

# Solar System Unit Test

## Study Guide

Remember you also have solar system information in the science section of your binder to help you prepare!

### Lesson 1: How do Earth and its Moon Move? (S4E2.a,b,c)

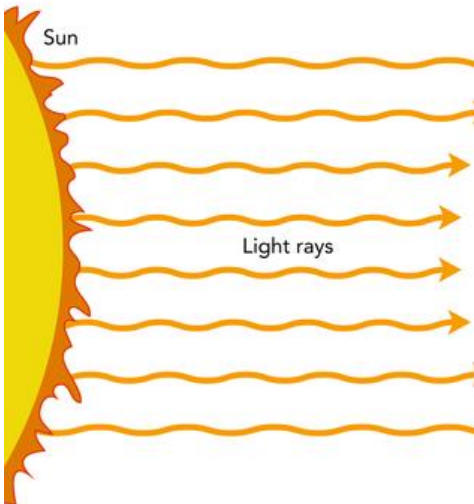
#### Vocabulary (pg. 57)

**Directions:** Write the vocabulary term on the line next to the definition it defines.

Definition	Vocabulary Term
To spin around an axis.	
An imaginary line that runs through the center of Earth from the North Pole to the South Pole.	
To travel in a closed path.	
The closed path of one object in space around another object; or to move in a such a path.	
A natural body that revolves around a planet.	
One of the shapes the moon seems to have as it orbits Earth.	

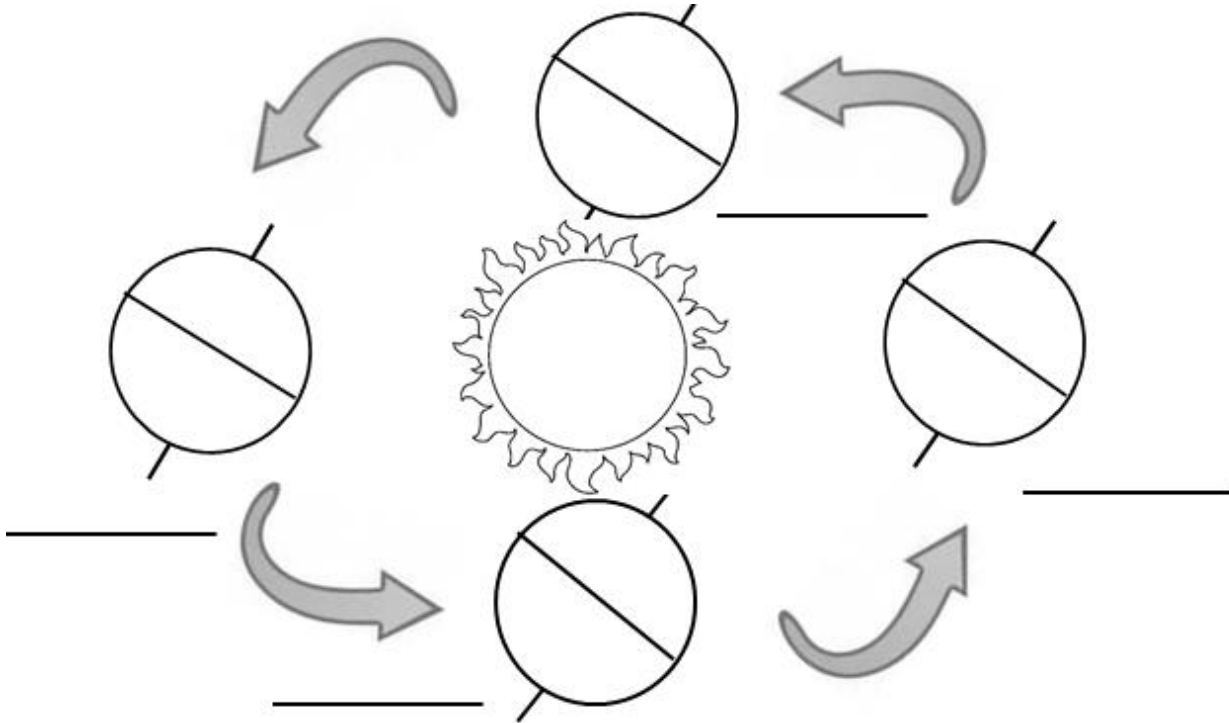
#### S4E2.a: Earth's Rotation (p.60-61)

- It takes 1 day or \_\_\_\_\_ for Earth to \_\_\_\_\_, or \_\_\_\_\_, on its \_\_\_\_\_.
- Rotation is why the Earth has \_\_\_\_\_.
- Because of Earth's rotation, sunrise & sunset occur at different times in different places, which is why we have 24 time zones.



### S4E2.c: Earth's Revolution (pg. 62-63)

- It takes 1 year or \_\_\_\_\_ for Earth to \_\_\_\_\_ or \_\_\_\_\_ around the sun.
- Seasons are caused by the \_\_\_\_\_ of Earth on its \_\_\_\_\_.
- Below, label the northern hemisphere's season above the line AND label the southern hemisphere's season below the line! (Hint: You have this on a notes handout!)



### S4E2.b: Phases of the Moon (pg. 64-65)

- \_\_\_\_\_ is a small planetlike body that revolves around Earth rather than the sun.
- The moon appears to shine, but the light you see is actually reflected light from the sun.
- \_\_\_\_\_ occur because as the moon revolves around Earth different amounts of its lit surface can be seen. This follows the same pattern of about \_\_\_\_\_.



