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# LAB 14

## The Earth's Interior

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### Purpose

The purpose of this lab is to have you identify the physical properties that are associated with the different portions of the Earth's interior.

### Materials

graph paper or  
spreadsheet  
computer application

colored pencils

### Procedure

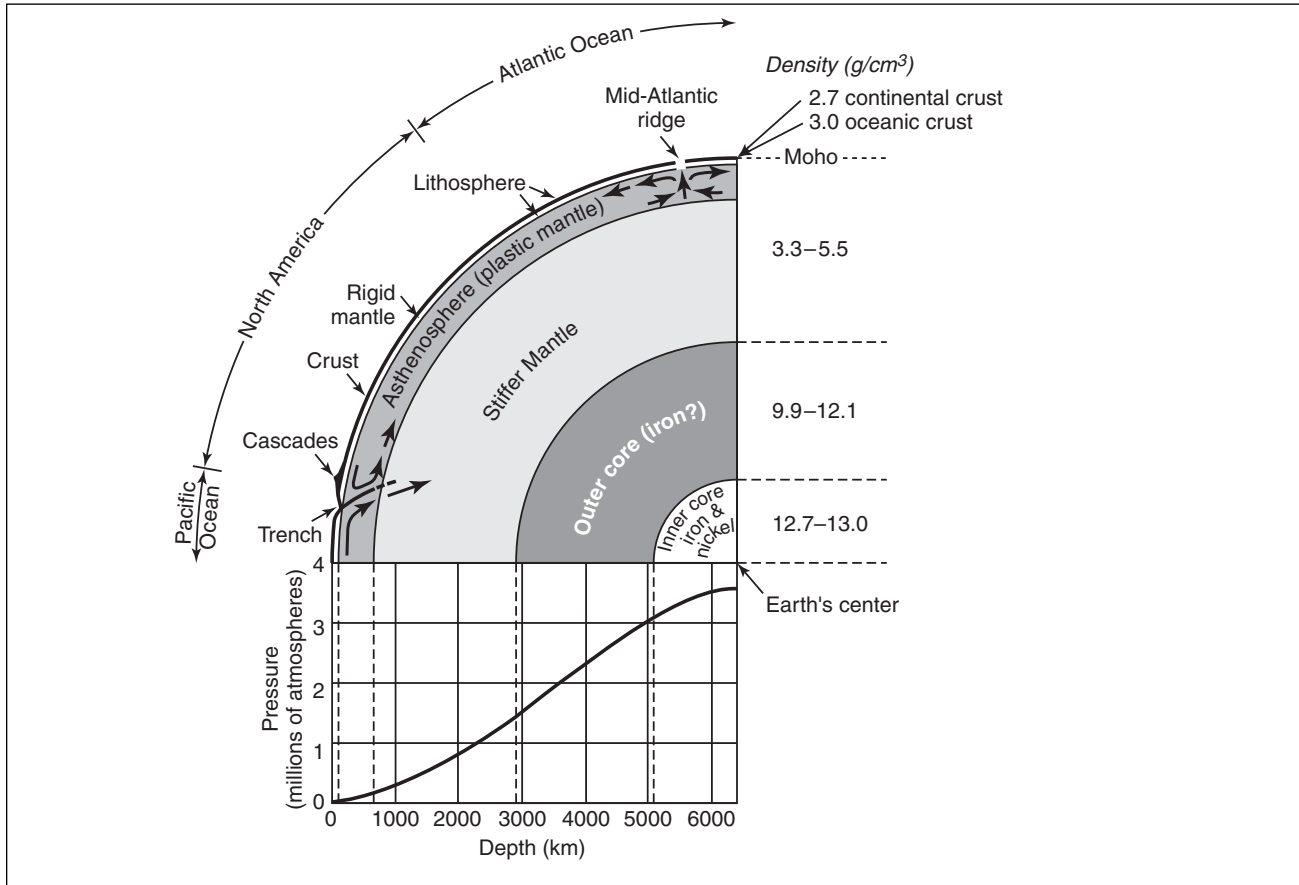
Complete the following steps.

1. Use the data provided in Table 14–1 to construct a line graph showing the relationship between the temperature of the Earth's interior and depth. The  $x$ -axis should be labeled "Depth (km)" and the  $y$ -axis should be labeled "Temperature of the Earth's Interior (Celsius)."
2. Once all of your data points have been plotted, connect the points with a colored pencil and label the line "Temperature of the Earth's Interior."
3. On the same line chart you just created, add the data points showing the melting point for the Earth's mantle shown in Table 14–1.
4. Once all of the data points have been plotted, connect them with a different color and label the line "Mantle Melting Point Temperature."
5. On the same line chart, add the data points showing the melting point for the Earth's core as shown in Table 14–1.
6. Once all of the data points have been plotted, connect them with a different color and label the line "Core Melting Point Temperature."
7. Using the information from Table 14–2, shade in and label the different portions of the Earth's interior with five different colored pencils.

**TABLE 14-1 Earth's Interior Temperature and Depth**

Depth (km)	Temperature of the Earth's Interior (°C)	Mantle Melting Point Temperature (°C)	Core Melting Point Temperature (°C)
0	0		
200	1200	1100	
400	2200	2000	
600	2600	2600	
800	2900	3400	
1000	3200	4200	
1200	3400	4800	
1400	3700	5500	
1600	3900	5900	
1800	4100	6200	
2000	4300		
2200	4400		
2400	4600		
2600	4700		
2800	4800		
3000	5000		4400
3200	5200		4700
3400	5300		4900
3600	5400		5000
3800	5600		5200
4000	5700		5400
4200	5800		5600
4400	5900		5700
4600	6000		5800
4800	6200		6000
5000	6300		6300
5200	6400		6500
5400	6500		6700
5600	6600		6800
5800	6700		7000
6000	6800		7000

Zone	Depth (km)
Lithosphere	0–120
Asthenosphere	120–600
Mantle	600–2900
Outer Core	2900–5200
Inner Core	5200–6400



**FIGURE 14-1 Inferred Properties of Earth's Interior**

## Conclusions

Use the line chart you have just created along with the Inferred Properties of the Earth's Interior (Figure 14-1) to answer the following questions.

1. What is the average density of the Earth's crust?
2. Describe the temperature range within the Earth's outer crust.