

Chapter 22 Origin of Modern Astronomy

Section 22.2 The Earth-Moon-Sun System

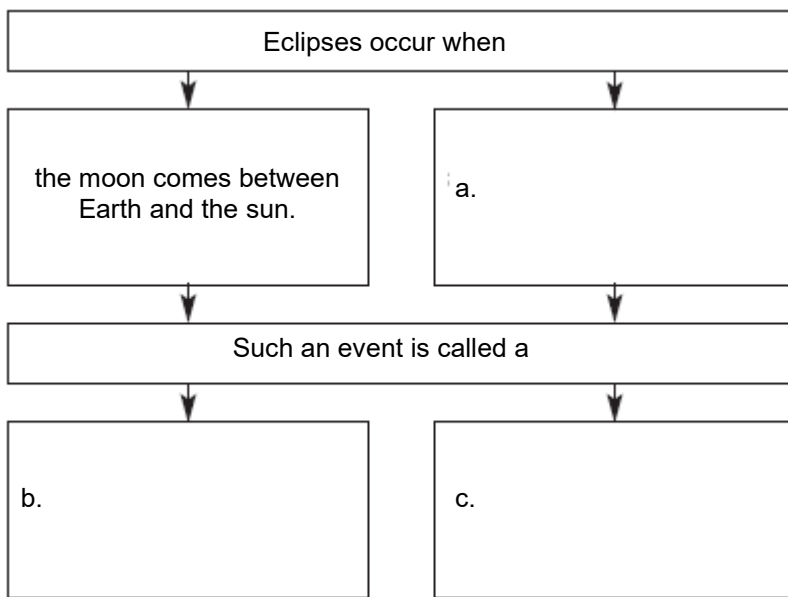
26 pts

This section describes how Earth moves in space and how changes in the relative positions of Earth, the sun, and the moon cause seasons, phases of the moon, and eclipses.

Reading Strategy

As you read, complete the flowchart to show how eclipses occur. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

3pts



Motions of Earth

- Circle the letter of the two main motions of Earth.

a. rotation and precession b. rotation and revolution

c. revolution and precession d. rotation and aphelion
- Is the following sentence true or false? Day and night are caused by Earth's revolution on its axis. _____
- The point at which Earth is closest to the sun is called _____.
- Is the following sentence true or false? Seasons are caused in part by the tilt of Earth's axis of rotation. _____
- What is precession? _____

Motions of the Earth-Moon System

- Circle the letter of the term that describes the point at which the moon is farthest from Earth.

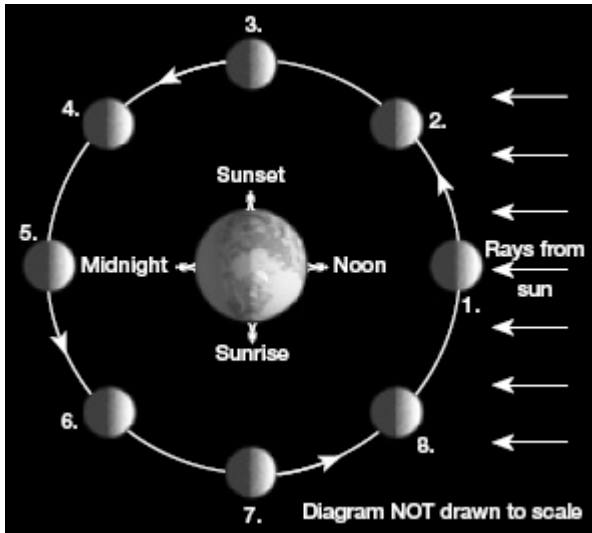
a. apogee b. aphelion c. perigee d. perihelion

Chapter 22 Origin of Modern Astronomy

7. Identify each labeled phase on the figure as one of the following: waning gibbous, first quarter, waning crescent, waxing gibbous, new, waxing crescent, full, third quarter.

8pts

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | |



8. ☾ Lunar phases are caused by changes in how much of the sunlit side of the _____ faces Earth.

9. Do the phases of the moon affect how much of the moon is illuminated? Explain your answer. _____

10. Is the following sentence true or false? The cycle of the phases takes about two days longer than the moon's revolution around Earth. _____

2pts

11. List two reasons why the moon's surface has extremely high and low temperatures. _____

Eclipses

12. A(n) _____ eclipse occurs when the moon passes between Earth and the sun and casts a shadow on Earth.

13. Is the following sentence true or false? A lunar eclipse occurs when the moon passes into Earth's shadow. _____

14. ☾ What must happen in order for an eclipse to take place? _____

15. Who can see a total eclipse of the moon when it occurs? _____

Chapter 22 Origin of Modern Astronomy

Section 22.3 Earth's Moon

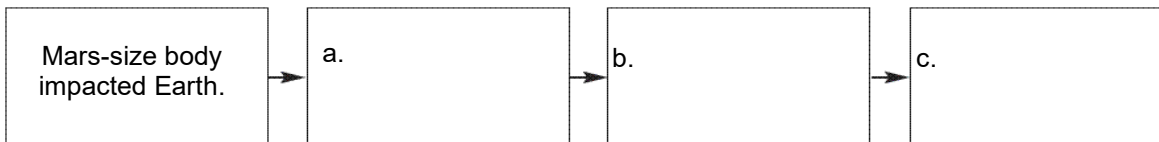
This section describes the moon's structure, surface, and ideas about its origin.

