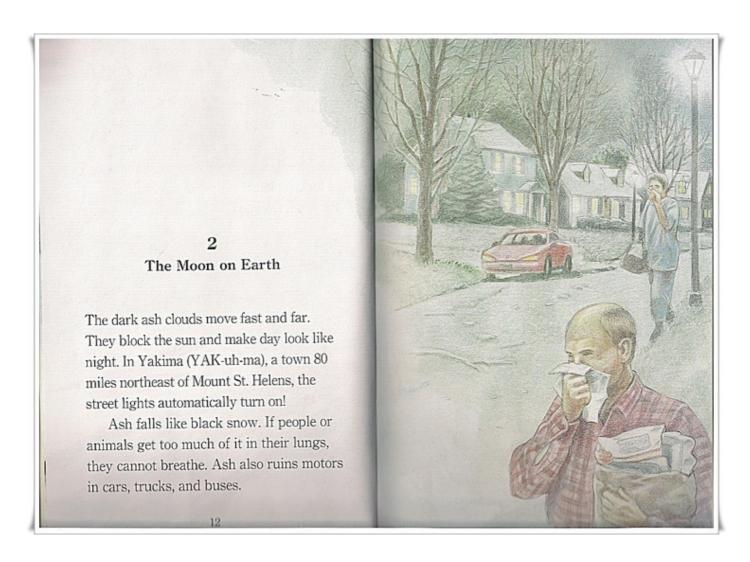














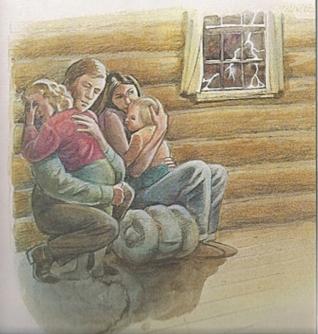
A family is camping in a cabin nearby when the ash clouds pass overhead. Small rocks start to rain down from the clouds. The sky becomes pitch black.

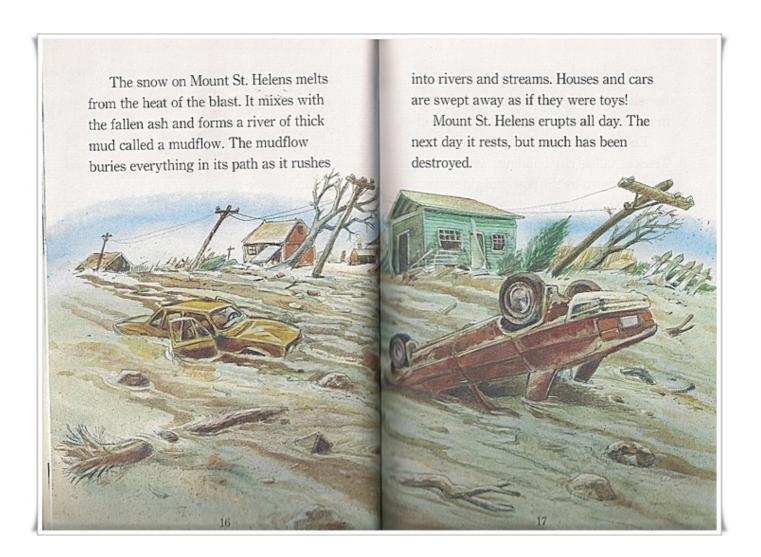
Thunder shakes the cabin. Lightning looks like a flash from a giant camera. When bits of ash bump into each other in the clouds, they make static electricity. This creates bolts of lightning.

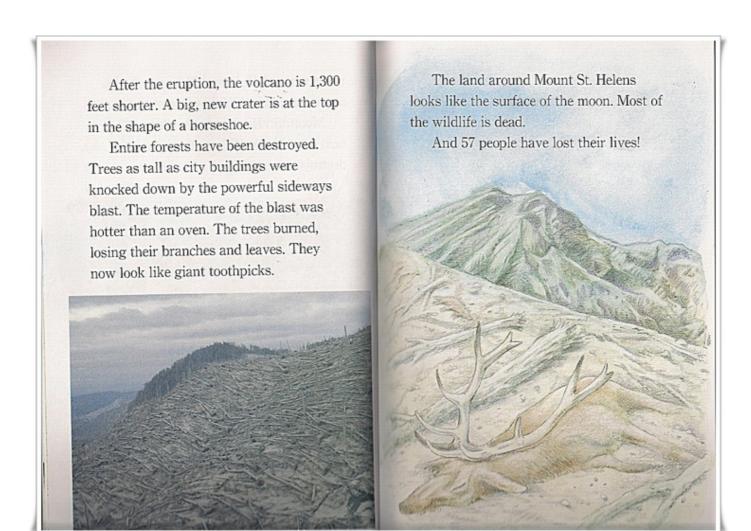
The highway outside the cabin is

closed. It is covered with six inches of ash! Inside, the family huddles together. They don't think they will get out alive.

