**Earth, Moon, & Sun: Study Guide**

**Earth in Space**

* The Earth \_\_\_\_\_\_\_\_\_\_ about its own axis every \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* The Earth \_\_\_\_\_\_\_\_\_\_ around the sun every \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Days and Years**

* \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_ fall upon the earth as it rotates about its \_\_\_\_\_\_\_\_\_\_\_
* One complete \_\_\_\_\_\_\_\_\_\_\_\_\_ of the earth around the sun is called a \_\_\_\_\_\_\_\_\_\_\_\_

**Seasons**

* Earth has \_\_\_\_\_\_\_\_\_\_\_\_ because its axis is tilted at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Draw a picture of the earth’s position relative to the Sun when it is

summer in California

**Solstice and equinox**

* A \_\_\_\_\_\_\_\_\_\_\_\_\_ occurs only 2 days a year in \_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_. These days mark the longest and shortest \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (respectively).
* The spring and fall \_\_\_\_\_\_\_\_\_\_\_\_\_mark the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and equal lengths of daytime and nighttime.

**Phases of the Moon…**

* The moon revolves around the earth every \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* The moon also rotates on its axis every \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* “Moonlight” is actually \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the sun
* The different shapes of the moon are called “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”

Name 8 different Phases of the moon

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* What causes the moon’s Phases? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* The \_\_\_\_\_\_\_\_\_\_\_\_ of the moon you see depends on how much of the “\_\_\_\_\_\_\_\_\_\_\_” side of the moon faces the Earth…..

**Eclipses**

* The moon’s \_\_\_\_\_\_\_\_\_\_ around the earth is \_\_\_\_\_\_\_\_\_\_ with respect to the earth’s orbit…if it wasn’t, we would have an \_\_\_\_\_\_\_\_\_\_\_\_ every month!
* A \_\_\_\_\_\_\_\_\_\_\_\_\_ eclipse occurs when the moon passes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the earth and the sun, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from reaching the earth.
* A \_\_\_\_\_\_\_\_\_\_ eclipse occurs when the earth is directly between the \_\_\_\_\_\_\_\_and \_\_\_\_\_\_\_\_\_.
* Unlike solar eclipses, lunar eclipses can be seen from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**The Tides**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ result from the moon’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on the Earth’s waters.
* As Earth \_\_\_\_\_\_\_\_\_\_\_\_\_, the moon’s \_\_\_\_\_\_\_\_\_\_\_\_ pulls \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_toward the point on Earth’s surface \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Every \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, every location on earth experiences a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as the Earth \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Spring and Neap Tides**

* When the moon and Sun are in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(during a new or full moon), their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ result in a \_\_\_\_\_\_\_\_\_\_\_ Tide.
* When Spring tides occur, \_\_\_\_\_\_\_\_\_\_\_ tides and \_\_\_\_\_\_\_\_\_\_ tides are extremely pronounced.
* When the moon is at a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the sun, the gravitational forces are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and a \_\_\_\_\_\_\_\_\_\_\_ tide results.
* This arrangement results in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between high and low tides.
* Draw a picture of the earth, moon, and Sun During Spring and Neap tides (respectively)