28pts

Reading Strategy

As you read, complete the flowchart showing the stages leading to the formation of the moon. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

3pts



1. The density of the moon is comparable to that of mantle rocks on _____.

The Lunar Surface

Match each description with its moon feature.

- | Description | Moon Feature |
|---|--------------|
| _____ 2. densely pitted, light colored areas containing mountain ranges | a. regolith |
| _____ 3. dark, relatively smooth areas made of ancient beds of basaltic lava | b. maria |
| _____ 4. splash marks that radiate outwards for hundreds of kilometers | c. craters |
| _____ 5. long channels similar to valleys or trenches | d. rays |
| _____ 6. soil-like layer of igneous rock, glass beads, and fine lunar dust | e. highlands |
| _____ 7. round depressions produced by the impact of rapidly moving debris or meteoroids | f. rilles |
8. How did the maria on the moon's surface form? _____

9. Complete the table below.

7pts

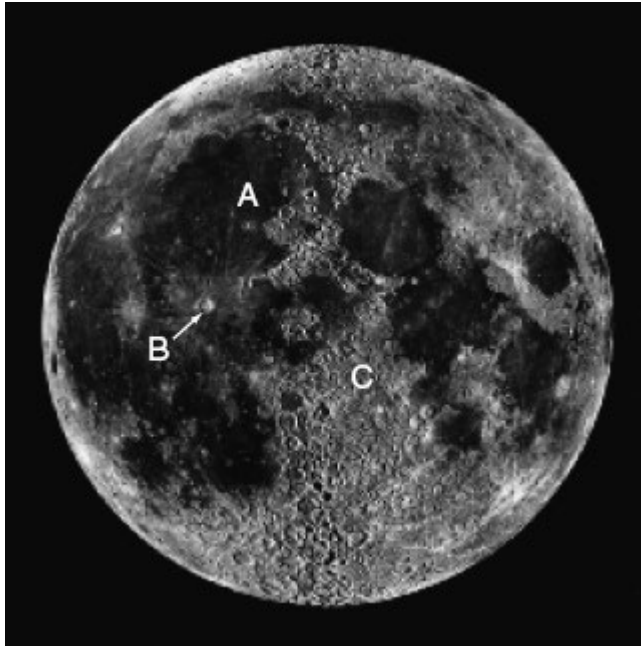
Characteristic	Highlands	Maria
Color		dark
Surface texture		
Mountains present?		
Rilles present?		

Chapter 22 Origin of Modern Astronomy

10. Select the appropriate letter in the figure that identifies each of the following moon features.

3pts

_____ crater _____ highland _____ mare



Lunar History

11. 🌑 What is the most widely accepted theory of the moon's origin? _____

12. The greater the density of craters on the moon, the _____ the surface must be.

13. List the three phases in which the moon evolved in order from oldest to youngest.

3pts

- a. _____
- b. _____
- c. _____

14. Is the following sentence true or false? Lava flows on the moon sometimes overlap highlands, showing that maria deposits are younger than highlands. _____

15. Why have very old craters on the moon not been erased as similar craters on Earth have been? _____

Chapter 22 Origin of Modern Astronomy

11 pts

WordWise

Use the clues below to identify vocabulary terms from Chapter 22. Write the terms, putting one letter in each blank. Use the circled letters to find the hidden word.

Clues

1. apparent westward drift of a planet as seen from Earth
2. an oval-shaped path
3. average distance between Earth and the sun
4. spinning of a body on its axis
5. motion of a body along a path around some point in space
6. point at which Earth is farthest from the sun
7. point at which the moon is farthest from Earth
8. cycle of changes in the amount of the moon that appears lit
9. splash mark radiating outward from a crater

Vocabulary Terms

1. _ _ _ _ _ o _ _ _ _ _
2. _ _ _ _ _ o _ _
3. _ _ o _ _ _ _ _
4. o _ _ _ _ _
5. _ _ _ _ o _ _ _ _ _
6. _ _ _ _ _ _ _ o _ _
7. _ _ o _ _ _ _
8. _ _ _ _ _ _ _ _ _ _ o _ _ _ _
9. _ _ _ o _ _

Hidden Word: _ _ _ _ _

Definition: _____