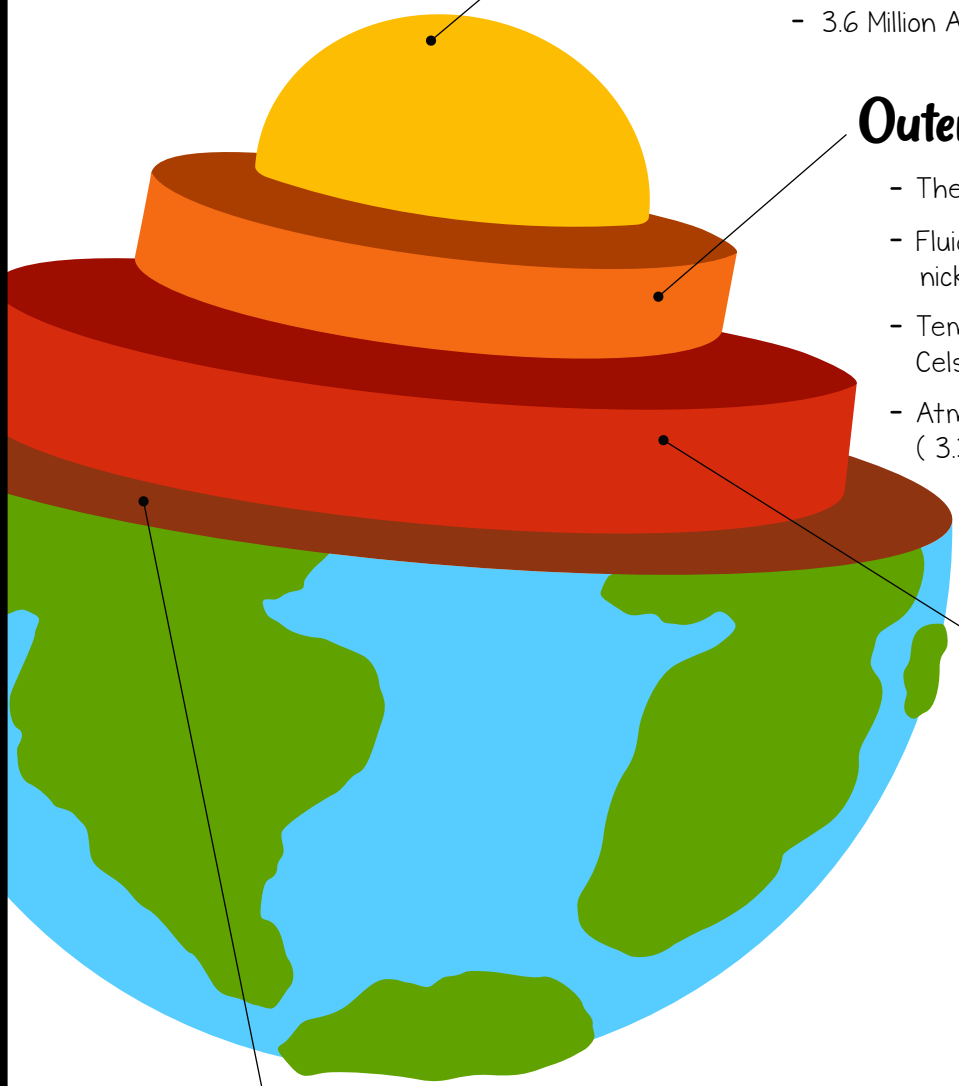
LAYERS OF THE EARTH



Inner Core

- The fourth layer inside the earth. (1,230 to 1530 km thick)
- Hot and solid metallic ball made of iron.
- Temperature is about 5200' Celsius.
- 3.6 Million Atmospheric Pressure

Outer Core

- The third layer of the Earth
- Fluid Layer made up of the metals iron and nickel about 2,200 km (1,367 miles) thick.
- Temperature is between 4,500' and 5,500' Celsius (8,132 and 9932).
- Atmospheric Pressure of 135–330 GPa (3.3 Million Atmosphere)

