

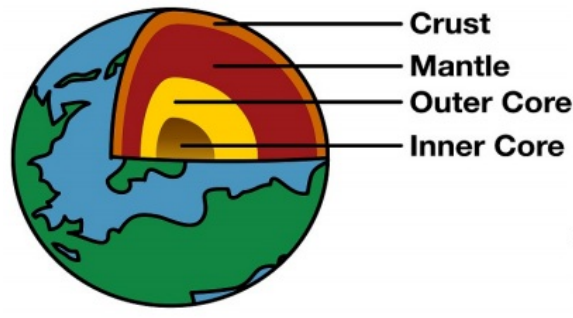
Intermediate Science 7
Unit 4: Earth Crust
Topic 1: Structure Of The Earth



Student Name _____

Geology: the study of the materials of the earth crust.

The earth has four main levels:



Crust: The crust is the outermost layer of Earth. This layer, on which life exists, is covered with soil, rock, and water. Relative to the thickness of Earth's other layers, Earth's crust can be compared in thickness to the shell of an egg or the skin of an apple. The crust is thickest under the continents and thinnest under the oceans.

Thickness: 5 to 64 kilometers (varies depending on which type of crust)
State: Solid

Mantle: The mantle is Earth's thickest layer. About 80% of the volume of Earth is contained in Earth's mantle, which extends from the base of the crust to the liquid outer core. The mantle is generally considered to exist in a solid state, although high temperatures and pressure can cause some of this solid rock to flow like an extremely thick liquid.

Thickness: About 2900 kilometers
State: Considered solid, but has the quality of plasticity, which means the solid rock in this layer can flow like a thick liquid.

Outer core: Most of the rock in Earth's outer core is molten, which means that it acts like a hot liquid. The outer core begins about 2900 kilometers below Earth's surface.

Thickness: About 2250 kilometers
State: Molten liquid

Inner core: Earth's inner core is incredibly dense, because it is under so much pressure. The inner core begins at a depth of about 5150 kilometers below Earth's surface.

Thickness: Radius is about 1300 kilometers
State: Solid

Technologies used to get information about the earth:

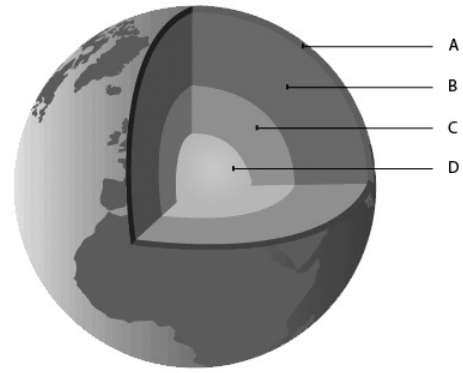
1. Satellite Imaging: images of Earth or other planets collected by imaging satellites.
2. Seismographs: an instrument used to detect and record earthquakes.
3. Magnetometers: an instrument used for measuring magnetic forces, especially the earth's magnetism.
4. Remote Sensing: the scanning of the earth by satellite or high-flying aircraft in order to obtain information about it.
5. Core Sampling: a roughly cylindrical piece of subsurface material removed by a special drill and brought to the surface for examination

PART A: MULTIPLE CHOICE

Instructions: Shade the letter of the correct answer on the computer scorable answer sheet provided.

1. Which of the following is the outer most layer of the earth?
 - (A) Crust
 - (B) Inner core
 - (C) Mantle
 - (D) Outer core
2. What are the two main types of crust?
 - (A) Continental and oceanic
 - (B) Hot and cold
 - (C) Solid and liquid
 - (D) Thick and thin
3. Which Layer of Earth is directly below the crust?
 - (A) Crust
 - (B) Inner core
 - (C) Mantle
 - (D) Outer core
4. What layer contains 80 % of Earth's volume?
 - (A) Crust
 - (B) Inner core
 - (C) Mantle
 - (D) Outer core
5. Which is the correct order of the earth's layers starting from the inside and going outwards?
 - (A) Crust, mantle, outer core, inner core
 - (B) Continental cruse, oceanic crust, mantle, core
 - (C) Inner core, outer core, mantle, crust
 - (D) Mantle, crust, outer core, inner core

Use the diagram below to answer questions 6 to 8:



6. What is layer D called?
- (A) Crust
(B) Inner core
(C) Mantle
(D) Outer core
7. Which of the following best describes layer B?
- (A) Liquid and solid rock
(B) Liquid and solid metals
(C) Solid metal
(D) Solid rocks
8. Which of Earth's layers is mostly iron and solid because of the high amount of pressure?
- (A) A
(B) B
(C) C
(D) D
9. Which layer of the Earth is the thickest?
- (A) Crust
(B) Inner core
(C) Mantle
(D) Outer core
10. What do Geologist use to study the interior of the Earth?
- (A) Large drills
(B) Manned probes
(C) Seismic waves
(D) X-rays

PART B : MATCHING

[5]

Match each thermometer on the left with the best Descriptor on the right. Each Descriptor may be used only once. Place your answer on the scantron

<u>Term</u>	<u>Descriptor</u>
11. ___ Satellite Imaging	A. the scanning of the earth by satellite or high-flying aircraft in order to obtain information about it.
12. ___ Seismographs	B. An instrument used to detect and record earthquakes
13. ___ Magnetometers	C. Images of Earth or other planets collected by imaging satellites
14. ___ Remote Sensing	D. An instrument used for measuring magnetic forces, especially the earth's magnetism.
15. ___ Core Sampling:	E. a roughly cylindrical piece of subsurface material removed by a special drill and brought to the surface for examination

PART C: CREATE A FOLDABLE

Layers of the Earth Instructions:

1. Colour the interior layers and exterior layers of earth.
2. Cut out exterior of the Earth with tab, interior of the Earth and labels
3. Glue interior of earth on to a sheet of blank white paper
4. Glue labels to the correct layers and page title at the top
5. Tape the exterior of the Earth by the tab so that it can be lifted to reveal the interior



Outer Core
2,266 km thick

Crust
570 km thick

Inner Core
1,216 km thick

Mantle
2,867 km thick

Earth's Interior

