

Chapter 27

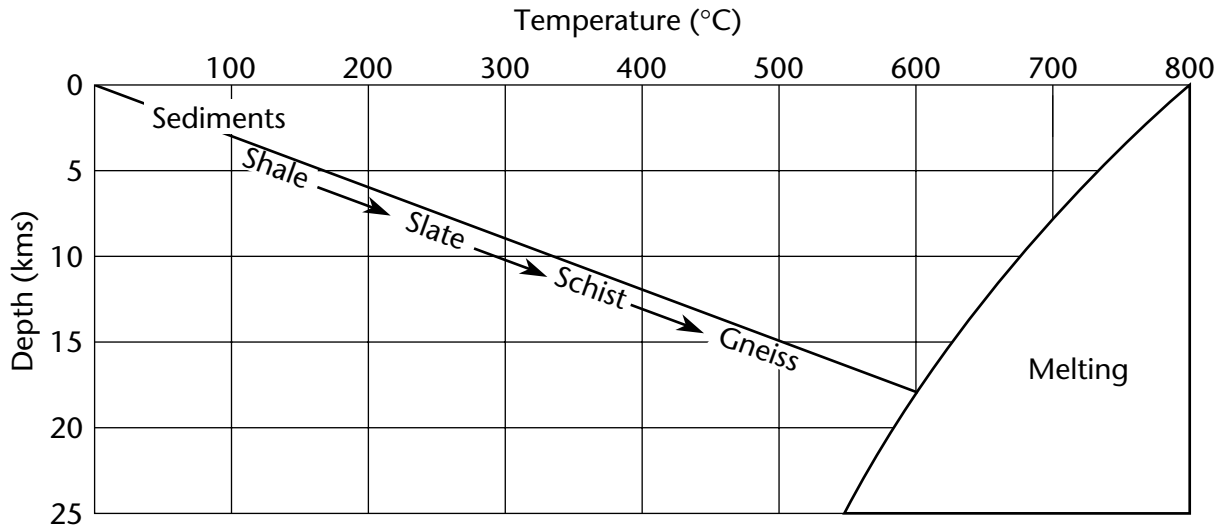
Use with Section 3

ENRICHMENT

● Metamorphic Rocks

Metamorphic Process

Use the graph to answer questions about the formation of metamorphic rocks.



1. What is the relationship between rock temperature and depth beneath the surface?

2. At a depth of 10 kilometers, what would the temperature be? _____
3. Between 0 and 10 kilometers, how many degrees per kilometer does the temperature increase?

4. Which metamorphic rock shown forms at the highest temperature? _____
5. Through what general temperature range would you expect schist to form? _____
6. How many kilometers beneath the surface does gneiss occur? _____
7. As the depth increases, what happens to the temperature at which rock melts?

8. Suppose you knew that a certain metamorphic rock begins to form at about 300°C. How many kilometers beneath the surface might this rock temperature occur? _____
9. How far beneath the surface does shale metamorphose to slate? _____
10. Metasomatism is described as a process by which metamorphic rocks may gradually change into granite (an igneous rock). At which temperature does metasomatism begin? _____