

Volcanoes **Erupt!**

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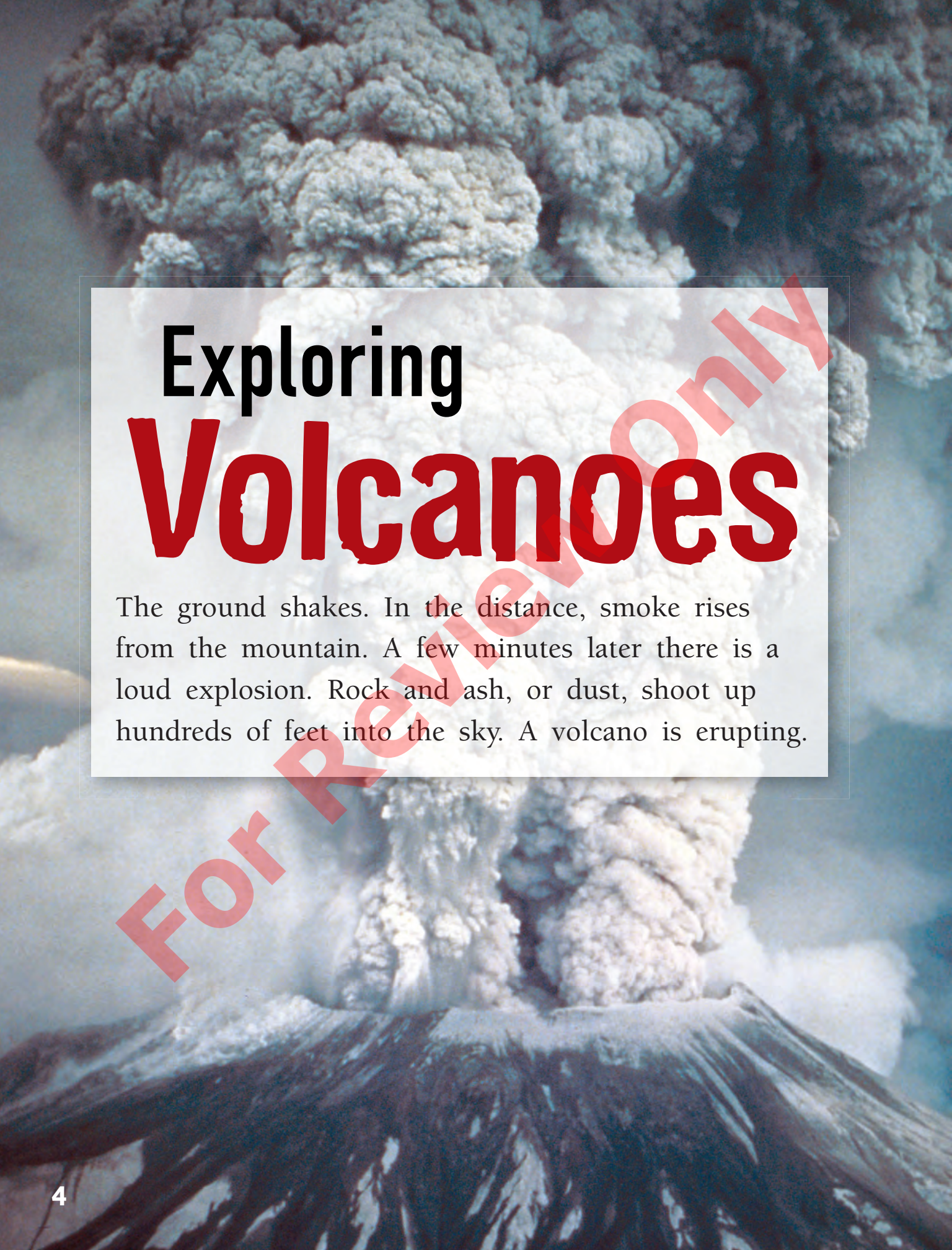
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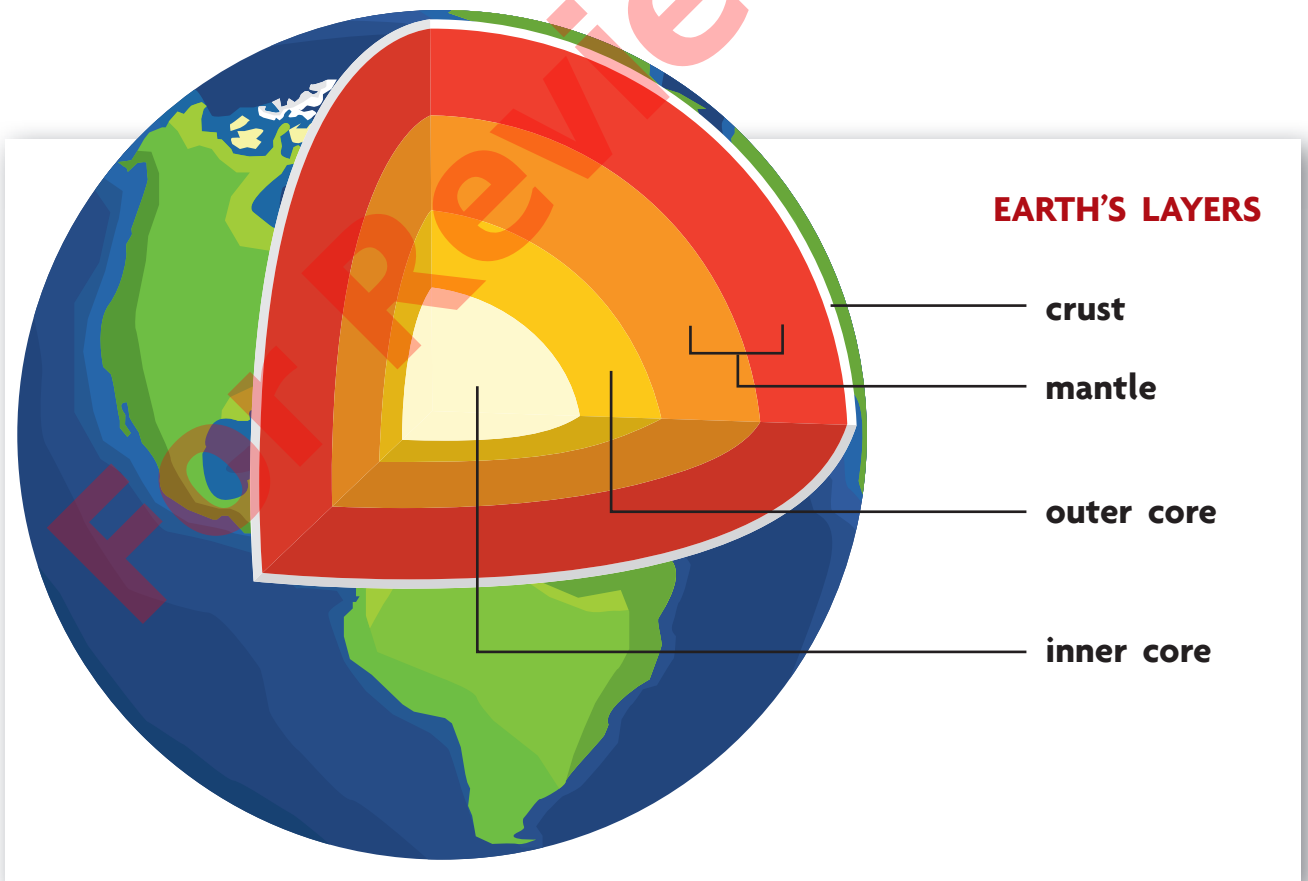
Exploring **Volcanoes**