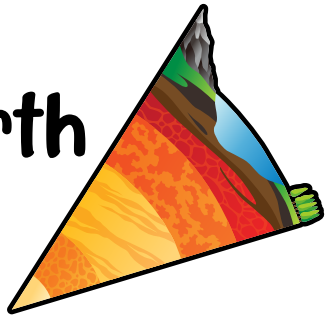
Mantle

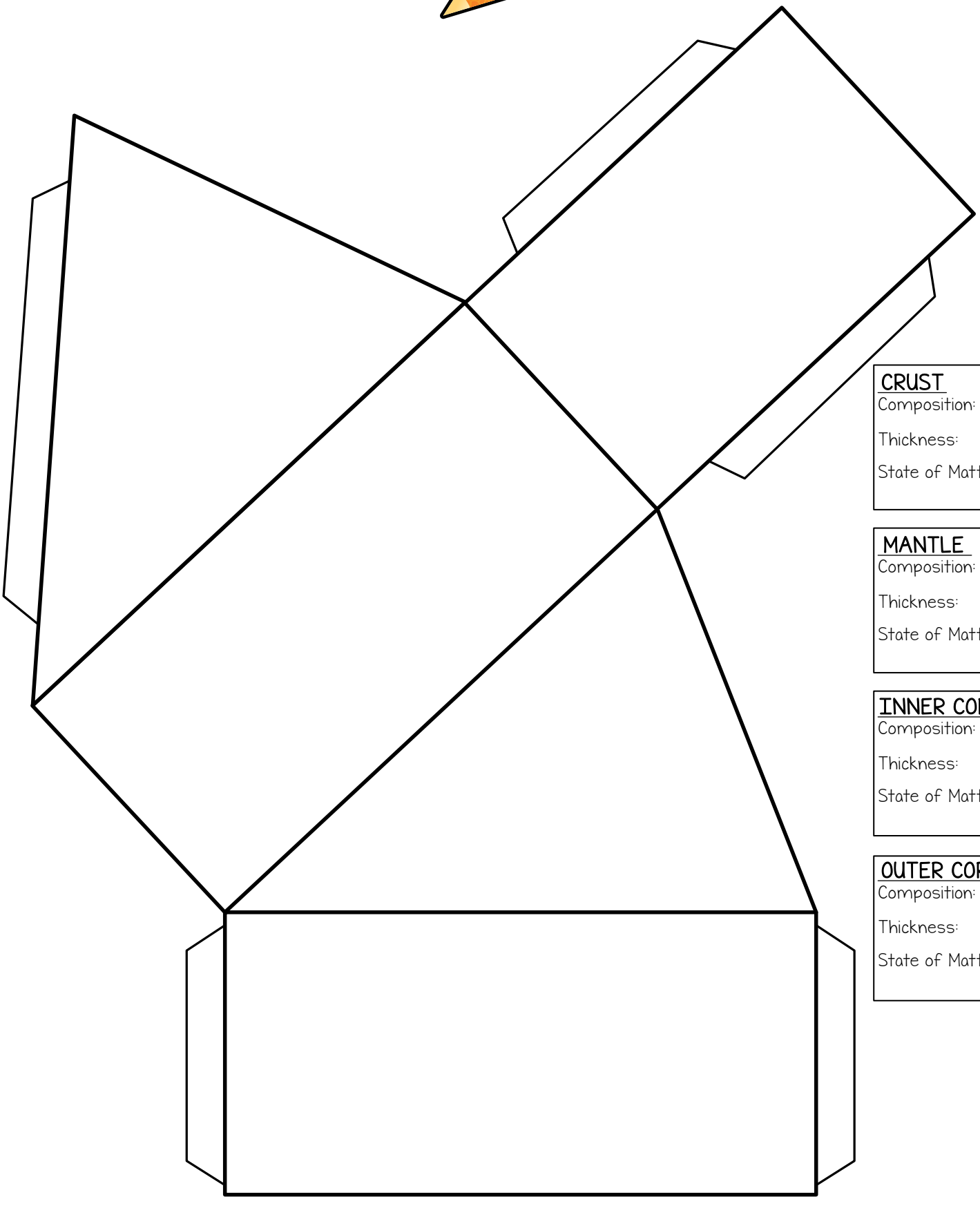
- The largest and massive layer between the crust and the core (2,900 km thick).
- Made of solid rocks and ices with 84% of Earth's Volume.
- Temperature ranges from 200 to 4000 degree celsius.
- Atmospheric Pressure is 136 GPa (1.4 million).

