



## **Lesson Plan Outline for Stafford Air and Space Museum**

**Prior to traveling to the Stafford Air and Space Museum, the teacher will prepare the students with the following suggested activities**

**GRADE LEVEL:** First and second grades

**THEME:** Constellations and the Universe

### **OBJECTIVE(S):**

1. Introduce a map of space, where the earth is, where Weatherford (or the city they live in) and Oklahoma is in the United States to help children understand their place in the universe
2. Learn about constellations/solar system and their relationship to each other – moon, sun, earth and other planets
3. Identify types of airplanes and rockets that travel in space

**VOCABULARY WORDS:** (found in books listed; others may be added)

1. Planetarium, sun, star, earth, spaceship, temperature, gases, solar energy, constellation, star, compass, direction, full moon, quarter moon, crescent moon, waxing moon, waning moon, rocket ship, space suit, air tanks, astronaut, hatch meteor, comet, lava binoculars, capsule, spaceship, astronaut, rocket, orbit, spacesuit, lunar rover, lunar, salute, moon lander, telescope, constellations, western sky, Orion, Sirius, Regulus, Vega, Lyra, milky way, Pegasus, jet propeller, Concorde, electronic surveillance, radar, accelerate, hover, cruise, abbreviations, facility, rocket fuel burner

### **PASS SKILLS ADDRESSED:**

1. Math: Standard 1: Algebraic Reasoning: Patterns and Relationships – The student will use a variety of problem-solving approaches to model, describe and extend patterns.
2. Visual Literacy: The student will interpret, evaluate, and compose visual messages.
3. Oral Language/Listening and Speaking: The student will demonstrate thinking skills in listening and speaking.



4. Writing Process – The student will use the writing process to write coherently.
5. Standard 4: Vocabulary – The student will develop and expand knowledge of words and word meanings to increase vocabulary.

**ACTIVITY:**

1. Large group conversation about space and what is in space utilizing books about constellations, airplanes and rockets; map of the world/globe and Oklahoma
2. Teach the children what a constellation is and how to locate in the sky.
3. Learning Centers:
  - a. Science - Coffee can activity
    - i. Take a coffee can and cut both ends out.
    - ii. Cut out a piece of cardboard large enough to cover the end of the coffee can
    - iii. Mark the stars of the constellation
    - iv. Punch the holes with a large nail
    - v. Paint the inside of the can black
    - vi. Tape the cardboard over one end of the can
    - vii. In a dark room point the can at a wall, and turn on the flashlight
  - b. Art – color spectrum of the rainbow
  - c. Math – Measuring – size of airplanes, rockets, planets, etc.
  - d. Literacy – reading books about airplanes, rockets, the universe
4. Types of airplanes and rockets – supplied by SASM to teachers
5. Matching game with planets, moon and sun



**MATERIALS NEEDED:**

1. Memory game of planets
2. Pictures of different types of airplanes and rockets, spaceships
3. Black construction paper, coffee can painted black inside, nail and flashlight
4. Books
5. Map of world/globe marked with city where live and state within the US

**Books:**

- Branley, FM (1960, 1987). *The Moon Seems to Change*. NY: Harper Collins
- Branley, FM (1962, 1991). *The Big Dipper*, NY: Harper Collins
- Branley, FM (1981). *The Sky is Full of Stars*. NY: Harper Collins
- Gaffney, T. (1996). *Grandpa Takes Me to the Moon*. NY: Tambourine Books
- McNulty, F. (2005). *If You Decide To Go To the Moon*. Scholastic Press
- Pallotta, J. (1999). *The Jet Alphabet Book*. Watertown, MA: Charlesbridge
- Sweeney, J (2006). *Me and My Place in Space*. NY: Crown

**OUTCOME:**

1. Children will gain an understanding of how they fit into the universe with the earth and planets.
2. Children will be able to identify different types of airplanes and rockets.
3. Children will have a positive experience at the Stafford Air & Space Museum.

**TOUR ACTIVITIES:**

1. Clipboard with preflight checklist



- a. Passport
  - b. Location of bathrooms at the museum
  - c. Where to go if get lost; buddy to stay with
2. Planetarium show on constellations
  3. Tour museum – find biplanes, rocket models, full size Titan II and Saturn V
  4. Measure the length of the Titan II with all their bodies

**POST TOUR ACTIVITIES:**

1. Measure space at school, i.e. classroom, cafeteria, hallway to compare length to Titan II at Stafford Air & Space Museum
2. Utilize play dough or clay to create the solar system; utilize color and scale of planet size as we know it (Mars is smaller than the earth)
3. Write and illustrate a story about their trip to Stafford Air & Space Museum
4. Write a thank you note to the museum
5. Homework – with parents took at moon and stars