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| **Topic:**  Solar System | | **Class:**  Science | **Date:**  11/24/12 |
| **Standards:** | | [SC.1.N.1.1: Raise questions about the natural world, investigate them in teams through free exploration, and generate appropriate explanations based on those explorations.](javascript:PublicPreviewBenchmark(1566))  [SC.1.N.1.3: Keep records as appropriate - such as pictorial and written records - of investigations conducted.](javascript:PublicPreviewBenchmark(1568))  [LA.1.1.6.1: The student will use new vocabulary that is introduced and taught directly](javascript:PublicPreviewBenchmark(760))  [LA.1.1.6.5: The student will relate new vocabulary to prior knowledge](javascript:PublicPreviewBenchmark(764)) | |
| **Content Objective:**  Students will demonstrate understanding that the solar system consists of the sun and the eight planets that orbit around it by creating a replica of the solar system in picture form. | | **Language Objective:**  The learner will be able to understand and relate new vocabulary to prior knowledge and be able to use it in a sentence. | |
| **Key Vocabulary:**   * **Solar System** – consists of the sun, and eight planets, and their moons; our solar system is a part of the Milky Way galaxy * **Sun** – a star at the center of our solar system * **Star** – a ball of constantly exploding gases, giving off light and heat * **Planets** – orbit, or move, in a path around a star; there are eight known planets in   our solar system | | Materials: (supplementary and adapted)   * The book *The Magic School Bus Lost in Space*, by Joanna Cole      * 2. 9” x 12” piece of black construction paper (one for each student) * Crayons (one box with a variety of colors for each student) * Glue (one bottle or glue stick for each student) * Scissors (one pair for each student) | |
| **High-Order Questions:**  a. What is the Solar System? (The Sun and all of the eight planets that orbit  around it, their moons the asteroids and comets.)  b. What makes night and day? (The spinning of the earth makes night and  day) When one side of the earth faces the sun it is sunrise (daytime) on  that side. When that side turns away from the Sun, it is sunset (or  nighttime). It takes twenty-four hours (one day) for the Earth to make  one complete rotation. (turn)  c. What are the eight planets? (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.)    d. How long is a year? (The time it takes a planet to move around the Sun.) | | | |
| **Time**:  15 minutes | **Activities**:  **Building Background**   * Brainstorm about what the Solar System and what is in it. Introduce bulletin board of Solar System and name planets * Have students echo read names of planets * Read and discuss the book *The Magic School Bus Lost in Space* to students. Ask the following discussion questions (above in High- Order Questions). * The teacher will demonstrate the position of the planets in the solar system using a bulletin board display of the Sun and planets in order.   *Links to Experience:*  Students know that there is night and day, this will be an introduction on how that process involves our solar system.  *Links to Learning:*  In this unit, first grade students will develop an understanding of the Earth and the Solar System.  Through hands-on activities, pictures, and informational books, the students will recognize and learn about the planets and their positions in space.  *Key vocabulary:*  Solar System, Sun, Star, Planets | | |
| **Time:**  **20 minutes** | **Student Activities**  Have students create a representation of the solar system:  a. Each child will get the supplies they need from the art center (black construction paper, crayons, glue, and scissors).  b. Students will color the planets and cut out (see below).  c. Students will glue the planets on the black construction paper in the correct order by looking at the teacher’s model.  d. Make sure the students are putting the planets in the correct order using the teacher’s model drawn on the white board.  ***Scaffolding:*** Modeling Guided Independent  ***Grouping:***  Whole Class Small Group Partners Independent  ***Process:***  Reading Writing Listening Independent  ***Strategies:*** Hands-On Meaningful Links to Objectives | | |
| Time:  10 minutes | **Review and Assessment**  Individual Group Written Oral  1. Teacher observation of the student’s participation during discussion of the story read (*The Magic School Bus Lost in Space*).  2. The teacher will observe each child’s planet chart checking for accuracy of planet order.  *Review Key Vocabulary:*  The teacher will discuss the definitions and meanings of the following vocabulary words: Solar System, Sun, Star, and Planets.    *Review Key Content Concepts**:*  The whole class will go outside to create a larger model of the planets distances from the sun. There will be 8 pre-cut pieces of string that will each represent the distance of one planet from the sun. Student volunteers will use the strings to position themselves on the field to represent the planets. This exercise will give the students the understanding of just how far some planets are from the sun and how much distance there is between planets. | | |
| **Extensions**: | Students can go to this website: <http://www.manatee.k12.fl.us/sites/elementary/samoset/psgk3ex.htm>  And look at the planets and read information on them. | | |

