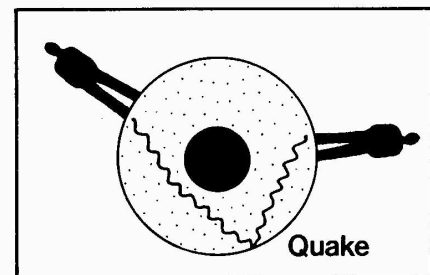


Science Shorts -6

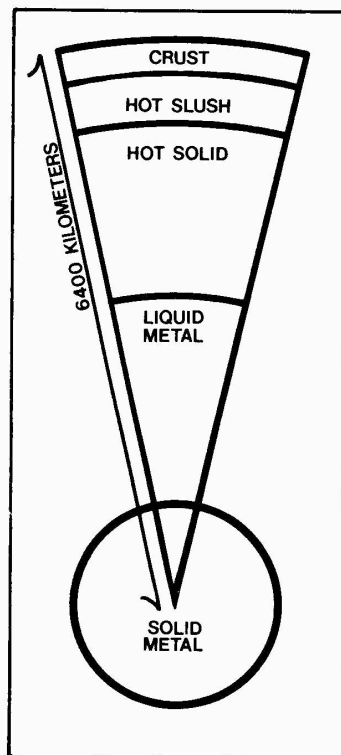
WHAT'S INSIDE THE EARTH?

Have you listened to someone tap two stones together in a swimming pool? It sounds quite different above the water and under the water. Put your ear down on one end of a table and have someone tap the table at the other end. It sounds quite different when your ear touches the table than when you're standing away from it. Sound waves travel better through solid and liquid than they do through the air.

Scientists listen with special instruments to waves traveling under ground and through the earth. Often these waves are made by earthquakes. Waves from the same earthquake travel at different speeds through different kinds of earth. Scientists can compare these speeds and learn what the earth is made of.



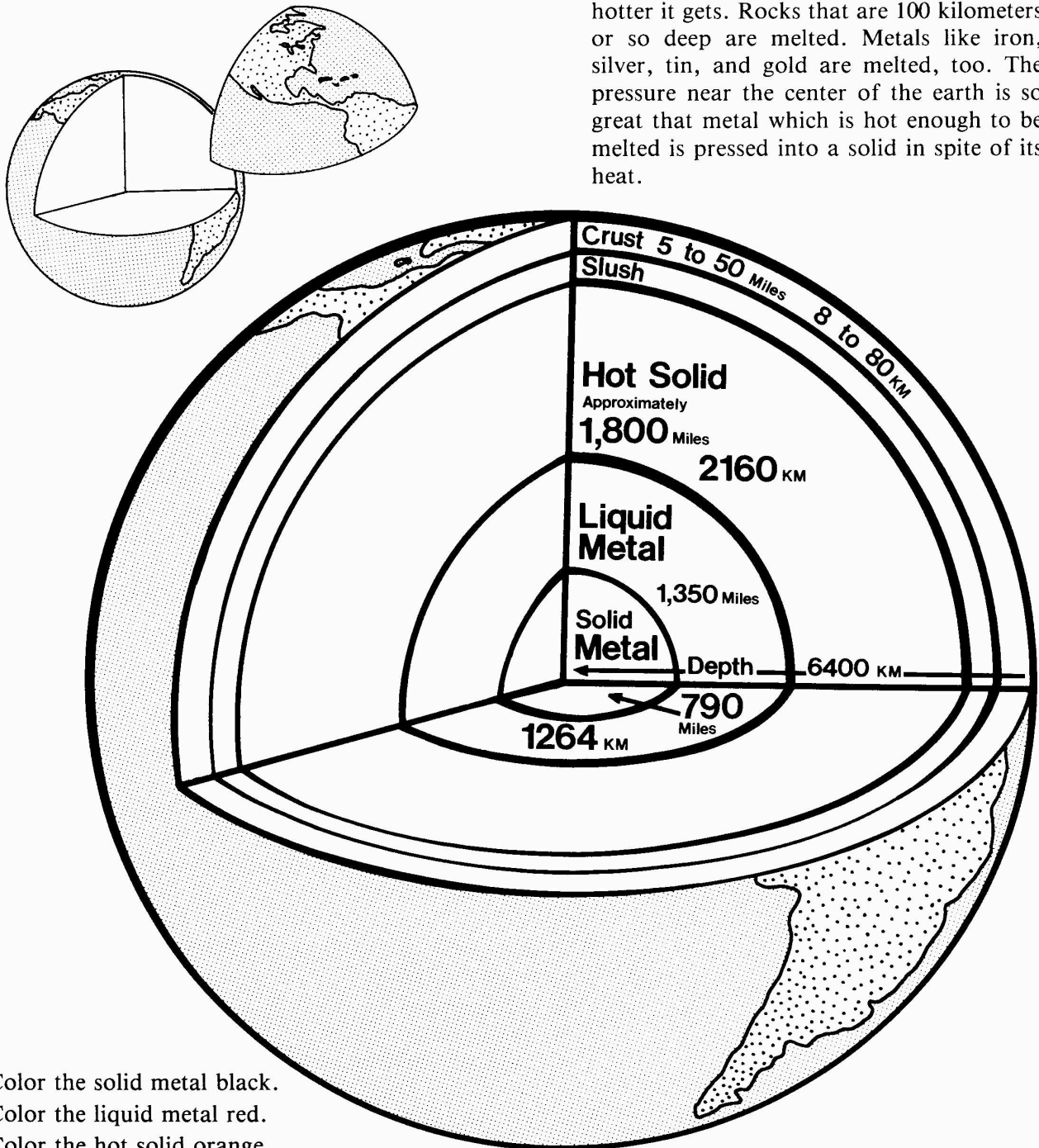
Scientists now think that the earth has a solid, very hot core of metal about 2,500 kilometers across. Outside this is a very hot layer of liquid metal about 2,000 kilometers thick. Above this is a 3,000-kilometer layer which is very hot and solid. Between this hot, solid layer and the cool, solid crust is a slushy layer of solid rock mixed with molten rock. The slushy layer and the crust are different thicknesses in different places. They total about 150 kilometers. The solid layer of crust covers the earth and goes under the ocean as well as under the continents.



1. An Indian put his ear to the ground to listen for horses coming. This worked because
 - a. sound travels better through the solid ground than through air.
 - b. putting his ear to the ground blocked out other sounds.
 - c. with his ear to the ground, he could talk with the Earth Spirits.
2. If you could dig a hole several kilometers deep, the temperature would
 - a. get warmer.
 - b. get cooler.
 - c. stay the same all the way down.
3. From the story you can tell that
 - a. earthquakes do a lot of damage.
 - b. earthquakes help scientists learn about the inside of the earth.
 - c. earthquakes happen at the center of the earth as well as on top.

INSIDE THE EARTH

The center of the earth is very hot because of all the pressure on it. The deeper it is, the hotter it gets. Rocks that are 100 kilometers or so deep are melted. Metals like iron, silver, tin, and gold are melted, too. The pressure near the center of the earth is so great that metal which is hot enough to be melted is pressed into a solid in spite of its heat.



- Color the solid metal black.
- Color the liquid metal red.
- Color the hot solid orange.
- Color the surface blue where there's water.
- Color the slush yellow.
- Color the crust brown.
- Color the surface green where there's land.