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Holt Science and Technology **4** A Family of Planets

**Section: The Inner Planets**

\_\_\_\_\_\_ **1.** Why are the inner planets called terrestrial planets?

**a.** Because they are very hot.

**b.** Because, like Earth, they are dense and rocky.

**c.** Because most are gas giants.

**d.** Because they can support life.

**2.** In what three ways do the inner planets differ from the outer planets?

**MERCURY: CLOSEST TO THE SUN**

\_\_\_\_\_\_ **3.** Because Mercury is less massive than Earth, things there would weigh

**a.** about the same as on Earth.

**b.** much more than on Earth.

**c.** much less than on Earth.

**d.** two-thirds of their weight on Earth.

**4.** The amount of time that an object takes to rotate once is called its \_\_\_\_\_\_\_\_\_\_\_\_.

**5.** Why does Mercury’s day last almost 59 Earth days?

**Match the correct definition with the correct term. Write the letter in the space**

**provided.**

\_\_\_\_\_\_ **6.** the time that a planet takes to go

around the sun once

\_\_\_\_\_\_ **7.** the motion of a body orbiting another

body in space

\_\_\_\_\_\_ **8.** the amount of time that an object takes

to rotate once

\_\_\_\_\_\_ **9.** the amount of time an object takes to

revolve around the sun

Name Class Date

**a.** period of rotation

**b.** period of revolution

**c.** year

**d.** revolution

**VENUS: EARTH’S TWIN?**

\_\_\_\_\_\_**10.** Why does the sun rise in the west and set in the east on Venus?

**a.** Because Venus has a retrograde rotation.

**b.** Because Venus has a prograde rotation.

**c.** Because the sun rotates in the same direction.

**d.** Because Earth has a prograde rotation.

\_\_\_\_\_\_**11.** Which of the terrestrial planets has the densest atmosphere?

**a.** Earth **c.** Mercury

**b.** Mars **d.** Venus

\_\_\_\_\_\_**12.** What is the atmosphere of Venus composed of?

**a.** mainly oxygen and nitrogen

**b.** mainly carbon dioxide and acids

**c.** mainly hydrogen and helium

**d.** mainly water vapor and acids

\_\_\_\_\_\_**13.** What causes the high surface temperature on Venus?

**a.** the acids in its atmosphere

**b.** the low atmospheric pressure

**c.** the carbon dioxide in its atmosphere

**d.** the water in its atmosphere

\_\_\_\_\_\_**14.** What technology did the *Magellan* spacecraft use to map Venus?

**a.** geological surveys

**b.** orbital satellites

**c.** radar

**d.** sonar

\_\_\_\_\_\_**15.** What Earthlike feature was discovered on the surface of Venus?

**a.** continents **c.** rift valleys

**b.** oceans **d.** volcanoes

**16.** In what ways is Venus more like Earth than other planets?

**17.** A planet with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rotation appears to spin counterclockwise as seen from above its North Pole.

**18.** A planet with a\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rotation appears to spin clockwise as seen from above its North Pole.

**EARTH: AN OASIS IN SPACE**

**19.** Explain why Earth appears to be the only planet suitable to support life.

**20.** What are the three major components of the Earth’s global system?

**MARS: OUR INTRIGUING NEIGHBOR**

\_\_\_\_\_\_**21.** How does the air pressure on Mars compare with that on Earth?

**a.** The air pressure is about the same as on Earth.

**b.** The air pressure is greater on Mars.

**c.** The air pressure is lower on Mars.

**d.** The air pressure is lower on Earth.

\_\_\_\_\_\_**22.** What evidence suggests that there was once liquid water on Mars?

**a.** the Martian icecaps **c.** features like wave patterns

**b.** features like dry riverbeds **d.** water vapor in its atmosphere

\_\_\_\_\_\_**23.** Where may some of the lost water on Mars be found?

**a.** in underground rivers **c.** frozen beneath the Martian soil

**b.** frozen in icecaps **d.** in underground oceans

**24.** Give two reasons why Mars is a cold planet.

**25.** The largest extinct shield type volcano on Mars is called\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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**26.** How does the chemical composition of Mars affect Martian volcanic activity?

**27.** Describe the two goals assigned to NASA’s Twin Rover project.