

Aerospace for the Very Young

A COMPENDIUM OF AEROSPACE-THEMED ACTIVITIES AND GAMES FOR EARLY CHILDHOOD

These games and activities are intended for use with young children. They are designed to help develop and strengthen basic concepts and skills in a non-threatening atmosphere of fun. The guidelines for each game or activity may be altered to address specific objectives; these are meant to give you a starting point from which to create activities to best meet the individual needs of your children.

Children who cannot complete the activity alone should be assisted by the instructor in order to allow them to experience success with the activity. Group activities that lend themselves to children working together can provide opportunities for peer assistance; make use of these occasions to help children learn to work together and to support each other.

Recognize the short attention span of very young children. Use only a few pieces at a time in an activity or game; keep the children involved. A great many pieces, or too many things to do at once, can overwhelm young children. A good rule is to keep it simple and keep it fun! Recognize that you may need to repeat the same game or activity many times before all children succeed. It is also very likely that children will ask to repeat games or activities that they have enjoyed or have been successful in completing. Honor the requests and treasure the times of early childhood!

AEROSPACE EDUCATION...

...that branch of general education concerned with communicating knowledge, skills, and attitudes about aerospace activities and the total impact of air and space vehicles upon society.

CIVIL AIR PATROL'S AEROSPACE EDUCATION PROGRAM...

...is designed to provide all American citizens with an understanding and an appreciation of the importance of aviation and space exploration to our society and to our national security. It provides the aerospace education necessary to ensure the development of aerospace and the maintenance of aerospace supremacy.

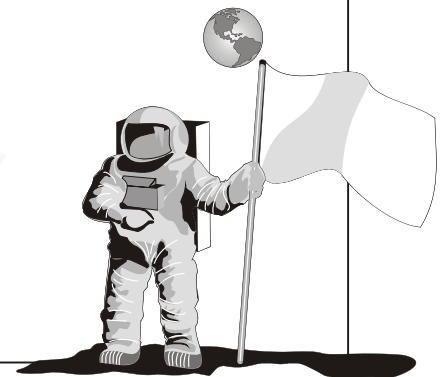
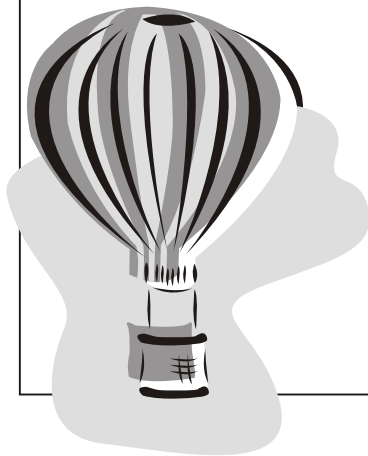


Prepared by

NATIONAL HEADQUARTERS, CIVIL AIR PATROL
Aerospace Education Division
105 South Hansell Street - Building 714
Maxwell Air Force Base, Alabama 36112-6332

