

Planetarium Lesson

Kindergarten Lesson 6



Prepared by The Planetarium Committee At Wood Acres
Elementary School

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Review Concepts from Lessons 1-5.

Lesson 1

THE PLANETARIUM IS A MODEL

STARS

There are stars in different places in the sky and a planetarium shows us the stars, but much smaller. When we go outside, the sky and the stars are much bigger.

Our Sun is a star.

NEVER LOOK DIRECTLY AT THE SUN, IT WILL HURT YOUR EYES.

Stars are very old. There are billions of stars in the sky.

Many stars are in the sky all day but we can't see them because the sun makes everything too bright.

CONSTELLATIONS

Groups of stars that seem to form pictures in the sky are called constellations.

The Big Dipper and the North Star

The Big Dipper looks like a big soup ladle in the sky. For most people it is the first pattern they can find.

The Big Dipper is especially useful because it helps you find the North Star.

The big dipper always moves around the North Star but is in different places depending on the season and the time of night.

Orion

Cassiopeia

Lesson 2

Kindergarten - Lesson II

The Sun:

The Sun is our nearest STAR. IT IS A HUGE BALL OF BURNING GAS.

The Sun is huge when compared to our planet Earth and to the other planets.

The Sun is actually a pretty ordinary star, like the thousands we see in the sky. It is bigger than the planets, but it is not bigger than many stars. Betelgeuse and Rigel, Orion's shoulder and knee, are bigger than the Sun. The Sun is a medium-sized star.

We live 93 million miles away from the Sun.

Earth, our planet, ROTATES (SPINS), so that only half of the Earth at a time receives the light from the Sun.

The Sun is 5 billion years old.

The Sun gives us heat and light.

The Sun gives light to our planet Earth and it also gives light to the other eight planets that REVOLVE (TRAVEL) around the Sun.

Lesson 3

The Solar System:

- The Solar System is made up of the Sun, eight planets, several moons and a band of rocks called the Asteroid Belt. The Planets and the Asteroid Belt travel around the Sun in paths called orbits.

- The planets stay in their orbits because of an invisible, powerful force called gravity, which pulls the planets toward the Sun.

The planets are different from the stars. They do not have light of their own. They receive the light and heat that the Sun, our closest star, is giving them.

- A sentence to help you remember the planets' names and their order from the Sun is:

My Very Excellent Mother Just Served Us Noodles

Mercury Venus Earth Mars Jupiter Saturn Uranus Neptune

- The inner planets - Mercury, Venus, Earth and Mars - are all made of rock. They are quite small compared with some of the other planets.

Mercury is the closest of the Sun. Because Mercury orbits the sun faster than any other planet, Mercury was named for the speedy messenger of the Roman gods.

Venus is the brightest object in the sky, other than our sun and moon. Venus is the hottest planet--even hotter than Mercury which is closer to the sun --because its atmosphere traps heat.

Earth is the planet where we live, and is the only planet known to have just the right environment for plants, animals and people to live in.

Mars is the "red planet" because of the rusted iron in its rocky surface.

- The outer planets- Jupiter, Saturn, Uranus and Neptune are basically made of gas. They're known as the gas giants.

Jupiter is the largest planet.

Saturn is famous for its rings made up of ice and rock.

Uranus spins different from the other planets, when traveling around the sun; it seems to be lying on its side.

Neptune seems blue because of the blue clouds which cover it.

My Very Excellent Mother Just Served Us Noodles

The planets' motion:

- Revolution: each planet takes a certain time to travel around the sun. This time is the planet's year.

Our Earth takes 365 days to revolve around the sun. Our year has 365 days. Neptune and Uranus are so far away from the sun that they have very long years. One year in Uranus is 84 Earth years. Neptune's year is 165 Earth years.

- While revolving (traveling around the sun), the planets spin like tops. They all spin in different speeds. The time they take to spin around once is called a day. Our Earth takes 24 hours to complete a turn, a rotation. Our day has 24 hours.

Lesson 4

Review what Asteroids are

Review what Comets are

Review Meteors & Meteorites

Lesson 5

Review The Moon

The moon is smaller than most stars and planets. It is smaller than our planet Earth, which is smaller than some of the other planets in the solar system, which are smaller than our sun. It is Earth's closest neighbor in space. The moon is 238,900 miles away and it is 1/4 of the size of the Earth.

- The moon is Earth's only natural satellite.
- It takes about one month for the moon to travel around Earth.
- The moon has no light of its own
- The moon is made up of rock and dust.
- Twelve (12) men walked on the moon between 1969 and 1972. The missions to the moon were called Apollo. The last mission was Apollo 17, in 1972.
- The temperature on the moon varies greatly.
- Gravity on the moon's surface is far less than on Earth,

Dome Lesson 6 Review

Discuss behavior under the dome.

Review N E S W.

Sing Twinkle Twinkle Little Star.

Show the night sky in Bethesda with (Urban Sky Cylinder)

Show Full stars (Stars Cylinder)

Review Circumpolar Constellations - The northern circumpolar constellations never set; they are near the Pole Star and remain in view all year round in the Northern Hemisphere

Ursa Major, the Great Bear (**Big Dipper**)

Ursa Minor the Little Bear (**Little Dipper**)

Polaris, the Pole Star, the tail star of the Little Dipper. Polaris is called the North Star because it is always north. The two outer stars of the bowl of the Big Dipper point to the North Star.

Cassiopeia the Queen looks like a "W" or "M" and is almost overhead.

Cepheus the King

Review Winter Sky Constellations

Orion the Hunter, **Taurus** the Bull, and **Canis Major**, the Big Dog. In Canis Major point out Sirius, the brightest star in the night sky.

Draco

Thuban the third star from the tail end of Draco was the pole star 4,000 years ago.

Review the Winter Circle Stars

