The HOMESCHOOL DAILY

FREE educational resources and activities

MARIE - CREATOR OF THE HOMESCHOOL DAILY

Hi! Thank you for your download. I'm so glad you were able to find a school tool you can use. Please feel free to use this activity for your own personal use or classroom.

Hope it works out great!

Marie

Solar System Guided Notes

- The Solar System is made up of the sun and other celestial bodies that _____. These bodies include _____, dwarf planets, over 100 moons, and countless asteroids, comets, and meteoroids.
- Our solar system is found in the _____. The sun is one of billions of stars in this _____ galaxy.
- The sun is a medium sized _____. It is our source of _____, _____, and _____.
- There have been two ways of thinking about how the Earth and other planets move in space. One is called a geocentric model and the other is called a heliocentric model.
- At one time, a scientist named Aristotle made claims to a geocentric model. A _____ says that the _____ is the center of the universe and that all the celestial bodies orbit the Earth.
- It wasn't until after Aristotle's death that a monk named Nicolaus Copernicus revealed a heliocentric model. A _____ says that the _____ is at the center of the solar system and all celestial bodies orbit it.
- Planets orbit the sun because of gravity. Objects that have more _____ have more _____. Gravity also gets _____ with _____.
- _____ is the force of attraction that all objects with mass have between each other.
- The sun makes up _____ of the mass of our solar system. It has more gravitational pull than anything else in our solar system. This _____ and the _____ at which the planets are _____ keep the planets in orbit.
- Each of the 8 planets revolve around the sun in _____ orbits.
- An elliptical orbit is an _____ that a celestial body takes around another celestial body.
- Write the mnemonic device.

Mercury **V**enus **E**arth **M**ars **J**upiter **S**aturn **U**ranus **N**eptune

- The 8 planets can be divided evenly into 2 groups, the _____ planets and the _____ planets.
- _____, _____, _____, and _____ make up the inner planets. They are also called _____ planets. Terrestrial planets have _____ surfaces that are comprised mainly of _____ and _____.
- Mercury
  - _____
  - Speediest Planet- moves 30 miles a second!
  - _____ Atmosphere
  - Planet of _____ hot and cold temperatures
  - _____ planet
  - 2nd most dense
  - No satellites
  - A _____ is an object that orbits a larger object. Example: Moon
- Venus
  - Nicknamed "_____" and "_____"
  - One of the _____ objects in the sky due to its reflective clouds
  - _____ atmosphere causes the _____
  - _____ planet
  - Retrograde Rotation- _____
  - No satellites
  - It is called Earth's twin because they are relatively the same size.
- Venus' hot temperature is due to what we call "the Greenhouse Effect." The large amount of _____ in Venus' atmosphere acts like a _____. The heat gets _____ underneath the thick layer of clouds. Because the heat has nowhere to go, Venus gets hotter and stays hot.
- Earth

- _____ planet
- Has _____
- Atmosphere with _____ and _____
- Has _____ including humans, plants, and animals
- 1 Revolution= _____
- 1 Rotation= _____
- 1 satellite

- A _____ is one trip around the sun.
- A _____ is one complete turn on a planet's axis.
- <u>Mars</u>
  - Nicknamed _____ due to the iron oxide (rust) on its surface
  - _____ at the poles
  - _____ just like Earth
  - Largest known volcano called _____
  - _____ known as Valles Marineris
  - 2 satellites
  - The icecaps are made of _____ (frozen carbon dioxide) and small amounts of water.
- <u>Asteroid Belt</u>
  - Asteroids are _____ and dust that are too small to be considered planets.
  - Asteroids in the belt orbit the sun.
  - The asteroid belt separates the _____ planets from the _____ planets.
  - It is lies between _____ and _____.
- The outer planets are also called _____. Gas giants are much _____ than terrestrial planets. They are comprised primarily of _____, liquids, and _____.
- <u>Jupiter</u>

- _____ Planet
- Made up mostly of _____ and _____
- Faint ring system
- Has _____ satellites
- Has a _____ that is an ongoing _____
- Jupiter is so BIG that all the other planets could fit inside it!

