



## Chapter 7, Sun, Moon, and Planets Study Guide

To prepare for this test, make sure you study:

- Science book pages C64-C89
- Vocabulary:  
(from Lesson 6- Earth, the Moon, and the Sun): rotate, axis, revolve, orbit, crater  
(from Lesson 7- The Solar System and Beyond): star, planet, solar system, comet  
asteroid, meteor, constellation
- Lesson 6 and Lesson 7 notes
- Solar System diagram
- Moon phases diagram
- Phases of the moon website activities
- Asteroids, comets, and meteors outline

Use your Asteroids, Comets, and Meteors outline to practice for the essay question:

**Write a one paragraph essay in which you define and describe the characteristics of an asteroid, a comet, and a meteor.**

- Your paragraph must start with an opening sentence and end with a closing sentence.
- You must give the definition and at least 3 characteristics of an asteroid, a comet, and a meteor.
- Your essay should be (at the **very** least) eight sentences in length.
- This is expository text. It is **not** written in **first person**.  
Do not use I, me, my, you, or we.
- Use your own words. Do not copy from the book!
- Use transition words, especially when moving from one topic to another.
- A fourth grade opening does not begin with: I am going to tell you...  
This is about...  
You will learn about...
- A fourth grade closing does not begin with: Now you know...  
That is...  
I hope you liked...



Don't just study your facts- practice writing a sample essay!

**Don't forget: In addition to the test there will be three quizzes: Lesson 6, Lesson 7, and the Chapter 7 vocabulary quiz. Please check the website and your planners for those upcoming dates.**

## **Notes- Chapter 7 Lesson 6 Earth, the Moon, and the Sun**

- As Earth moves around the Sun, it spins or rotates.
- Earth rotates on its axis, which is the imaginary line drawn between the North and South Poles.
- One rotation takes 24 hours and gives us day and night on Earth.
- As Earth spins on its axis it also revolves, or moves in a circular path, around the Sun.
- It takes 365  $\frac{1}{4}$  or one year for Earth to make a complete revolution.
- The path Earth takes around the Sun is called an orbit.
- Earth's orbit is shaped like an ellipse, or flattened circle.
- Earth's axis is tilted at 23.5°.
- This tilt causes the seasons on Earth because of the different ways the Sun's rays strike parts of Earth.
- Things weigh more on Earth than on the Moon because gravity is six times stronger on Earth.
- Gravity is the force that holds things on the ground and determines how much they weigh.
- The Moon does not make its own light. It reflects the light of the Sun.
- The moon revolves around Earth.
- There is no air or water on the Moon.
- The Moon's surface has mountains, plains, and thousands of craters formed by volcanoes and chunks of rock and metal from space crashing into it.
- Half the Moon always faces the Sun, and the other half is always in darkness.
- As the Moon travels around the Earth, it appears to change shape because we see different amounts of its lighted half. These changes in shape are called phases.