For three days, they are trapped in the cabin. Finally, on the fourth day, it is safe for them to leave the cabin and head home.



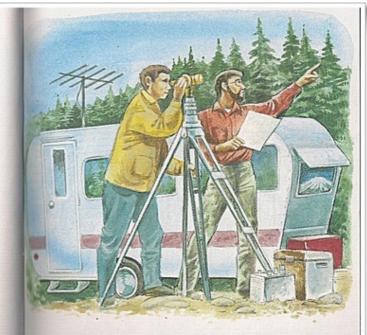




3 Warning!

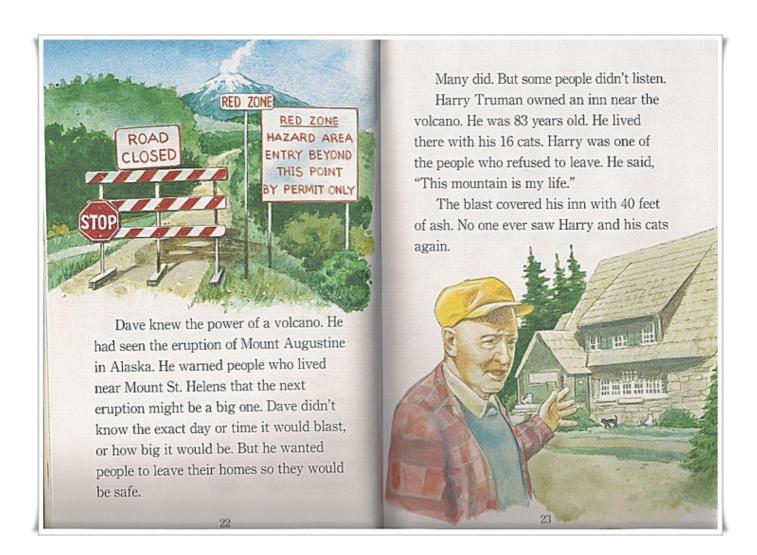
Volcanologists (scientists who study volcanoes) tried to warn people before the big eruption.

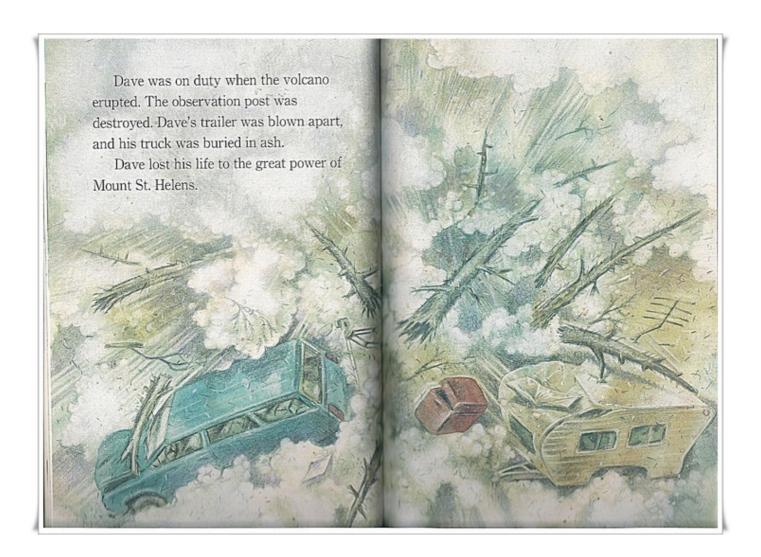
Dave Johnston and several other volcanologists set up an observation post six miles from Mount St. Helens. They had been watching the volcano closely for months because it had started to erupt. So far, the eruptions had been small and harmless.



They also noticed that the volcano was swelling on its north side. This swelling was caused by magma, or melted rock found beneath the earth's surface, moving up into the volcano. It was like a keg of dynamite ready to blast!

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4 Fire in the Mountain

Volcanologists look for clues that will help them predict when a volcano will erupt. This is hard to do, because each eruption is different and some happen without warning!

