

Lesson 2

ANSWER KEYS

Reading Checks

 **READING CHECK Summarize Text** What type of minerals might a geologist expect to find near the site of an ancient lava flow? Explain.

Pyroxene and olivine because both minerals can form as a result of lava cooling

 **READING CHECK Integrate With Visuals** What ideas from the text are illustrated in the map in **Figure 5**?

Some minerals are very rare; some minerals are tied to geological processes so they are found in concentrated deposits in specific places.

Figure 2 & Math Toolbox

Identifying Minerals

Figure 2 You can identify a mineral such as pyrite by its properties. Describe the color and luster of pyrite.

Properties of Pyrite

Color	Golden to brassy yellow
Streak	Greenish black
Luster	Metallic
Hardness	6–6.5
Density	5 g/cm ³
Crystal structure	Isometric (cubes or octahedrons)
Cleavage or fracture	None; uneven
Special	Becomes magnetic when heated

Math Toolbox

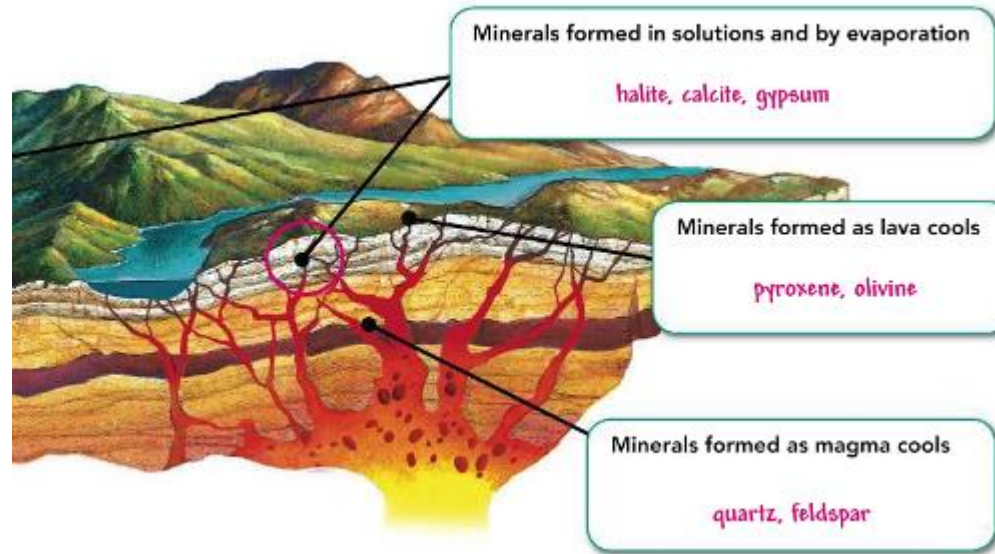
Calculate Density

A sample of the mineral cinnabar has a mass of 251.1 g and a volume of 31.0 cm³.

SEP Use Mathematics What is the density of cinnabar?

$$\text{Density} = \text{Mass/volume} =$$
$$251.1 \text{ g}/31.0 \text{ cm}^3 = 8.1 \text{ g/cm}^3$$

Figure 3 & 5



Mineral Resources

Figure 5 The map shows the location of some important mineral resources. Many of the minerals represented on the map are not evenly distributed across the planet.

SEP Construct Explanations What patterns do you notice in the distributions of different minerals on Earth?

Sample: Some areas on Earth seem to have a larger concentration of different minerals than other areas. Northern, western, and southern Africa, for example, have many resources, which are not found in eastern Africa.