Earth's Crust

- Layer of the Earth that we live on everyday. (5 to 70 km thick)
- Made of light materials such as rock–basalts and granites.
- Temperature ranges from 500 to 1000' C.
- Split into two types (Oceanic and Continental)
- Atmospheric Pressure at sea level on Earth 1013.5 millibars or 14.7 pounds per square inch.

Layers of the Earth Section Model





CRUST
Composition:

Thickness:

State of Matter:

MANTLE
Composition:

Thickness:

State of Matter:

INNER CORE
Composition:

Thickness:

State of Matter:

OUTER CORE
Composition:

Thickness:

State of Matter:

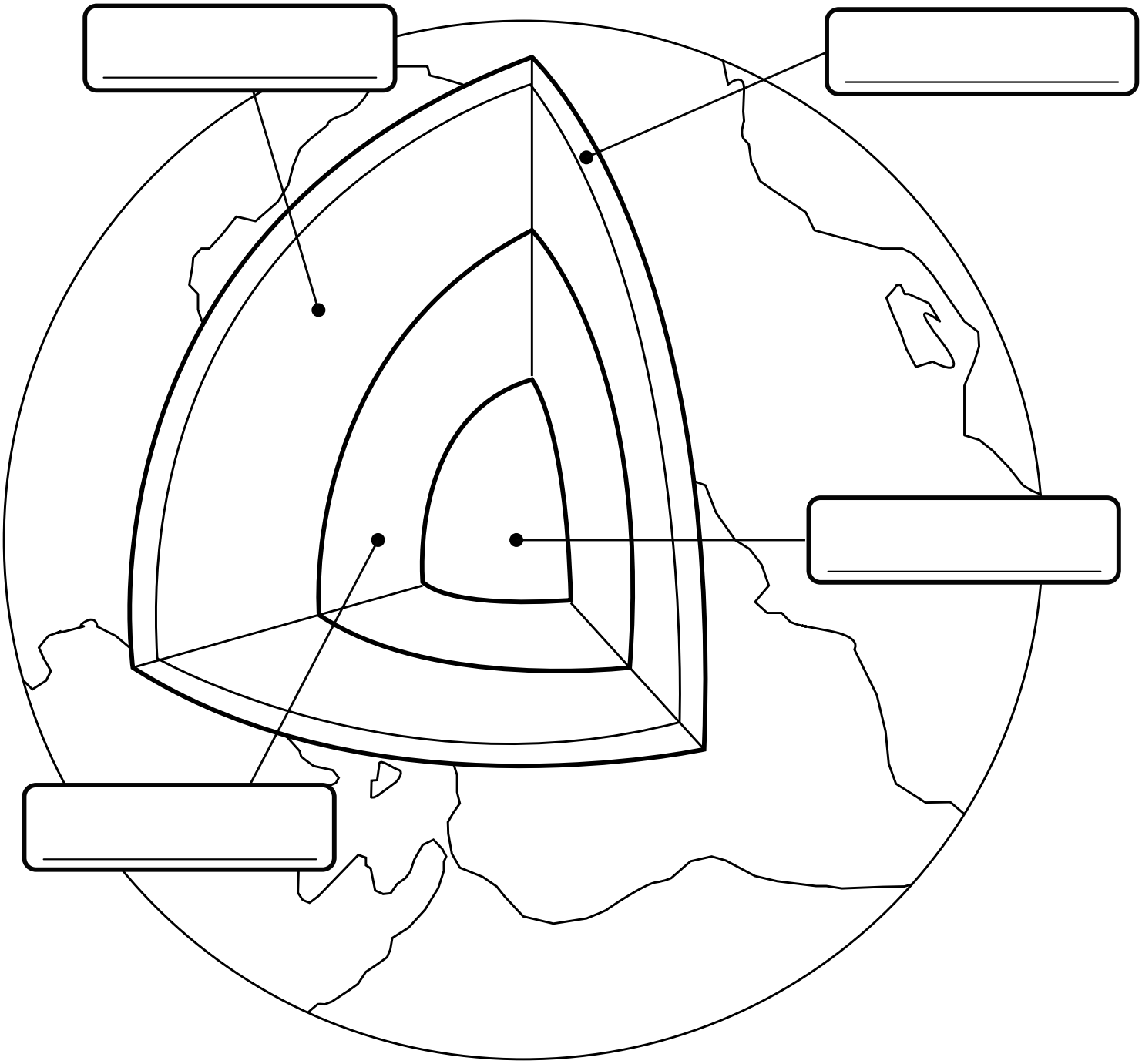
LAYERS OF THE EARTH
CROSSWORD PUZZLE

Earth	Plate Tectonics	Core	Topsoil
Crust	Gravity	Magnetosphere	Geosphere
Sphere	Lithosphere	Ridge Push	Density
Mantle	Convection	Subduction	Asthenosphere

G E O S P H E R E E X I U J L K H G E
G X C F O X R I D G E P U S H H M X N
E A R T H T P L I T H O S P H E R E N
R G B N R V E E Q E X I U J L K H G E
G X C F O X Y G P N A A N C M H M X N
O Z R N E A M P L M O Y R O Y H A Z M
N C U A N B B C A D U S T N W L G C D
W F S U I O O P T D V R E V T A N F D
S Y T R T K K N E R Y R R E A A E Y R
U U V F R M A N T L E A N C H H T U C
B N N A O E E T E A B B A T D H O N O
D H H A G J J K C L K H V I V D S H R
U A S U B D U C T I O N T O B E P A E
C A A A N A W U O D E O D N B N H A D
T F E R Y G H J N Q A A M U N S E F Q
I A R B G R A V I T Y D E S Y I R A X
O B N N G R R K C L G A A E I T E B L
N N B Y R T O P S O I L G P U Y A N D
A P A R T R C U L A T I E S P H E R E
U A S T H E N O S P H E R E U Y A F A