- Saturn
  - _____ Planet
  - Spectacular _____ made of ice and dust
  - Second largest planet
  - Has more than 80 satellites
  - Despite Saturn's size, it could float in a bathtub of water!
- Uranus
  - _____ on its side and east to west
  - Blue color from _____ in atmosphere
  - 13 dark _____
  - Thought to have _____ of water, ammonia, and methane above a solid core
  - Has more than 27 satellites
- Neptune
  - Most distant planet from the sun
  - _____, _____, and windy
  - 6 Faint Rings
  - 13 known satellites
  - Visible _____
  - Blue color is from _____ in the atmosphere

Solar System Guided Notes

- The Solar System is made up of the sun and other celestial bodies that orbit the sun. These bodies include 8 planets, dwarf planets, over 100 moons, and countless asteroids, comets, and meteoroids.
- Our solar system is found in the Milky Way Galaxy. The sun is one of billions of stars in this spiral galaxy.
- The sun is a medium sized star. It is our source of energy, light, and heat.
- There have been two ways of thinking about how the Earth and other planets move in space. One is called a geocentric model and the other is called a heliocentric model.
- At one time, a scientist named Aristotle made claims to a geocentric model of the Solar System. A *geocentric model* says that the Earth is the center of the universe and that all the celestial bodies orbit the Earth.
- It wasn't until after Aristotle's death that a monk named Nicolaus Copernicus revealed a heliocentric model. A *heliocentric model* says that the sun is at the center of the solar system and all celestial bodies orbit it.
- Planets orbit the sun because of gravity. Objects that have more mass have more gravity. Gravity also gets weaker with distance.
- *Gravity* is the force of attraction that all objects with mass have between each other.
- The sun makes up 99% of the mass of our solar system. It has more gravitational pull than anything else in our solar system. This gravitational pull and the speed at which the planets are moving keep the planets in orbit.
- Each of the 8 planets revolve around the sun in elliptical orbits.
- An elliptical orbit is an oval shaped path that a celestial body takes around another celestial body.
- Write the mnemonic device.

Mercury **V**enus **E**arth **M**ars **J**upiter **S**aturn **U**ranus **N**eptune

---

- The 8 planets can be divided evenly into 2 groups, the inner planets and the outer planets.
- Mercury, Venus, Earth, and Mars make up the inner planets. They are also called terrestrial planets. Terrestrial planets have solid surfaces that are comprised mainly of rocks and metals.
- <u>Mercury</u>
  - Closest planet to the Sun
  - Speediest Planet- moves 30 miles a second!
  - Thinnest Atmosphere
  - Planet of extreme hot and cold temperatures
  - Smallest planet
  - 2nd most dense
  - No satellites
  - A satellite is an object that orbits a larger object. Example: Moon
- <u>Venus</u>
  - Nicknamed "Morning Star" and "Earth's Twin"
  - One of the brightest objects in the sky due to its reflective clouds
  - Thickest atmosphere causes the Greenhouse Effect
  - Hottest planet
  - Retrograde Rotation- rotates backwards
  - No satellites
  - It is called Earth's twin because they are relatively the same size.
- Venus' hot temperature is due to what we call "the Greenhouse Effect." The large amount of carbon dioxide in Venus' atmosphere acts like a blanket. The heat gets trapped underneath the thick layer of clouds. Because the heat has nowhere to go, Venus gets hotter and stays hot.
- <u>Earth</u>

    - Most dense planet
    - Has seasons
    - Atmosphere with water and air
    - Has life including humans, plants, and animals
    - 1 Revolution= 1 year
    - 1 Rotation= 1 day
    - 1 satellite
- A <u>revolution</u> is one trip around the sun.
- A <u>rotation</u> is one complete turn on a planet's axis.
- <u>Mars</u>
    - Nicknamed Red Planet due to the iron oxide (rust) on its surface
    - Polar caps at the poles
    - Seasons just like Earth
    - Largest known volcano called Olympus Mons
    - Huge canyon known as Valles Marineris
    - 2 satellites
    - The icecaps are made of dry ice (frozen carbon dioxide) and small amounts of water.
- <u>Asteroid Belt</u>
    - Asteroids are rocks and dust that are too small to be considered planets.
    - Asteroids in the belt orbit the sun.
    - The asteroid belt separates the inner planets from the outer planets.
- The outer planets are also called gas giants. Gas giants are much larger than terrestrial planets. They are comprised primarily of gases, liquids, and ice.
- <u>Jupiter</u>
    - Largest Planet
    - Made up mostly of hydrogen and helium
    - Faint ring system

- Has more than 75 satellites
- Has a Great Red Spot that is an ongoing storm
- Jupiter is so BIG that all the other planets could fit inside it!

- Saturn
  - Least Dense Planet
  - Spectacular rings made of ice and dust
  - Second largest planet
  - Has more than 80 satellites
  - Despite Saturn's size, it could float in a bathtub of water!
- Uranus
  - Rotates on its side and east to west
  - Blue color from methane in atmosphere
  - 13 dark rings
  - Thought to have oceans of water, ammonia, and methane above a solid core
  - Has more than 27 satellites
- Neptune
  - Most distant planet from the sun
  - Dark, cold, and windy
  - 6 Faint Rings
  - 13 known satellites
  - Visible Clouds
  - Blue color is from methane in the atmosphere