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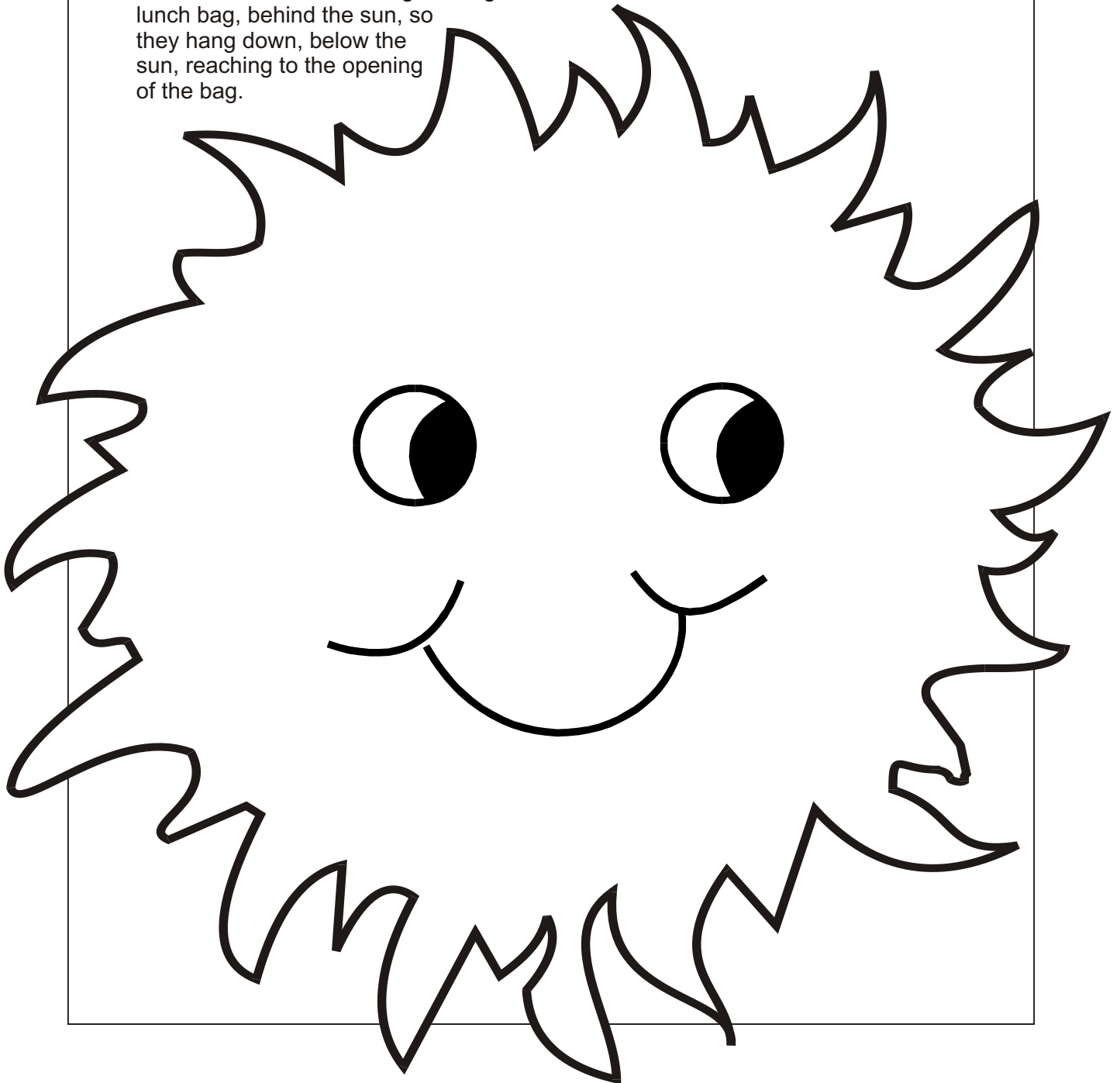
THE SUN, OUR NEAREST STAR

Make a solar cooker.

- Line a shoe box with aluminum foil.
- Push a skewer through both short sides of the box.
- Put a hot dog on the skewer and cover the box with plastic wrap.
- Put the box in the sun; use the energy of the sun to cook the hot dog.



Make "Mr. Sun" puppets.

- Using a paper lunch bag, paste the sun face to the bottom of the bag.
- Cut three one-foot strips of yellow crepe paper into thirds, making nine one-foot long streamers.
- Fasten the streamers along the edge of the lunch bag, behind the sun, so they hang down, below the sun, reaching to the opening of the bag.



TWINKLE, TWINKLE, LITTLE STAR, HOW I WONDER WHERE YOU ARE

Make star sticks.

- Using the   pattern, prepare a half-page (two star circles side by side) for each child.
- Have children color and/or decorate their stars.
- Cut out around the outer edge of the page (along the solid lines); laminate each rectangle.
- Make the star sticks by folding the rectangle in half along the dotted line.
 - Sandwich a craft stick in between (like a lollipop stick); center the stick and attach securely.
 - Glue the two edges of the open side together.
- Use the star sticks to reinforce positional words. These include:

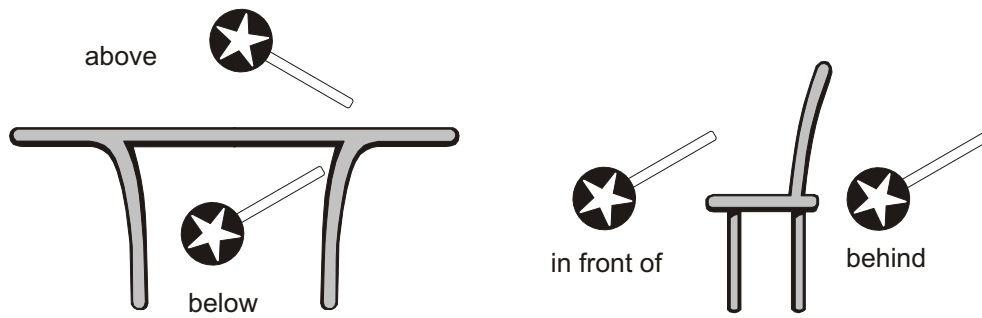
above	beside	in back of	left	over
behind	between	in front of	next to	right
below	front	inside	on top of	through
beneath				under