It is dangerous work, but many lives can be saved from what volcanologists discover. The lessons learned from the Mount St. Helens eruption helped scientists to predict the eruption of Mount Pinatubo

(pin-uh-TOO-bo) in the Philippines in 1991. The eruption of Mount Pinatubo was eight times bigger than that of Mount St. Helens.

People were moved to safe places before the eruption happened. Though about 200 people died, thousands of lives were saved.

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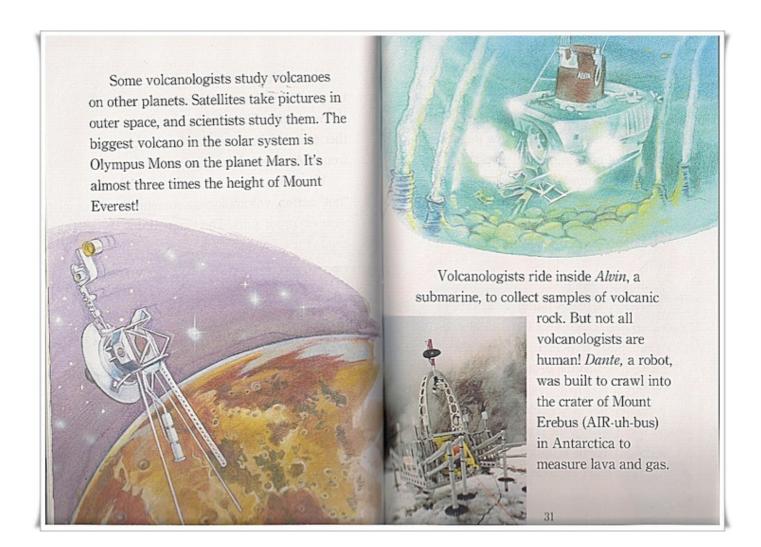
Much of the work of volcanologists is done in a laboratory, where they look at samples of gas and lava. But they also work right on a volcano. This is called fieldwork. They record the day-to-day life of a volcano.



Volcanologists take a volcano's temperature with a special electric thermometer. (They don't use a glass thermometer, because glass would break from the extreme heat.)

When they want to get close to the "hot" action, volcanologists sometimes wear fireproof suits. The temperature inside the suit stays cool.





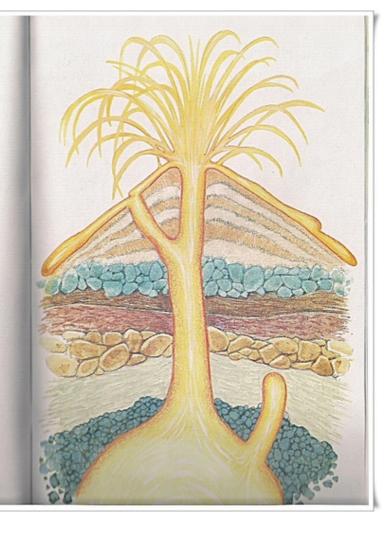
Here's how a volcano works:

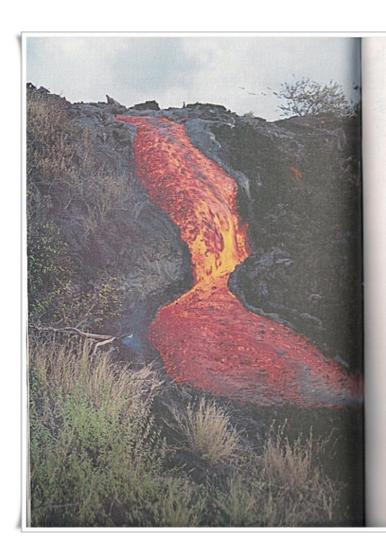
The earth has a layer of "skin" that is made of rock. The earth's skin is called the crust. The crust is like a jigsaw puzzle made up of giant pieces called plates. These plates move very slowly—a few inches a year. Why do they move? Because they sit on top of rock that is very, very hot. The rock gets so hot in spots that it melts.

SMACK!

When the plates bump each other or pull apart, a crack may form in the crust. Magma and gas push up through the crack. Once magma is outside of the volcano, it is called lava.

Sometimes lava explodes in a cloud and shoots out of the crater, as it did in the Mount St. Helens eruption. But some volcanoes don't explode when they erupt.