What's Inside the Earth

Directions: Color and label the layers of the earth.



Check Your Understanding

Directions: Use the words in the box to complete the sentence.

MAGMA	METAL	OCEANIC CRUST	INNER CORE
IRON	RIDGE PUSH	EARTH	CONTINENTAL CRUST
CORE	MANTLE	ROCKY	LITHOSPHERE
MANTLE	ASTHENOSPHERE	BIOSPHERE	

1. Just like the spherical layers in an onion, _____ has multiple layers that serve different purposes.

2. The thickest layer of the earth is the _____.

3. _____ is extremely hot liquid and semi-liquid rock located under Earth's surface.

4. _____ is the layer of the Earth that is a solid despite its high temperature due to high pressure squeezing the atoms together so that they can't spread out.

5. The _____ and _____ are the metals that is located in the outer core.

6. The earth's crust is _____ and brittle and can break during earthquakes.

7. _____ is a proposed driving force for plate motion in plate tectonics that occurs at mid-ocean ridge as the result of the rigid lithosphere sliding down the hot, raised asthenosphere below mid-ocean ridges.

8. _____ is hot, ultramafic rock and represents about 68% of the earth's mass.

9. Earth's crust is divided into two types, _____ and _____.

10. The _____ is composed of both the crust and the portion of the upper mantle and behaves as a brittle, rigid solid.

11. The _____ is partially molten upper mantle material and behaves plastically and can flow.

12. The _____ is the thin life-supporting stratum of Earth's surface, extending from a few kilometers into the atmosphere to the deep-sea vents of the ocean.

