Solar System Search

Background Information

Objectives

By the end of this activity, students will be able to:

- Recognize names and descriptions of the planets as objects of our solar system.
- practice active listening skills.
- complete an activity with the use of oral directions.

Instruction Time

45 Minutes

Materials

- Astronomer Journal page 10
- Solar System Search worksheet and bulletin board diagram
- Crayons, markers, or colored pencils
- Scissors and glue

Procedure

1. Before distributing the worksheet, display pictures and/or posters of the planets such as those found in the Solar System section of StarChild Levels 1 and 2 (see reference section for website.) These can be used to stimulate a discussion of Earth and any other planet(s) the children might be familiar with.
2. Students should be told that there are nine planets in our solar system and that each has its own name and special characteristics.
3. Challenge the children to listen carefully to the descriptions you will give so that they will be able to match your description with the correct planet on the worksheet. Tell them that if they listen very carefully, they will be able to identify all nine planets.
4. Use the script below to guide students through the identification of all of the planets.

Expected Results & Explanations

Upon completion of this activity, students should have identified all nine of the planets with information provided by the teacher. If students completed the bulletin board activity, this activity is the second activity involving planetary research.

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Extension Activity

Cover your entire bulletin board with paper. Draw a piece of the Sun along one side and arcs for the 9 planet orbits round the Sun. (See attached sheet.) Have your class work as a group to decide which planet belongs on which arc, i.e. what is the order of the planets from the Sun? Once this is decided, instruct each student to cut out the planets and paste them onto the correct planet orbit according to your verbal instructions. (make sure you orient Uranus correctly!) So if you have 20 students, you will have 20 Earths along the Earth arc, 20 Jupiter's along the Jupiter arc, and so on. Vocabulary such as nearest, farthest, before, after, next, between, etc. as well as planet names and characteristics can be reinforced during this lesson. The planets in order from the Sun are: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto

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Sample Teacher Script

Look carefully at your paper. Find the biggest planet of all. Put your finger on that planet. The name of the biggest planet is Jupiter. Jupiter is a big, big ball of gas. Jupiter is bigger than all of the other planets put together. Jupiter has more than 60 moons. On Jupiter there is something called the giant red spot. The giant red spot is really gases that are turning very fast. Use your crayons to color a giant red spot on Jupiter. Jupiter has stripes of color on it. Color Jupiter's stripes tan, orange, and yellow.

Now find the smallest planet on your paper. Look carefully. Find the smallest one of all. This planet's name is Pluto; it is a dwarf planet. Pluto was considered a planet until August 2006. It is a very small planet that is very far away. Pluto has more than 2 moons. Pluto is farther from the Sun than any other planet. Color Pluto a dark color. Draw a snowman next to the planet Pluto.

Count the planets that have rings around them. How many are there? (Four of the planets have rings.) Put your finger on the planet that has the most rings around it. The name of this planet is Saturn. Saturn has many, many rings. Some of Saturn's rings are very thin and some are very wide. Saturn's rings can appear to be many different colors. Like Jupiter, Saturn has a lot of moons. Over 30 moons have been found orbiting Saturn. Color Saturn yellow and color Saturn's rings like a rainbow.

One of the planets that has rings is lying on its side. See if you can find the planet that is lying on its side. Its rings look like they go from top to bottom instead of side to side. This planet is Uranus. So far, 25 moons have been identified around Uranus. Uranus is a light blue color, but its rings are dark. Color Uranus and its rings.

The ringed planet that is farthest from the Sun is called Neptune. Neptune looks like a big blue ball. Neptune has 13 moons. Some people say Neptune and Uranus are twins. How are they like twins? Color Neptune the same color as Uranus.

Try to find a planet almost as small as Pluto. Remember Pluto is the very smallest planet. Put your finger on the planet you think is the second smallest. This planet's name is Mercury. Mercury is the closest planet to the Sun. Mercury is a fast-moving planet. Mercury moves around the Sun faster than any other planet. Mercury has many dents in it where it was hit by rocks from space. Mercury is one of two planets that do not have any moons. Color Mercury brown or gray. Draw a space rock about to hit Mercury.

There are three planets that we haven't talked about. One of them is our planet. Does anyone know the name of the planet we live on? Earth is the largest of the planets that do not have rings. Earth has one moon. You must look carefully to find the correct planet.

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Put your finger on the planet that is Earth. Water and land cover Earth. Did you know that most of Earth is covered by water? Color Earth part brown and part blue. Draw a picture of yourself standing on top of the Earth.

Venus is the planet that is almost as big as Earth. Put your finger on Venus. Venus is the other planet that does not have any moons. Venus is hard to see because thick clouds cover it. Venus' thick clouds hold in heat from the Sun. Venus is a very hot planet. Draw yellow clouds all around Venus.

The last planet for us to color is Mars. Mars has a lot of the metal iron mixed in its dirt. The iron makes Mars have a red color. Many people call Mars the red planet. Mars has two moons. The moons are shaped like potatoes. Color Mars red. Draw Mars' two potato-shaped moons.