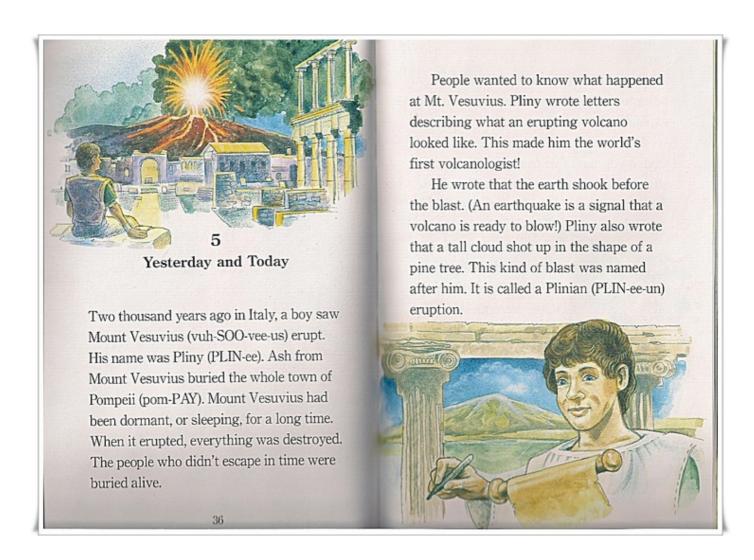


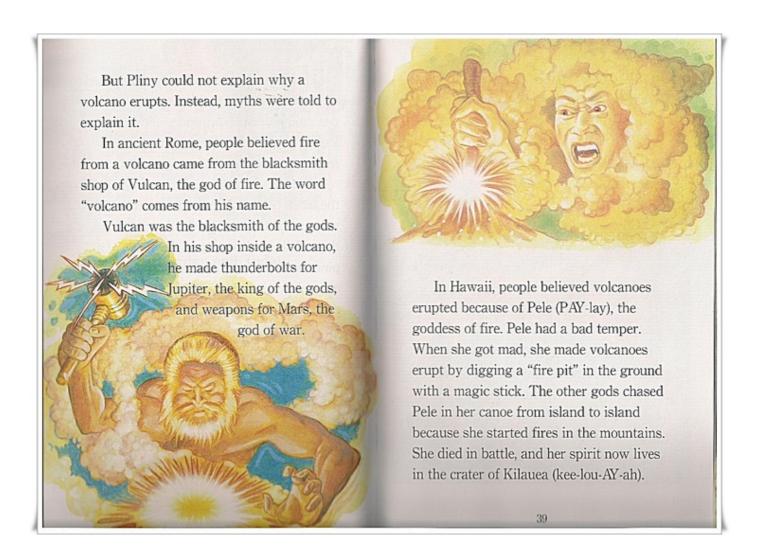
Instead, streams of hot lava flow out. The volcanoes of Hawaii erupt this way. The lava flows are beautiful, but they are like a "river of fire." They burn everything in their path!

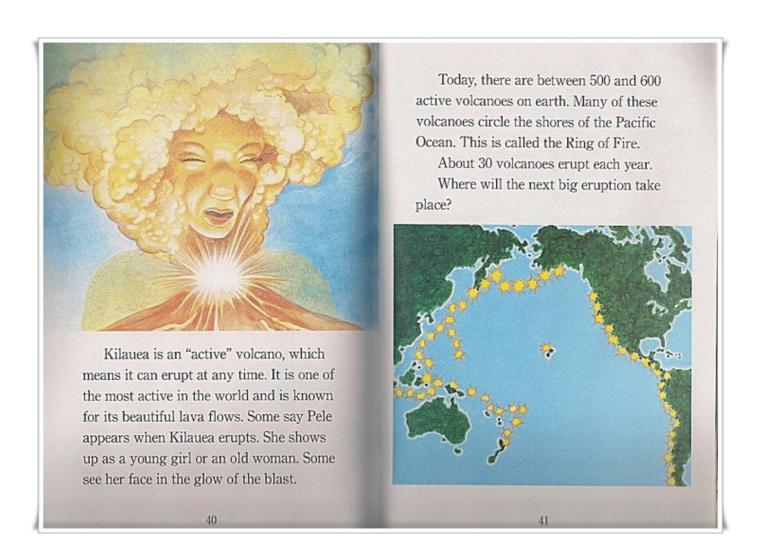
A volcano gets bigger from layers of lava and ash building up on its sides.

