

Chapter 15

Use with Section 2

ENRICHMENT

● Early Space Missions

Magellan

Read the following information and answer the questions below.

After it was launched by the space shuttle, *Magellan* began its long journey into space. *Magellan* headed for Venus, the planet closest to Earth. By August 10, 1990, *Magellan* began to orbit Venus. Once in orbit, the spacecraft began mapping the topography of the planet. By October, it had mapped only about 1.5 percent of the planet.

Magellan sends to Earth radar images of Venus. Its radar can detect features that are only 120 meters across. This is ten times smaller than anything ever detected on Venus before. The spacecraft has revealed many features of the planet's surface, including volcanic mountains and craters as large as major American cities.

After completing the mapping of Venus, which took about 250 days, *Magellan* started mapping the planet again. Scientists use the two sets of maps to compare sights on Venus. They look for changes that may have occurred between the times the two sets of maps were completed.

Scientists expect the images sent back to Earth by *Magellan* to help solve many mysteries about Venus. They hope to learn if Venus, like Earth, is divided into tectonic plates. They hope to learn how some features of its landscape have formed. They have learned already how one mountain peak was formed—by three upward thrusts of Venus's surface.

1. What might scientists conclude if a new space probe mapped Venus in 2001 and showed new lava not seen on the earlier maps? _____

2. Radar images sent back to Earth in October 1990 have shown that Venus's surface has faultlike cracks. Based on the information available in October 1990, could we generalize that the entire planet has these cracks? _____