- When the visible portion of the moon is **increasing**, the moon is \_\_\_\_\_.
- When the visible portion of the moon is **decreasing**, the moon is \_\_\_\_\_.

**Lesson 2: What Objects Are in the Solar System? (S4E2.d)**

**Vocabulary (p.69)**

Definition	Vocabulary Term
A group of objects in space that orbit a star in the center, plus the star itself.	
A large object that revolves around a star in a clear orbit.	
Bits of rock and metal mostly found in the asteroid belt.	
A ball of rock, ice, and frozen gases typically its orbit brings it close to the sun.	

**S4E2.d: Order of the Planets (p.72-74)**

Below, fill in the order of the planets.

	1	2	3	4		5	6	7	8
SUN					Asteroid Belt!!!				

**S4E2.d: Characteristics of the Planets (p.72-74)**



- \*Smallest planet= \_\_\_\_\_
- \*Planet similar in **size** to Earth/Hottest= \_\_\_\_\_
- \*Has life = \_\_\_\_\_
- \*Red planet= \_\_\_\_\_
- \*Largest planet/has a giant “red spot”= \_\_\_\_\_
- \*Has visible rings= \_\_\_\_\_
- \*Spins sideways on its axis = \_\_\_\_\_
- \*Named for god of sea = \_\_\_\_\_

**S4E2.d: Inner and Outer Planets (p.72-74)**

**Directions:** Below, write down the unique characteristics of inner and outer planets.

Inner Planets	Outer Planets

- **Answer:** Why is **Pluto** no longer considered a planet? (p.76)

**Lesson 3: What Can We See in the Sky? (S4E1.a,b,c,d)**

**Vocabulary** (pg. 83)

**Directions:** Write the vocabulary term on the line next to the definition it defines.

Definition	Vocabulary Term
A huge ball of superheated gas.	
The star at the center of our solar system.	
A pattern of stars that form an imaginary picture or design in the sky.	
A huge system of gases, dust, and many stars.	
Everything that exists in space.	

**S4E1.a: Attributes of Stars** (p.86-87 and your Star Brochure)

- **COLOR: Tells us about its** \_\_\_\_\_
  - Blue stars are the \_\_\_\_\_
  - Red stars are the \_\_\_\_\_
  - Our sun is a \_\_\_\_\_ or medium star.
  - Below, draw the color order of a star from hottest to coldest! (Think of a flame!)



- **SIZE: Mass impacts what happens in the star's life.**
  - Measured in relation to our sun.
- **Brightness: How bright a star appears depends on 2 factors**
  - How far it is from Earth
  - How bright it actually is
- **Number: The amount of stars**
  - A single, huge ball of superheated gas is a STAR.
  - A pattern of stars that form an imaginary picture or design in the sky is a CONSTELLATION.
  - A huge system of gases, dust, and many stars is a GALAXY.

**S4E1.b: Stars and Planets** (p.91, Lesson 2 and Lesson 3, handout)

**Directions:** Below, list characteristics in the correct category. (**Hint:** you have a handout to help you!)

Planets	Planets and Stars	Stars

**S4E1.c: Seasonal Star Patterns** (p.89)

- Stars appear to move east to west in the night sky due to Earth's \_\_\_\_\_.
- Stars appear to change with the seasons due to Earth \_\_\_\_\_ around the sun.
- Why does your location in the hemispheres impact the constellations you will see?

**S4E1.c: Watching the Night's Sky** (p.90-91)

- Stars look like faint, twinkling light because they are so \_\_\_\_\_ away.
  - It is easier to see distant stars than distant planets because they twinkle.
  - Stars do actually move through space in the \_\_\_\_\_ direction, but they are so far away it is hard for us to detect their motion.
- Planets shine with a steady light because they are so much \_\_\_\_\_ to Earth.
- Patterns of constellations don't appear to change. Why? (p.89)

- As we look at the night sky for several nights, an object appears to be moving across the sky. What do you think it is? Why? (p.89)

**S4E1.d: Technology** (handout)

Directions: Using the description on the right, write the form of technology in the left box below.

Technology	How It is Used
	An instrument that is used to view distant objects. <ul style="list-style-type: none"><li>• The <b>Hubble Telescope</b> is the best instrument we have to study distant stars outside our solar system.</li></ul>
	A lab in space where astronauts from many countries work together to study space and perform scientific experiments.
	This was used to explore the surface of the 4 <sup>th</sup> planet from the sun.

## Helpful Websites

- **Phases of the Moon Rap:** <http://www.youtube.com/watch?v=79M2ISVZiY4>
- **Order of the Planets Rap:** <http://www.youtube.com/watch?v=mVMTDjKDbws>
- **Size Comparison of Planets and Stars:** <http://www.youtube.com/watch?v=HEeh1BH34Q>
- **Bill Nye Clips:**
  - Orbiting Planets and the Moon: <http://www.youtube.com/watch?v=6f6maa9xPDM>
  - Outer Space: <http://www.youtube.com/watch?v=WHyl0TevzSs>
- **BrainPop:** [www.brainpop.com](http://www.brainpop.com)
  - username: jacksonelem
  - password: jaguar

### Videos to Review

- Type the word "SPACE" into search.
- There are 37 videos to help you!
- **StudyJams:** <http://studyjams.scholastic.com>
  1. Click on "Science" and "Solar System"
  2. Video to Review
    - Our Solar System: Inner Planets
    - Our Solar System: Outer Planets
    - A Day on Earth
    - The Moon
    - The Universe