The ground shakes. In the distance, smoke rises from the mountain. A few minutes later there is a loud explosion. Rock and ash, or dust, shoot up hundreds of feet into the sky. A volcano is erupting.

What Is a Volcano?

A volcano is an opening in Earth's crust. The crust is the outer layer of Earth. Large pieces of rock make up the crust.

These large pieces of rock float on the layer of Earth beneath the crust. This layer is called the mantle. The mantle is made up of hot, liquid rock. The mantle is always slowly moving. So the rocks that float on the mantle are also slowly moving.



How Volcanoes Form

Volcanoes can form when magma finds its way through a crack in Earth's crust. Magma is the hot, liquid rock from the mantle. The magma moves toward Earth's surface.

The magma builds up pressure underneath Earth's surface. It finally explodes through the surface of Earth as a volcano.



When the magma erupts out of Earth's surface, it forms lava and ash. Over time, volcanoes erupt again and again. They grow larger.

During a volcanic eruption, lava flows down the side of the volcano. Lava is magma that has reached Earth's surface. The lava is mixed with rock and ash. This mixture is very hot. It can move very fast and very far.



Measuring an Eruption

Not all volcanic eruptions are the same. Some are stronger than others. Scientists can measure how strong a volcanic eruption is. They look at how much ash and rock shoot into the sky. The more ash and rock, the bigger the eruption.

Kinds of Volcanoes

There are three kinds of volcanoes. They are stratovolcanoes, cinder cone volcanoes, and shield volcanoes.

Stratovolcanoes are made from layers of ash and lava. They are shaped like cones. Stratovolcanoes have powerful eruptions. They shoot ash and gas very high into the sky.

**Mount Ngauruhoe, a
stratovolcano in New Zealand**



**Paricutin, a cinder
cone volcano in Mexico**



Cinder cone volcanoes are mostly made of ash and cinders. Cinders are small, grainy pieces of hardened lava. Cinder cone volcanoes are small, hill-sized volcanoes with very steep sides. When these volcanoes erupt, the lava shoots out of one opening.