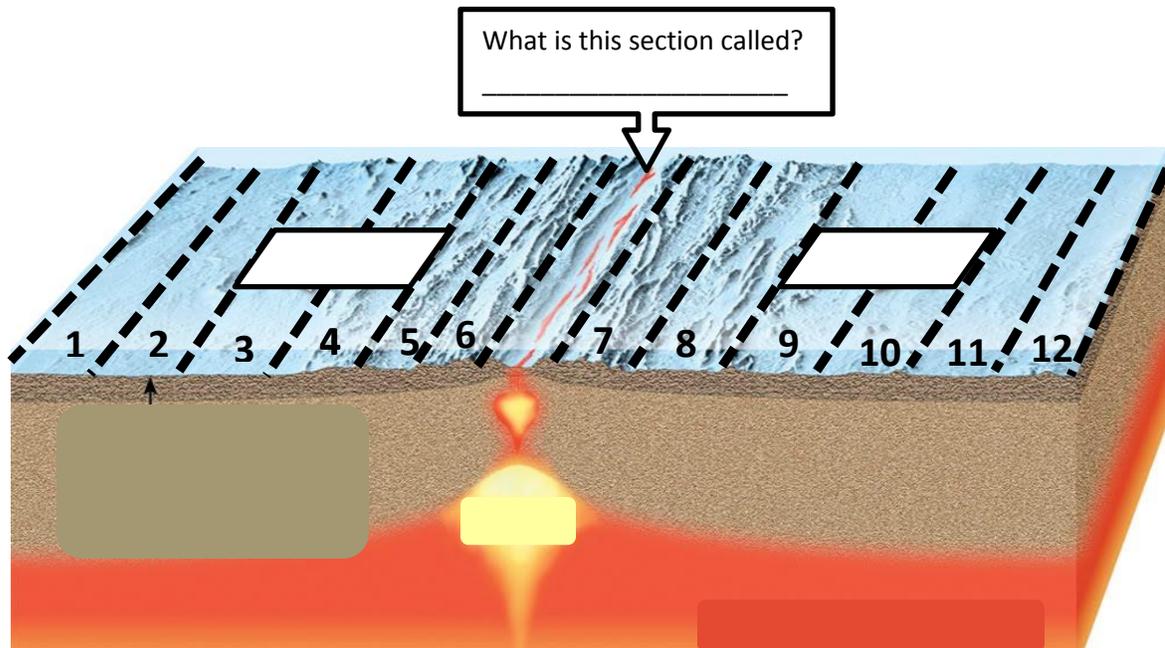


Station 1: Age of ocean floor

1. Explain why the youngest/newest ocean floor rocks are found at the center of the ridge?
2. What type of rock forms at the mid-ocean ridges? _____
3. On the diagram below, draw arrows in the boxes to show the direction the plates are moving.
4. On the diagram below, the ocean floor rock is divided into numbered sections. Which two sections are youngest? Which are oldest?
Youngest sections: _____ Oldest sections: _____
5. What sections are the same ages as section 9? _____ section 11? _____

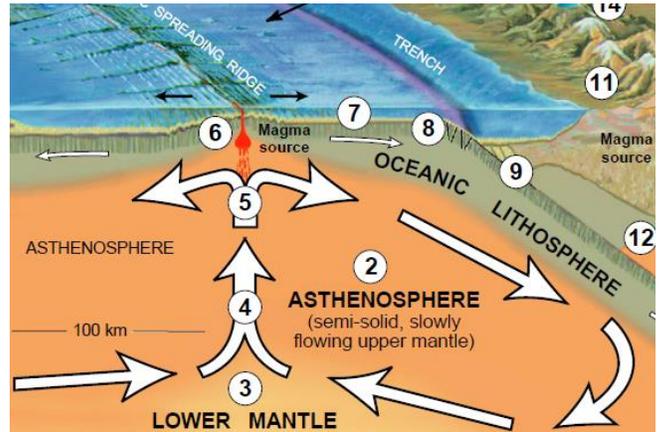
**Station 2: Historical Importance of Sea Floor Spreading**

1. Explain how sea-floor spreading gave Alfred Wegener's theory of Continental Drift credibility and acceptance from the scientific community?
2. Is the Atlantic Ocean getting bigger or smaller? Explain why.

