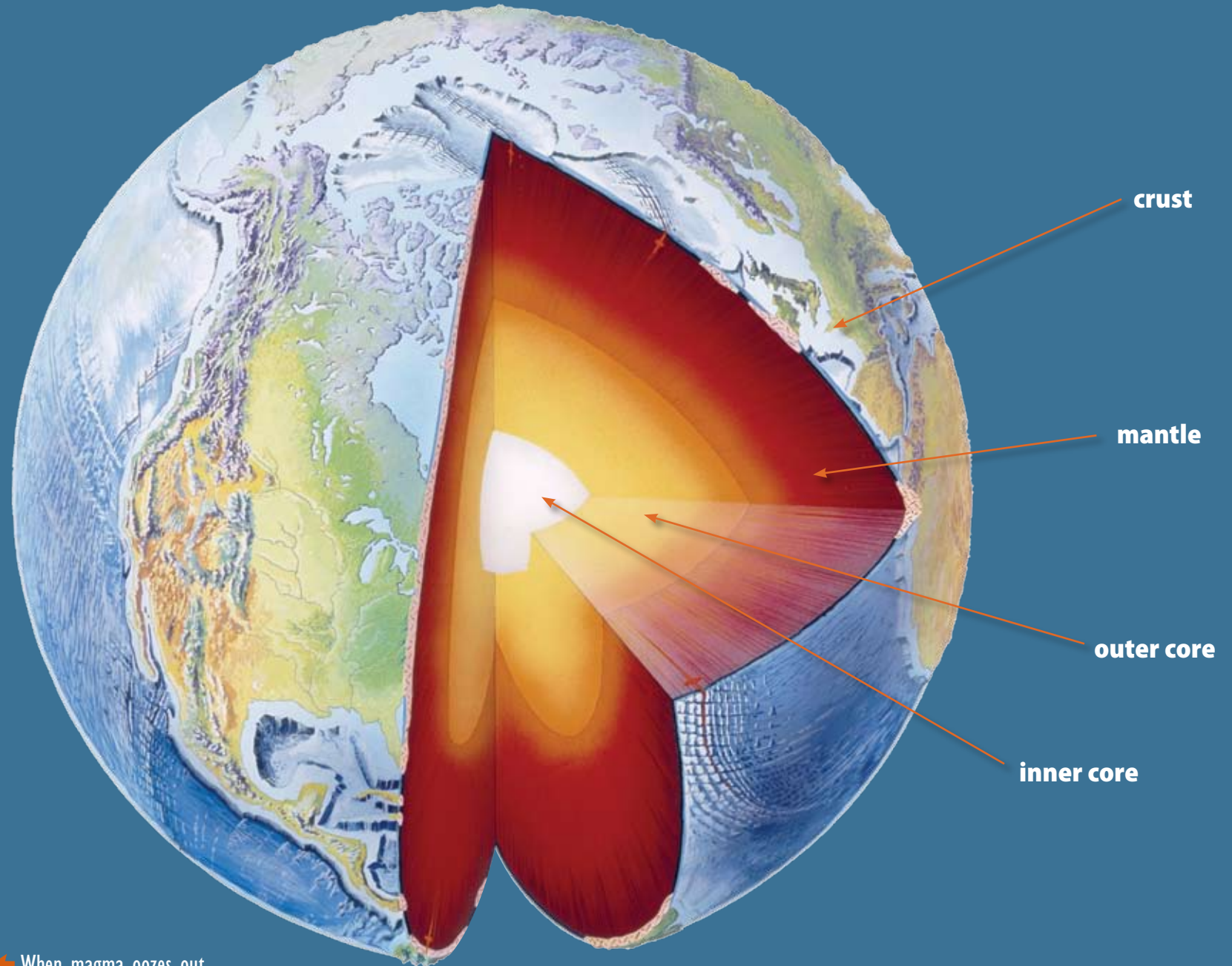


Earth's Crust

Imagine Earth as a hard-boiled egg. An egg has a shell. Earth has a crust. An egg has liquid under its shell. Earth has hot **magma** under its crust. If the Earth were an egg, it would be a 6,400-kilometer (4,000-mile) trip from its shell (the crust) down to its center!

We live on Earth's crust. The crust is the part of Earth that has cooled and hardened. All of the **continents** of Earth are a part of the crust. The ocean floor is also a part of the crust. Mountains rise up from the crust. And just like an eggshell with a crack, our crust is cracked. If you look at the edges of the continents, you might notice that they look like cracks on an eggshell.

Earth also has other layers beneath the crust. They are the mantle and the outer and inner core.

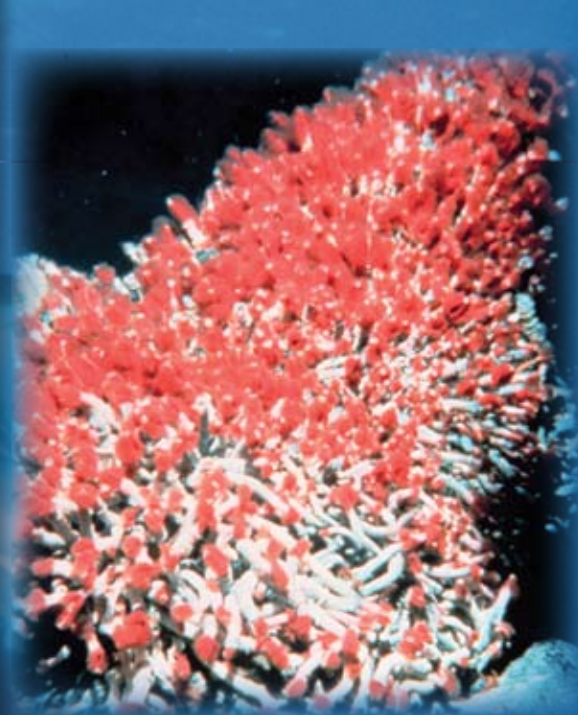


← When magma oozes out of the earth's crust, it is called lava.

↑ In this diagram, sections of the earth have been removed to show its internal structure.

Underwater Adventures

Carol Hirozawa Reiss is a **marine geologist** (earth scientist who studies oceans) for the U.S. government. She has taken two plunges to the ocean floor in a **submersible** vehicle. A submersible vehicle can travel underwater. On these dives, Reiss worked as a scientific observer. She took careful notes of the strange creatures she saw lurking in the ocean depths. Reiss also worked with equipment that measured how fast the ocean plates on the sea floor are spreading apart.



↑ Tube worms feeding at base of a black smoker chimney hydrothermal vent

↓ JOHNSON-SEA-LINK's six-inch-thick acrylic sphere holds a pilot and an observer.



In 1915, a scientist named Alfred Wegener said that the continents used to be together. Earth once had a huge single landmass. Wegener was not the first scientist to think this. But he was the first to try to show that the shapes of the continents were not just a **coincidence**. He used the clues of Earth's crust to support his **theory**. His theory was known as **continental drift**. It led to the study of **plate tectonics**.

About 200 million years ago, the landmasses of Earth were together. This single landmass was called **Pangea**. We also know that the hot, molten magma under the surface of the crust pushed the lands apart. And this motion continues today!

Fun Fact

Earth is very hot inside. There are several reasons for this. For example, heat comes from the radioactive elements. It also comes from friction as the tectonic plates grind against each other. The core temperature of Earth is hotter than the surface of the sun!

Throughout its history, Earth's landmasses have come together and broken apart many times.

