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Holt Science and Technology **7** A Family of Planets

**Section: The Outer Planets**

**1.** A planet that has a deep, massive atmosphere is called

a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**2.** Of the outer planets, why would Pluto NOT be called a gas giant?

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**JUPITER: A GIANT AMONG GIANTS**

\_\_\_\_\_\_ **3.** Which of the following is the largest planet in our solar system?

**a.** Jupiter

**b.** Earth

**c.** Saturn

**d.** Neptune

\_\_\_\_\_\_ **4.** Which of the following gases is Jupiter mostly composed of?

**a.** oxygen and nitrogen

**b.** organic molecules

**c.** hydrogen and helium

**d.** water and carbon dioxide

\_\_\_\_\_\_ **5.** What is Jupiter’s Great Red Spot?

**a.** thick layers of clouds

**b.** a huge storm system

**c.** metallic hydrogen

**d.** colorful organic molecules

\_\_\_\_\_\_ **6.** What did the Voyager missions discover about Jupiter?

**a.** details about its moons system

**b.** data about its temperature

**c.** that it has a faint ring

**d.** data about its composition

**7.** What happens to the gases in Jupiter’s atmosphere as the depth increases?

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**SATURN: STILL FORMING**

\_\_\_\_\_\_ **8.** What are Saturn’s rings made of?

**a.** rocks and dust

**b.** iron and metals

**c.** different sized icy particles

**d.** organic molecules

**9.** The *Cassini* spacecraft is designed to study Saturn’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**URANUS: A SMALL GIANT**

\_\_\_\_\_\_**10.** Which of the following astronomers discovered Uranus during the 18th

century?

**a.** Isaac Newton

**b.** Galileo Galilei

**c.** William Herschel

**d.** George III

**\_\_\_\_\_\_11.** The atmosphere of Uranus is mainly made up of

**a.** oxygen and nitrogen.

**b.** hydrogen and methane.

**c.** carbon dioxide.

**d.** methane and ammonia.

\_\_\_\_\_\_**12.** What is unusual about Uranus’s axis of rotation?

**a.** It is perpendicular to the orbital plane.

**b.** It is tilted almost 90° and lies on its side.

**c.** It is tilted at a 45° angle.

**d.** Its poles are reversed.

**13.** How do scientists explain what may have happened to Uranus?

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**NEPTUNE: THE BLUE WORLD**

\_\_\_\_\_\_**14.** What prompted astronomers to look for Neptune?

**a.** the writings of Jules Verne

**b.** disturbances in Pluto’s orbit

**c.** *Gulliver’s Travels*

**d.** irregularities in Uranus’s orbit

**15.** Neptune had an area called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the similar to the

Great Red Spot found on Jupiter.

**16.** What drives the belts of whirling clouds and storms visible in images of

Neptune’s atmosphere?

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**PLUTO: THE MYSTERY PLANET**

\_\_\_\_\_\_ **17.** Which of the following is the smallest planet in our solar system?

**a.** Pluto **c.** Mercury

**b.** Mars **d.** Charon

\_\_\_\_\_\_**18.** What does the sun look like from the surface of Pluto?

**a.** a ball the size of the moon **c.** a bright ringed object

**b.** a distant bright star **d.** a ball half the size of the moon

\_\_\_\_\_\_**19.** What materials does Pluto seem to be composed of?

**a.** hydrogen and helium **c.** hydrogen and water

**b.** organics and ice **d.** rock and ice

\_\_\_\_\_\_**20.** Pluto has a thin atmosphere. What does it seem to be made of?

**a.** oxygen **c.** methane

**b.** nitrogen **d.** hydrogen

**21.** Pluto appears to be covered with frozen \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ but its

moon, Charon, is covered with frozen \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**22.** What is unusual about Pluto’s moon?

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**23.** Why do some scientists think Pluto should NOT be classified as a planet?

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