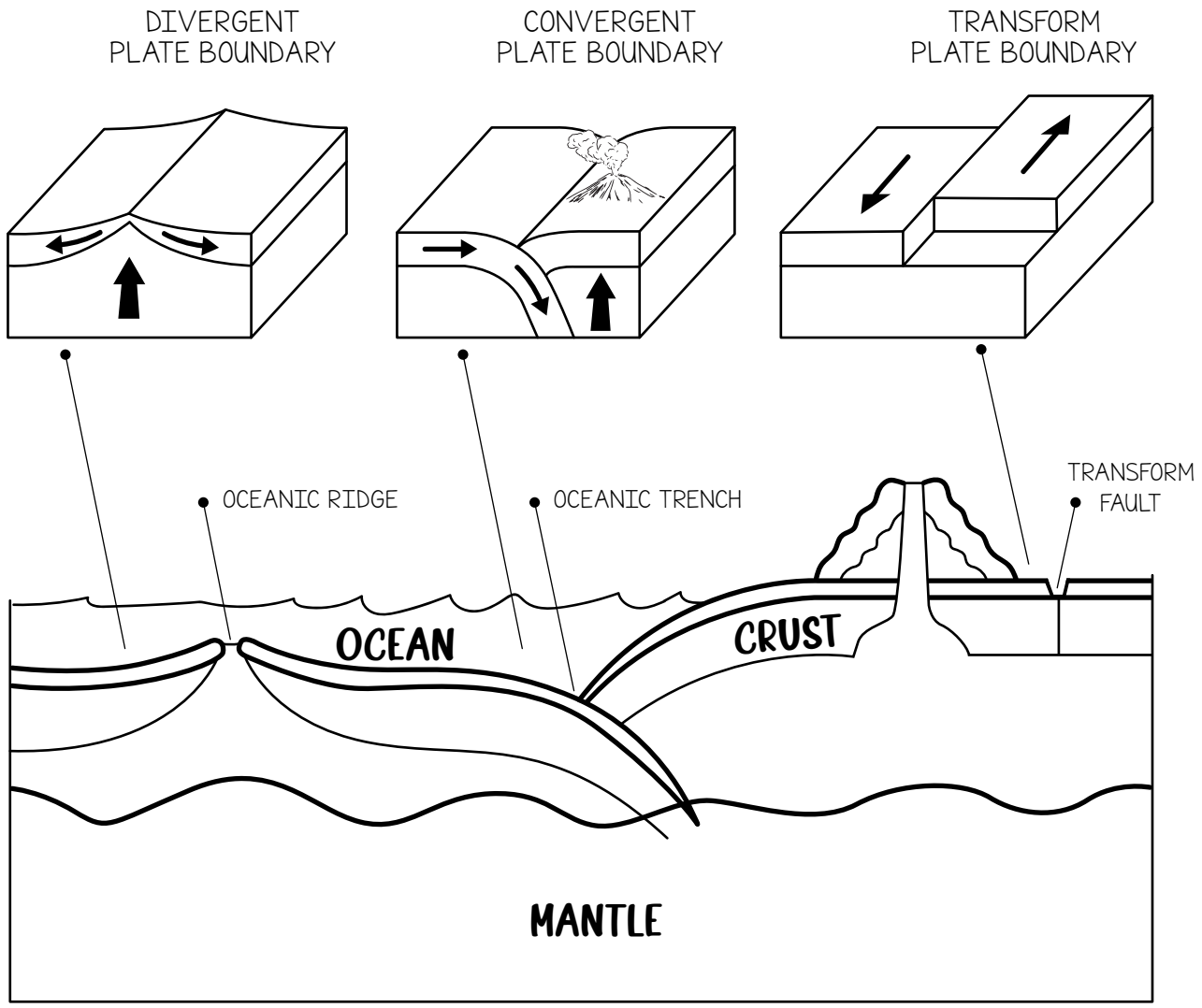
EARTHQUAKES

An earthquake is the sudden release of strain energy in the Earth's crust, resulting in waves of shaking that radiate outwards from the earthquake source. When stresses in the crust exceed the strength of the rock, it breaks along lines of weakness, either a pre-existing or new fault plane.

The exact place deep in the ground where the earthquake happens is called the **hypocenter**. If you draw a line straight above this point deep in the ground to the surface, you will find the **epicenter**.

The place where the two pieces of earth slip is called slip is called the **fault** or **fault line.**

PLATE BOUNDARIES



The Earth's Layers

Drawing	Name of the Layer	Definition	Describe what happens in this layer
	CRUST -		

The Plate Boundaries

Drawing	Boundary Type and Definition	Fault Type and Definition	Describe What Happens in This Stage
			Plates collide causing the edges of one or both plates to buckle up into a mountain ranges or one of the plates may bend down into a deep seafloor trench.