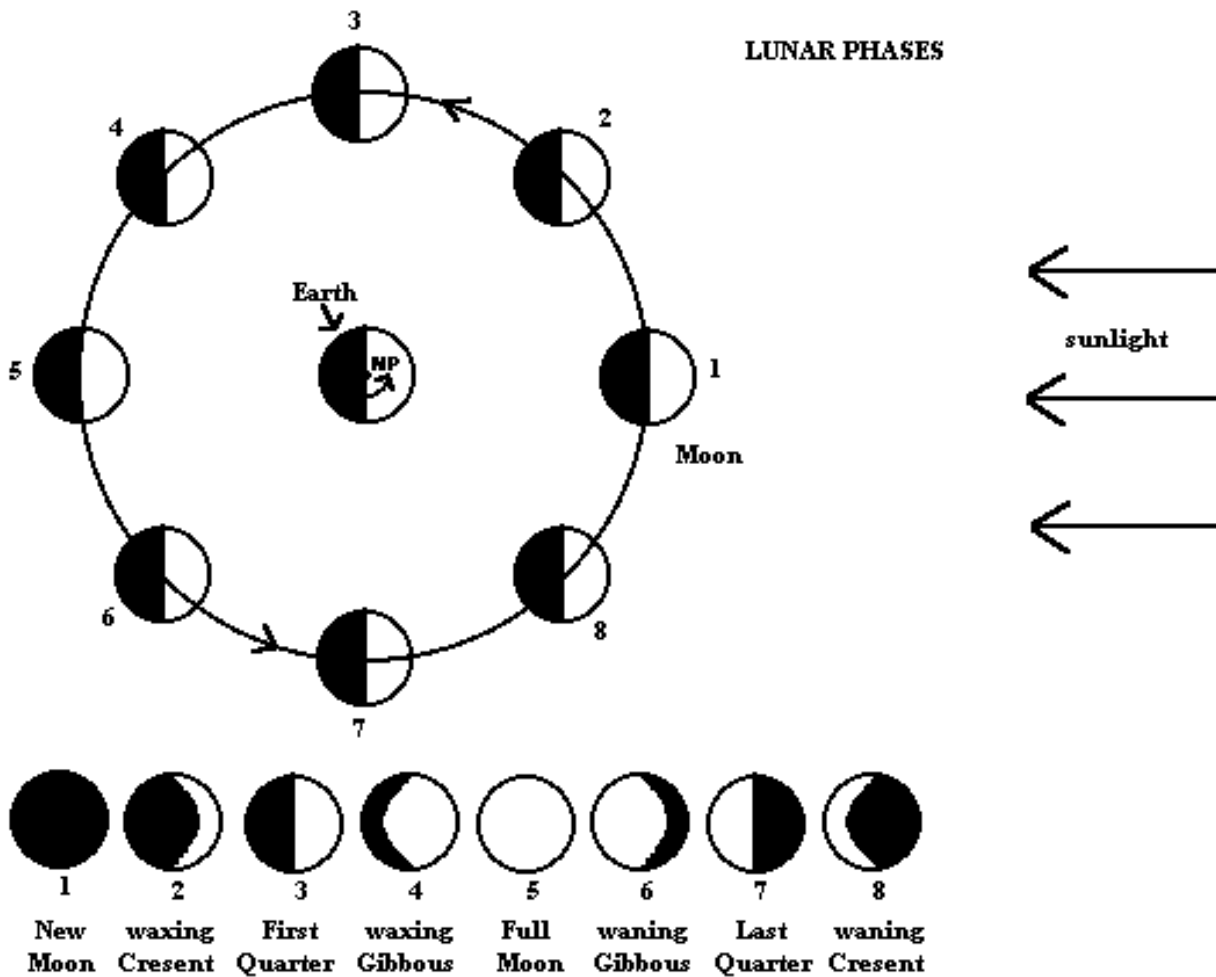
## **Notes- Chapter 7 Lesson 7 The Solar System and Beyond**

- The Sun is a hot glowing sphere of gases called a star.
- The Sun gives off energy that warms and lights Earth.
- The system that contains the Sun and the objects that orbit around it is called the solar system.
- There are eight planets in our solar system.
- Planets are different from stars because they are not as big or as hot, and they cannot make light.
- Like Earth, the other planets rotate on an axis and revolve around the Sun.
- The four inner planets are: Mercury, Venus, Earth, and Mars.
- Mercury is the planet closest to the Sun. It has a very hot side and a very cold side.
- Venus is the hottest planet in the solar system because its atmosphere traps heat.
- Earth is the only planet we know that supports life because it has water and oxygen, and its atmosphere keeps it from getting too hot or too cold.
- Mars is known as the red planet because of its reddish surface.
- The outer planets are: Jupiter, Saturn, Uranus, Neptune
- All outer planets are dark and cold, and they have rings and moons.
- They are all gas giants- planets made mostly of gas.
- Jupiter is the largest planet in the solar system.
- Saturn has thousands of rings made of chunks of ice and rock.
- Uranus looks as if it is lying on its side because of its extremely tilted axis.
- Neptune is the farthest planet from the Sun.
- Asteroids are chunks of rock or metal that orbit the sun.
- Meteors are small pieces of ice, rock, or metal that have broken off of colliding comets or asteroids. When a meteor hits Earth, it is called a meteorite.
- Comets are chunks of ice with bits of rock and dust sometimes called dirty snowballs.
- A constellation is a pattern or picture outlined by stars.

- Know the planets in order starting with the planet closest to the Sun.

Remember:      My            Mercury  
                       Very          Venus  
                       Energetic   Earth  
                       Mother       Mars  
                       Just          Jupiter  
                       Served       Saturn  
                       Us            Uranus  
                       Nachos      Neptune

- Know the phases of the moon.



## **Asteroids, Comets, and Meteors Outline for Practice Essay**

### I. Opening (Introduce the topic in a sentence or two.)

A. \_\_\_\_\_

B. \_\_\_\_\_

### II. Asteroids

A.

B.

C.

D.

E.

### III. Comets

A.

B.

C.

D.

E.

### IV. Meteors

A.

B.

C.

D.

E.

V. Closing (Tie everything together in a sentence or two.)

A. \_\_\_\_\_

B. \_\_\_\_\_

if one gets too close to Sun, will develop a tail as it melts	
Hailey's Comet first recorded over 2,000 years ago	
most found in asteroid belt	called dirty snowballs
broken off comets or asteroids	chunks of rock or metal
usually ice chunks mixed with rock and dust	most of size of house or smaller
if it hits Earth called a meteorite	may be planets never fully formed
burn up from friction in Earth's atmosphere	sometimes called shooting stars
revolve around Sun in long narrow orbits	thousands orbit the Sun
pieces of ice, rock, or metal	