3. Why do you think the Theory of Plate Tectonics is called the most important geologic theory?

Station 3: Mechanism for plate movement:

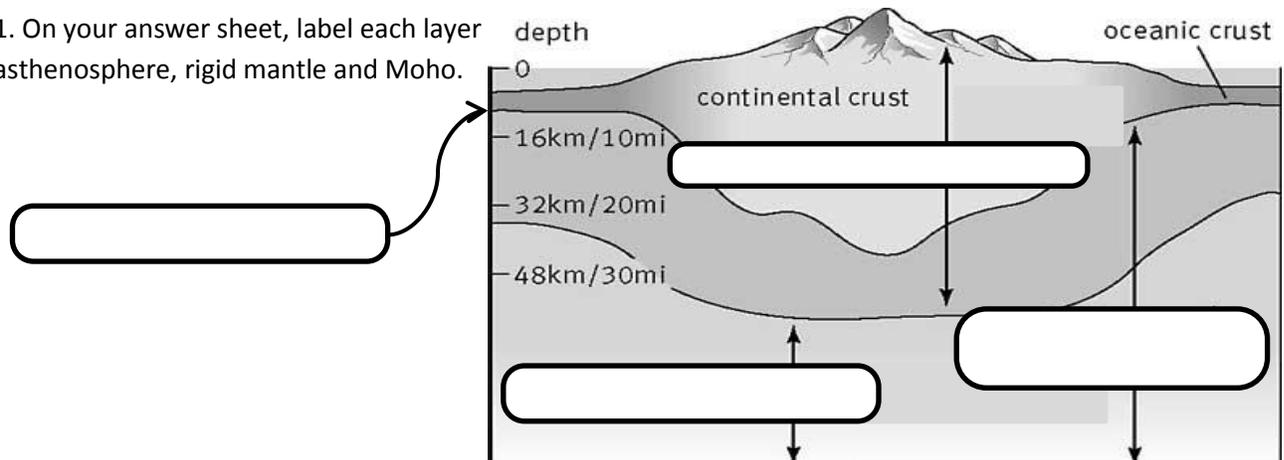
1. What are the two names for the plates?
2. Do they all move the same speed?
3. On the diagram for station 1, draw arrows showing the convection current responsible for moving the plates away from each other.



4. In YOUR words, explain what causes the plates to move? Write complete sentences and include words like density, convection and heat.

Station 4: Internal Geologic Structure of Plate Tectonics

1. On your answer sheet, label each layer asthenosphere, rigid mantle and Moho.



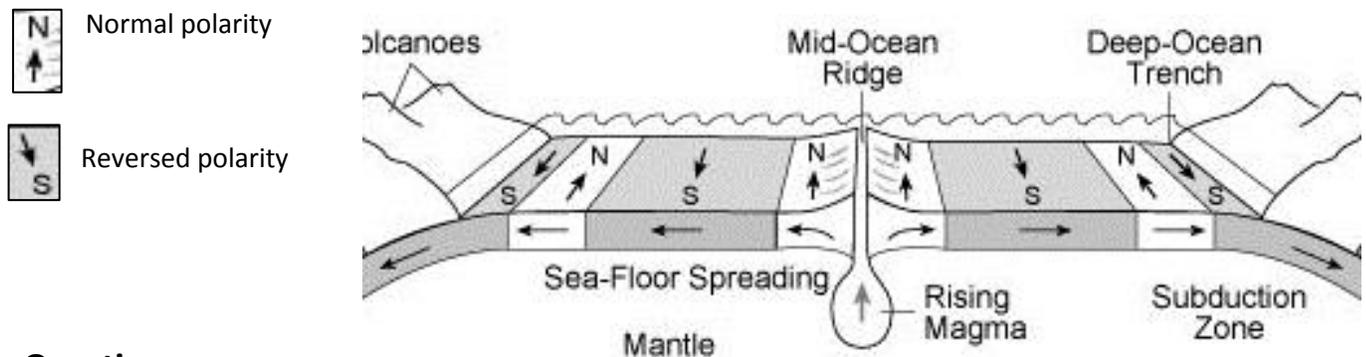
2. Complete the chart:

Type of crust	Mainly made of:	Density	Relatively thick or thin

3. If the Asthenosphere is “almost” liquid, how can the solid rock plates float on it without sinking?

4. What is the boundary called between the Mantle and Crust and how was it discovered? You should write multiple sentences in response.

Station 5: Magnetic Polarity of the Sea Floor



Questions:

1. How does the age of the sea floor rock change as distance from the mid-ocean ridge increases?
2. According to the diagram above, rocks presently forming have what type of polarity?

