

Project FOCUS
Best Lessons
FOURTH GRADE

Title of Lesson: : Constellation Telescopes

Theme: Earth/Space Science

Unit Number: 1 **Unit Title:** Solar System

Performance Standard(s) Covered (enter code):

S4CS4, S4CS5, S4E1

Enduring Standards (objectives of activity):

Habits of Mind

- Asks questions
- Uses numbers to quantify
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

Content (key terms and topics covered):

Stars, Constellations, Light, Telescopes, Understand how constellations directed people in the past, Solar System

Learning Activity (description in steps)

Abstract (limit 100 characters): Students will be able to construct a telescope and make a constellation design to understand stars.

Details:

1. Start off the activity by reviewing vocabulary words: Stars, solar system, telescope. Ask questions: What is a difference between a telescope and microscope? What is a telescope used for? What is a constellation?
2. Discuss what a constellation shows. Then show them the model telescope with built in constellation design.
3. Explain the steps to assembling the telescope: First, cut out a round piece of black construction paper. Then place it on top of the paper towel roll and tape it properly on all sides. Next, poke holes in the construction paper using a toothpick and make your own constellation design. Finally, take a flash light and shine it through the other side to see your design reflect on walls, ceiling, etc.

Materials Needed (type and quantity): Paper towel rolls, Black construction paper, Tape, Scissors, Toothpicks, Flashlight

Notes and Tips (general changes, alternative methods, cautions): Due to time constriction, my teacher and I had to cut up the construction paper and keep everything ready for the students to simply make their designs. However, as fourth-graders, students should be able to construct the simple telescope on their own. In the future, it would be better to allow the students to be able to construct

the telescope and initiate the activity on their own (with guidance of teacher). This is an individual activity and it is better to allow each student to have their own telescope. Students should be able to assemble it by following instructions by the teacher.

Sources/References:

- 1) N/A
- 2) N/A
- 3) N/A