

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)

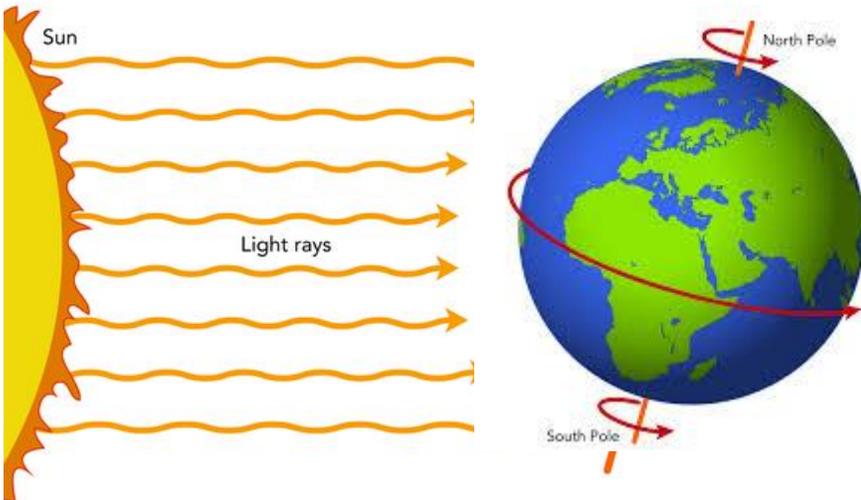
Vocabulary (pg. 57)

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. | |

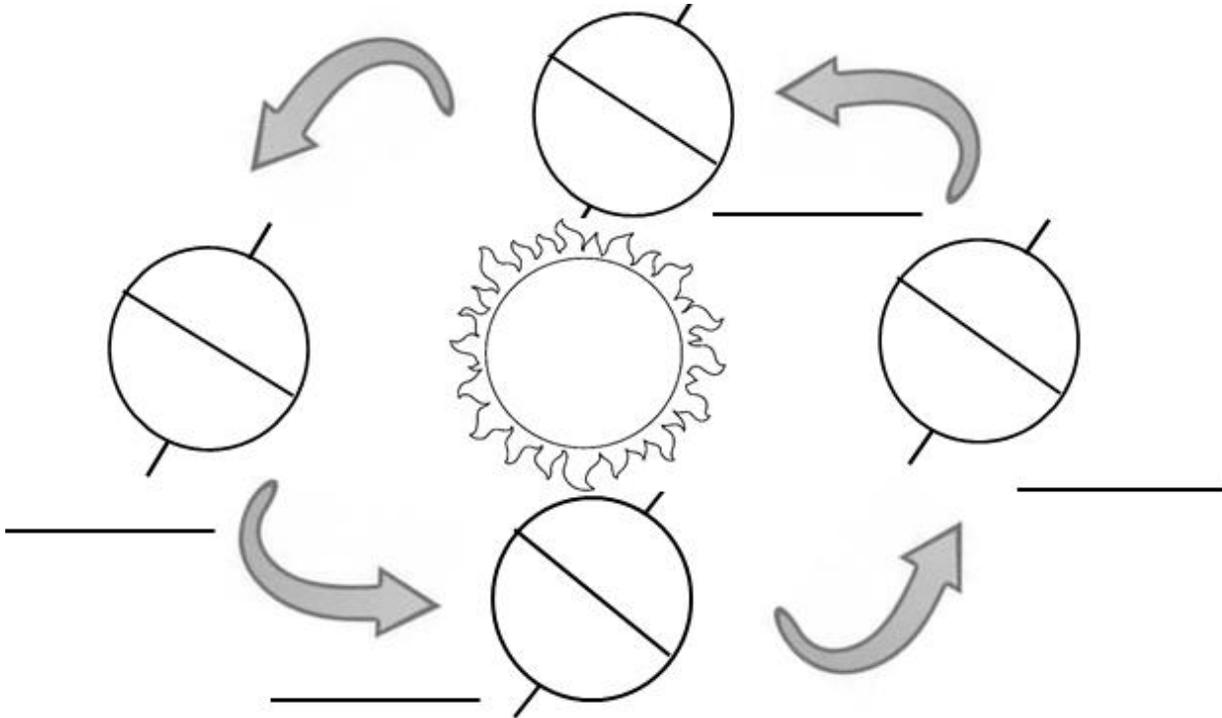
S4E2.a: Earth's Rotation (p.60-61)

- 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)

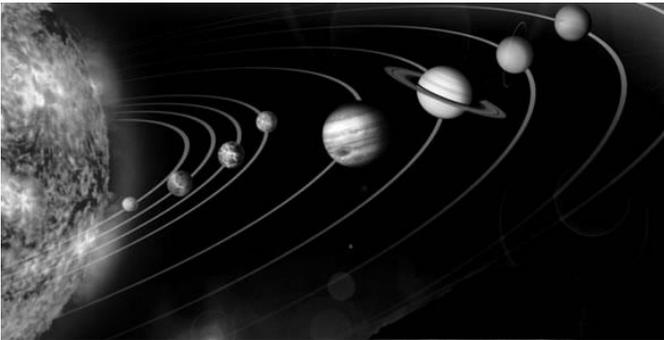
| Definition | Vocabulary Term |
|---|-----------------|
| A group of objects in space that orbit a star in the center, plus the star itself. | |
| A large object that revolves around a star in a clear orbit. | |
| Bits of rock and metal mostly found in the asteroid belt. | |
| A ball of rock, ice, and 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">• The Hubble Telescope is the best instrument we have to study distant stars outside our solar system. |
| | 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 th 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
 - 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