**SUBJECT**: Science TITLE: Intro Chapter 16 and What are the parts of the solar system?

**GRADE LEVEL**: 3

**NUMBER OF STUDENTS**: 26

**LESSON DURATION**: 40 minutes

**STANDARDS**:

State Goal 11: Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.

A. Know and apply the concepts, principles and processes of scientific inquiry.

2d. Use data to produce reasonable explanations.

State Goal 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

F. Know and apply concepts that explain the composition and structure of the universe and Earth’s place in it.

2a. Identify and explain natural cycles and patterns in the solar system (e.g., order of the planets; moon phases; seasons as related to Earth’s tilt, one’s latitude, and where Earth is in its yearly orbit around the sun.

**OBJECTIVES**:

* All students will be able to:
  + tell you why the Sun is so bright and hot.
  + describe how objects in the solar system move.

**MATERIALS/RESOURCES**:

* Promethean Board with ActivInspire Software
* Laptop
* “Chapter 16: The Solar System” and “What are the parts of the solar system?” pages 449-439
* Science Workbook page 152A
* Pencil
* Internet

**LESSON INSTRUCTIONAL PROCEDURES**

1. Introduction (motivation/warm-up/lead-in)
   * Pass out the science books and have students turn to page 449.
   * Introduce the next chapter (Chapter 16: The Solar System)
     1. “What do you know about the Solar System?” (Have 5-6 students answer.)
   * Explain to the students that they will be discovering 3 things from this chapter.

(1) How the Sun makes heat and light.

(2) How the planets move in space.

(3) What is special about each planet.

1. Development: Instruction and Activities
   * Read the title of Lesson 1 (What are the parts of the solar system?).
   * Have one student read the italicized words below the title of the lesson.
     1. Ask: “After reading this, what is the Solar System?” (Have 1-2 students answer.)
   * Have another student read the first paragraph about the Sun.
     1. Ask: “Is the Sun a star or a planet?”
   * Have another student continue reading the next two paragraphs.
     1. Ask: “Why is the Sun so bright and hot?” (Have 1-2 students answer.)
   * Have a student read the paragraph, You Are There!, on page 454 .
     1. Ask: “Why should you never look at the Sun?” (Have 1-2 students answer.)
   * Have another student read the first paragraph under the title “How Objects In the Solar System Move.”
     1. Ask: “What is a planet?” (Have 1-2 students answer.)
     2. Ask: “What is the solar system?” (Have 1-2 students answer.)
   * Have another student read the next two paragraphs.
     1. Ask: “What does orbit mean?” (Have 1-2 students answer.)
     2. Ask: “What are the four inner planets?” (Have 1-2 students answer.)
        1. Label them on the Promethean board.
     3. Ask: “What are the four outer planets?” (Have 1-2 students answer.)
        1. Label them on the Promethean board.
   * Have another student read the last paragraph about asteroids.
     1. Ask: “What is an asteroid?” (Have 1-2 students answer.)
   * Read and discuss the information boxes on the eight planets. Label the planets on the Promethean board.
2. Differentiated Instruction
   * ELL Students

- Provide students with a Spanish-English dictionary and additional translation if needed.

- May be provided with worksheet translated in Spanish.

* + Special Education – mild-moderate memory and processing learning disability

- Have all instructions clearly written on board.

- Provide further explanation if there are any questions.

- Read questions aloud if needed.

- Work in a small group.

* + Talented and Gifted

- Students must provide detailed answers for question 9 on the worksheet.

1. Closure
   * “What makes up the solar system?”
   * “How do objects in the solar system move?”

DIFFERENTIATED ASSESSMENT for ELL, LD, Gifted, and General Education

* Informal: While reading the 4 pages of text, make sure students are reading along by using their fingers. While the students work, walk around the room making sure students are on task and are actively engaged in learning. Look for correct answers and anything that may need further explanation.
* Formal: Students will complete the workbook page 152A.

REFLECTION/NEXT STEPS

REFERENCES AND RESOURCES

* Scott Foresman, Illinois, Diamond Edition, “What are the parts of the solar system?”, pgs 449-439