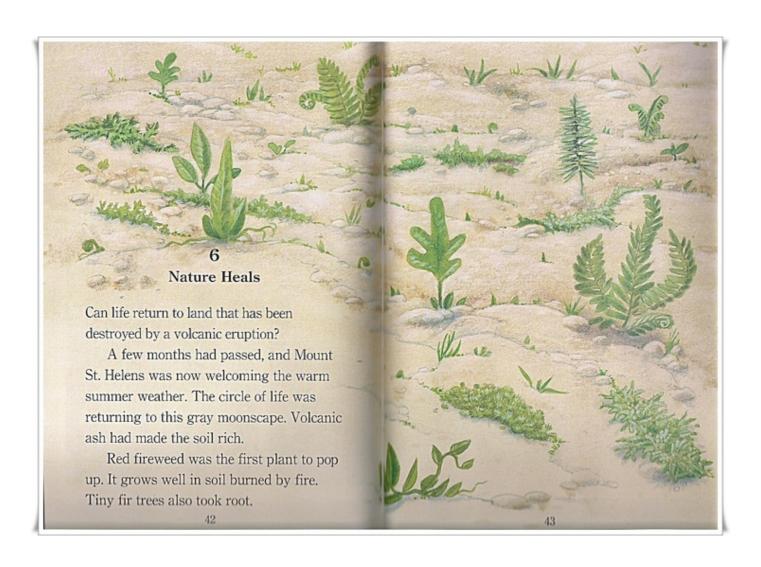
When magma or lava cools, different types of volcanic, or igneous (IG-nee-us), rock are formed. Granite forms when magma cools slowly in cracks beneath the earth's surface.

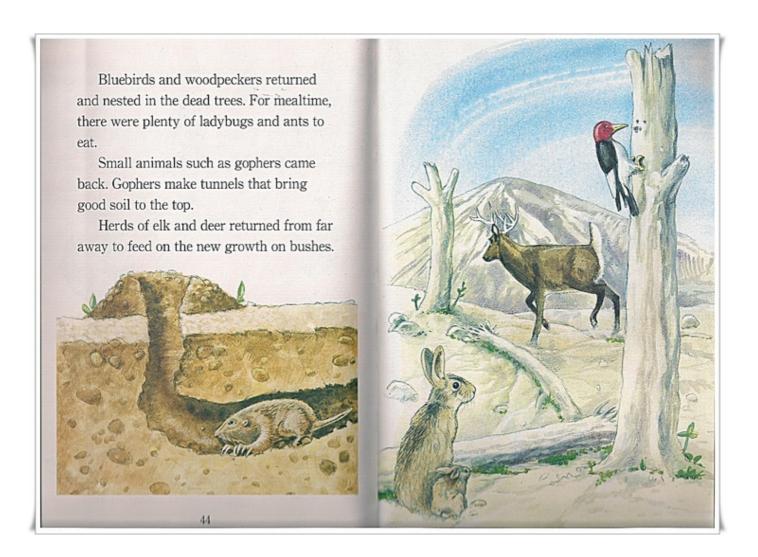
Basalt forms when a stream of lava cools quickly. Pumice (PUM-is), the lightest rock in the world, is made when thick, sticky lava cools fast. Pumice hardens with air bubbles inside—it is so light, it can float in water.

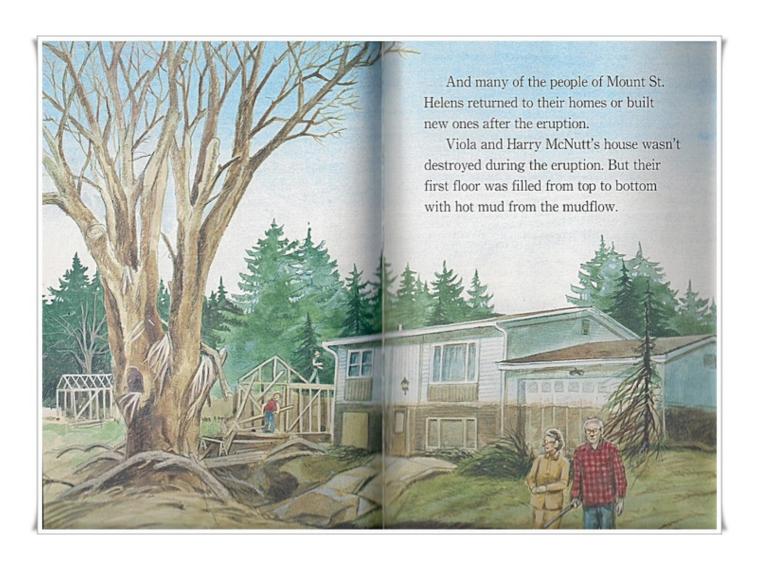












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