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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.  LA.1.1.6.1: The student will use new vocabulary that is introduced and taught directly  LA.1.1.6.5: The student will relate new vocabulary to prior knowledge | |
| **Content Objective:**   * The student will identify the planets in order starting from the sun. * The student will be able to identify how the sun’s size compares to the other planets in our solar system. | | **Language Objective:**   * The students will recite one characteristic for each planet. * The student will identify the planets in order starting from the sun. | |
| **Key Vocabulary:**  • Solar System • Mercury • Venus • Earth • Mars • Jupiter • Saturn • Uranus • Neptune | | **Materials: (supplementary and adapted)**  • 40 different sized Styrofoam balls (4 should be a lot larger to represent the sun) • “The Magic School Bus, Lost in the Solar System” book • 4 larger sheets of black Styrofoam/cardboard , cut into large circles • Safety pins • Colorful paint • Flashcards (with each planet) • Black yarn | |
| **High-Order Questions:**  Ask students which is bigger, Earth or Sun?  What are the names of the eight planets?  What planet is closest to the sun?  Which planet is hotter, one that is closer to the sun or one that is farther away from the sun?  What is unique (special) about Earth?  Is Venus like Earth?  Are any planets like Earth? | | | |
| **Time**:  15- 20 minutes | **Activities**:  **Building Background:**   * Ask students which is bigger, Earth or Sun Explain that if the Earth was the size of a marble, the sun would be the size of a basketball * Ask the students if they remember any planets mentioned in the book, and write them down on the board. * Ask if they know which planet is closest to the sun. * Explain the order of the planets starting with the sun ( will first ask the students if they know which planet comes after the one I name first. * Divide the students into 3 groups. Each group will make a planet mobile * Pass out the materials (black cardboard, planets (planets will already be painted for time restraints, and a string will be attached with a safety pin.)   *Links to Experience*  Students have been learning about the Solar System all week it is their time to make their own to scale Solar System to show understanding.  *Links to Learning:*  To remember the order of the planets the teacher will recite a rhyme that the students will learn:  So, My Very Educated Mother Just Saw Uncle Nick  Sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.  *Key vocabulary:*  • Solar System • Mercury • Venus • Earth • Mars • Jupiter • Saturn • Uranus • Neptune | | |
| **Time:**  20- 30 mintues | **Student Activities** (Highlight activities applied in this lesson)   * Attach the sun on the middle of the cardboard. * Attach the other planets according to their position from the sun. (The black cardboard has been labeled with number 1-9, with a white crayon). * The students will be asked if they know which planet is number one (the closest to the sun), and they will attach the piece of string. * After students have completed attaching all planets, they can turn it over. * They can display their planet mobiles.   ***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**  • Orally assess students when they are reciting planets out loud.  Individual Group Written Oral  *Review Key Vocabulary:*  • Solar System • Mercury • Venus • Earth • Mars • Jupiter • Saturn • Uranus • Neptune  *Review Key Content Concepts:*  Show a PowerPoint presentation. The presentation will consist of a Title page, and an introduction page. The presentation will then move forward exploring each planet individually starting with the closest to the sun. There will be a picture of the planet along with interesting facts about it. Each planet will be shown on an individual slide. The last slide will show the size difference between all of the planets and the sun. | | |
| **Extensions**: | * To end the lesson, students can make flashcards with the “fun facts” * Collect fun facts and make a booklet for each student. * Hang mobiles around the room. | | |