

# Astronomy Chapter 9 Study Guide

Write the term that matches each definition:

**Terms:** axis                      comet                      constellation                      meteorite                      meteor                      planet  
                    revolution                      rotation                      star                      orbit                      ellipse                      axial tilt  
                    gas giants                      solar system                      moons                      radius                      asteroids  
                    terrestrial planets

- \_\_\_\_\_ remaining material from a meteor that reaches Earth's surface
- \_\_\_\_\_ a mass of gas that produces light and heat through nuclear reactions
- \_\_\_\_\_ a group of stars that form a pattern in the night sky
- \_\_\_\_\_ one complete trip in a planet's orbit
- \_\_\_\_\_ an imaginary rod stretching between the planet's North and South Poles
- \_\_\_\_\_ a large object that circles (orbits) a star and does not produce light of its own
- \_\_\_\_\_ the path a planet takes around the sun (or other star)
- \_\_\_\_\_ to turn or spin completely around
- \_\_\_\_\_ oval shape
- \_\_\_\_\_ giant "dirty snowballs" made mostly of ice, rock, and dust
- \_\_\_\_\_ chunks of rock that are drawn in by Earth's gravity and fall through the atmosphere; friction causes them to burn up
- \_\_\_\_\_ the angle created by the axis of a planet
- \_\_\_\_\_ planets that are Earth-like
- \_\_\_\_\_ natural objects that revolve in an orbit around a planet
- \_\_\_\_\_ a star and the objects that revolve around it
- \_\_\_\_\_ the distance from one edge of a circle or sphere to the center
- \_\_\_\_\_ very large planets made up of substances that would be gases on Earth
- \_\_\_\_\_ smaller, rocky objects that orbit the sun

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Circle the best answer to each question. Read carefully, as some questions ask for more than one answer to be selected.

19. What causes day and night?
- A. the Earth's revolution around the sun
  - B. the Earth's rotation on its axis
  - C. the Earth's momentum around the sun
  - D. the sun's revolution around the Earth
20. What causes a planet's year?
- A. the Earth's revolution around the sun
  - B. the Earth's rotation on its axis
  - C. the Earth's momentum around the sun
  - D. the sun's revolution around the Earth
21. What causes seasonal changes throughout the year?
- A. the Earth's revolution around the sun and its axial tilt
  - B. the sun's revolution around the Earth and its axial tilt
  - C. the Earth's momentum around the sun
  - D. the Earth's rotation on its axis and its axial tilt
22. Which of these statements are true? Circle all that apply.
- A. Summertime has more hours of daytime than night time.
  - B. Summertime has more hours of night time than daytime.
  - C. Wintertime has more hours of daytime than night time.
  - D. Wintertime has more hours of night time than daytime.
23. How many known planets are in our solar system?
- A. five
  - B. nine
  - C. ten
  - D. eight
24. Circle the objects that are part of our solar system. Circle all 5 that apply.
- A. a star
  - B. moons
  - C. Polaris
  - D. planets
  - E. asteroids
  - F. Orion
  - G. comets
  - H. meteorites
  - I. galaxies

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25. Which two planets may at times be called the farthest from the Sun?
- A. Mercury and Venus
  - B. Jupiter and Neptune
  - C. Neptune and Pluto
  - D. Pluto and Uranus
26. Which planet in our solar system has the largest diameter?
- A. Earth
  - B. Saturn
  - C. Jupiter
  - D. Sun
27. What is one A.U. (Astronomical Unit)?
- A. the distance from Earth to the moon
  - B. the distance from the center of the Earth to the surface of Earth
  - C. the distance from Earth to Pluto
  - D. the distance from Earth to the Sun
28. Which planet is the only one in our solar system on which life is known to presently exist?
- A. Earth
  - B. Mars
  - C. Mercury
  - D. None of the planets in our solar system are known to have life presently existing on them.
29. Which of the planets are referred to as the four "gas giants"? Circle all that apply.
- A. Pluto
  - B. Neptune
  - C. Uranus
  - D. Earth
  - E. Mars
  - F. Mercury
  - G. Venus
  - H. Jupiter
  - I. Saturn
30. What is Jupiter's "Great Red Spot"?
- A. a volcano
  - B. a huge crater
  - C. a giant circular storm
  - D. a moon
31. Which of the nine planets has the most unusual tilt?
- A. Neptune
  - B. Uranus
  - C. Earth
  - D. Jupiter

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32. Label each of the planets shown on this model of the solar system. Number the model in order of distance from the sun (1 is closest), looking at the overall orbit of the planet. Then write the matching planet names on the numbered lines below the diagram. Spell correctly, using the planet names on question 29 to help you.

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33. Complete the diagram of the moon's phases. Use the terms list to spell correctly. Some terms are used more than once!

Terms: full    new    waxing    waning    quarter    gibbous    crescent

