



Craft: Sunray Catcher Bracelet

What you need:

- Pipe cleaners
- Ultraviolet pony beads
- Brightly colored pony beads
- Ultraviolet flashlights (optional)

What you do:

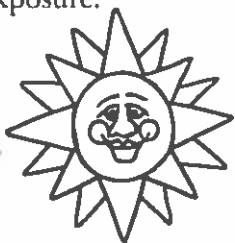
1. Hand out a pipe cleaner and 10–20 beads to each child. Make sure each child gets 3–10 ultraviolet beads to mix in with the others.
2. Have the children thread the beads onto the pipe cleaners.
3. Twist the pipe cleaners closed to make bracelets.
4. Have the children hold the beads up to sunlight to see the beads change color; if there is no access to a sunny location, ultraviolet flashlights can be used. (Note: The bead's color will change in sunlight outdoors or through some kinds of windows, outside, or if held under an ultraviolet flashlight.)

What is happening:

The ultraviolet beads used in this craft can be used to detect the presence of ultraviolet rays

through either sunlight or ultraviolet black lights. The beads darken when the ultraviolet rays are stronger or with longer exposure.

Tip: This program could be tied to a short discussion about using sunscreen. The US Environmental Protection Agency has resources about sun safety on their site at www.epa.gov/sunsafety.



Game: Don't Drop the Asteroids 

What you need:

- Balloons, various colors and sizes (latex-free)
- Challenge Slips reproducible on page 221
- Scissors
- Music

What you do:

1. Before the game, print and cut apart challenge slips. Use the blank slips to create your own. Fold the slips of paper, and place one slip inside each balloon. Have volunteers blow up and tie the balloons. Make many of these in different colors and sizes.
2. During the game, when the space music plays, participants keep the asteroids (balloons) from hitting Earth (the floor).
3. When the music stops, each participant grabs an asteroid.
4. The program leader will call out a color; each participant holding that color must break open the asteroid (or cut it open with scissors) and act out the mission it contains.





Trekking Across the Universe



STEM Activity: Make a Sundial

What you need:

- Paper plates
- Poster putty or playdough
- Pencils
- Sundial Clock Face handout on page 218
- Scissors
- Glue sticks

What you do:

1. Hand out the materials to each child.
2. Glue the sundial face onto the back of a paper plate.
3. Have each child put a small piece of poster putty or playdough in the center of the sundial.
4. Stand a pencil upright in the sundial's center, using the poster putty or playdough.
5. Take outside and place the sundial in a sunny location.
6. Use the shadow of the pencil to show the time.

What is happening:

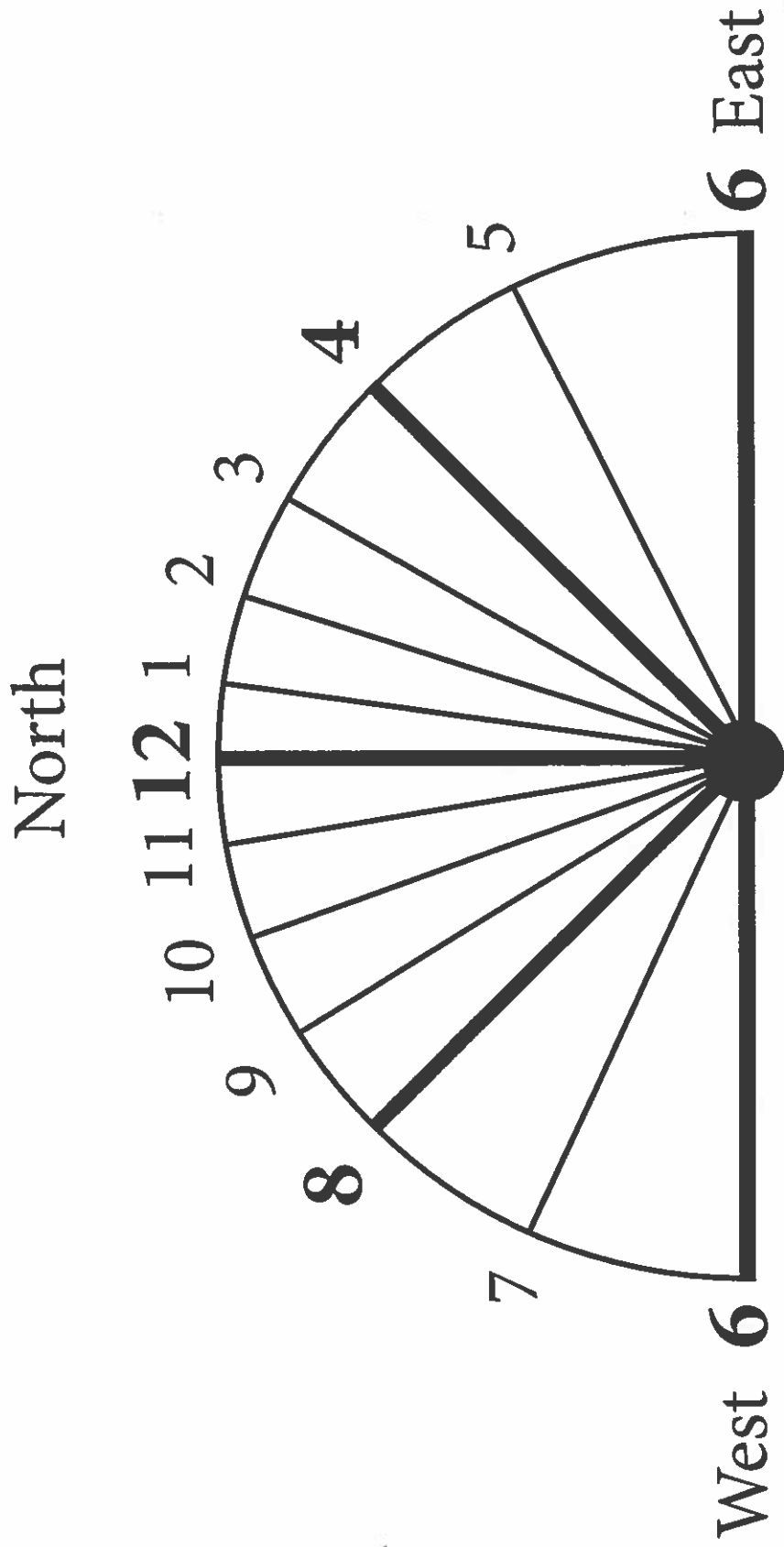
Sundials are the oldest known instruments for telling time. The surface of a sundial has markings for each hour of daylight. As the sun moves across the sky, the upright part of the sundial casts a shadow. The position of the shadow indicates the time.

Extension:

Give each child a copy of the Sun Color by Number reproducible on page 219.

Books to Share: *The Planets in Our solar System*, by Franklyn M. Branley; *Mousetronaut Goes to Mars*, by Mark C. Kelly; *Cinderstella: A Tale of Planets, Not Princes*, by Brenda S. Miles and Susan D. Sweet; *Our Solar System*, by Seymour Simon; *The Sun*, by Seymour Simon; *Who Was Sally Ride?* by Megan Stine; *Interstellar Cinderella*. by Deborah Underwood.

Sundial Clock Face



Sun Color by Number



- 1 - Yellow
- 2 - Orange
- 3 - Pink
- 4 - Blue
- 5 - Red
- 6 - Black