Astronomy Unit Test Review

You will be taking your test on _______________________.

➢ Use the list below as a guide to help you study.
➢ You are responsible for knowing all of the information in each packet we have completed in this unit.
➢ There is also a review PowerPoint posted on Mrs. Robinson’s website.

Part I: Motion and Size of Stars, Planets, & the Moon

1. How many times larger is the Sun than the Earth?
   1 million

2. How big is our Sun, in relation to all of the other stars we know about in the universe?
   Medium

3. If our Sun is not the biggest star in the universe, why does it look so bright?
   It is the closest star to us

4. Why can we only see stars during nighttime, and not during the day?
   The brightness of the Sun blocks them out

5. How many planets do we have in our Solar System. (*Note: Dwarf planets are not included in this number!)
   8

6. What is the order of the planets, from the Sun outward?

Part II: Rotation, Revolution, & Seasons

1. How many hours does it take the Earth to rotate once on its axis?
   24 hours

2. How many degrees is Earth’s axis tilted from vertical?
   23.5°

3. How long does it take the Earth to revolve around the Sun?
   365 1/4 days
Directions: Complete each of the following on the diagram below:

4. Draw the Earth's **axis**. **Label** the North & South Pole and the **equator**.
5. **Label** the arrows that represent the Earth's **rotation**.
6. Draw an arrow to show the Earth's **revolution** around the Sun.

7. Make sure you can explain why we have **day and night** on Earth.
   *Look in the "Why Do We Have Day and Night?" packet, as well as on your Astronomy Quiz.
   *If you did not get the explanation correct on the Astronomy Quiz, make a note here to help you remember what you missed. Or just make a note to help you remember!

   "Earth rotates on its axis. This causes day & night."

   The part of the Earth facing the sun has **day** and the other side (not facing the sun) has **night**.
8. Make sure you can explain why we have *seasons* on Earth.
   *Look in the "Reason For the Seasons" packet, as well as on your Astronomy Quiz.
   *If you did not get the explanation correct on the Astronomy Quiz, make a note here to help you remember what you missed. Or just make a note to help you remember both reasons why we have seasons on Earth.

   The seasons are caused by:
   1.) The tilt of the Earth on its axis (23.5°)
   2.) The revolution of the Earth around the sun

9. What is an equinox? When do they occur?
   Equinox - equal amounts of daylight + darkness
   - occur twice a year
   - spring (vernal) equinox (March)
   - Fall (autumnal) equinox (September)

10. Explain the *summer solstice*. When does it occur in the Northern Hemisphere?
    *Summer Solstice* - longest day of the year
    - most amount of daylight
    - End of June
    - Earth tilted toward the Sun (N. Hemisphere)

11. Explain the *winter solstice*. When does it occur in the Northern Hemisphere?
    *Winter Solstice* - shortest day of the year
    - least amount of daylight
    - End of December
    - Earth tilted away from the Sun (N. Hemisphere)
Part III: Earth's Moon

1. How long does it take the moon to make a complete revolution around the Earth? 
   \[ \text{27.3 days} \]

2. About how long does it take for the moon to go through all of its phases?
   \[ \text{29.5 days (New moon to new moon)} \]

**Remember that it takes longer for the moon to go through all of its phases than it does to revolve once around the Earth. This is true because the Earth is rotating on its axis and revolving around the sun at the same time the moon is rotating/revolving around the Earth.**

Directions: Draw and label each moon phase in the diagram below.

![Diagram of moon phases](image)

Directions: Draw a diagram of each of the following below.
*Draw and label the Earth, the moon, and the sun.*

3) **SOLAR ECLIPSE**

![Diagram of solar eclipse](image)

4) **LUNAR ECLIPSE**

![Diagram of lunar eclipse](image)
Directions: Answer each short answer question in a complete sentence.

5. Complete this statement: The phases of the moon depend upon...
   
   The position of the Earth, Sun, + Moon / The angle at which the sunlight hits the moon

6. What causes tides in the oceans?
   
   The gravitational pull of the moon

7. Why do you weigh less on the moon than you do on Earth? How much less do you weigh?
   
   You weigh less because there is less gravity on the moon. You weigh \( \frac{1}{6} \) less on the moon.

8. What is the difference between mass and weight?
   
   Mass is the amount of matter in an object. It stays constant. Weight depends on gravity. Weight changes depending on gravity.

Part IV: Other Objects in Space

9. Draw a picture and label the following:
   
   a. Meteoroid
   b. Meteor
   c. Meteorite
   d. Crater

10. Where is the asteroid belt located?

   Between Mars and Jupiter

11. When we travel through the tail of a comet, what happens?

   We see meteor showers because the rock and dust pieces from the comet's tail travel through Earth's atmosphere and burn up causing streaks of light or meteor showers.

   * The streaks of light are also known as shooting stars.
Top 10 Things I Need To Remember For The Astronomy Test:

1) 

2) 

3) 

4) 

5) 

6) 

7) 

8) 

9) 

10)