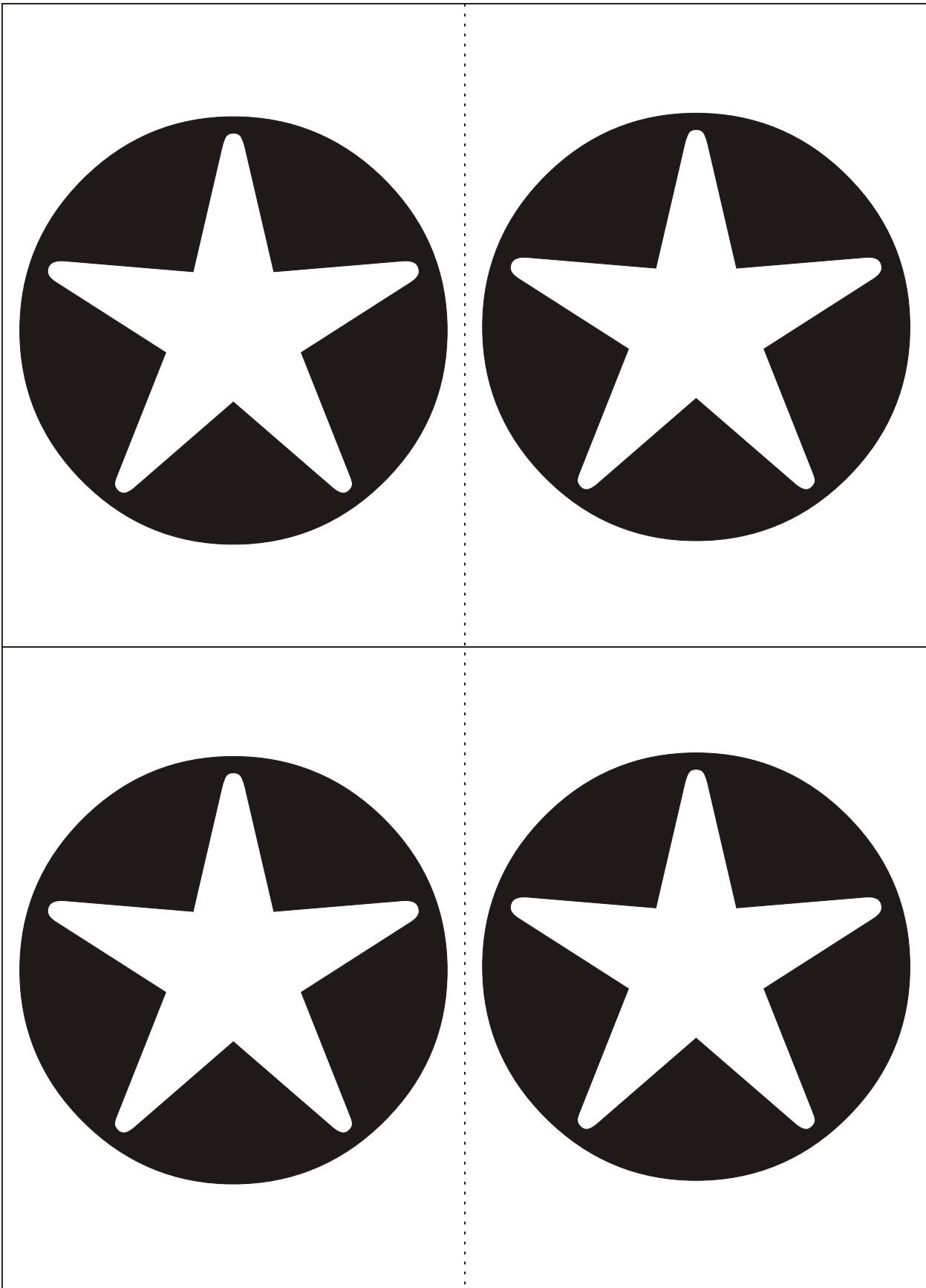
To use the star sticks:

- Children sing (or say),
"Twinkle, twinkle, little star
How I wonder where you are."
- The teacher tells the children where the star is; the children hold their star sticks there.
 - The teacher might say,
"The star is under your chair." (Children hold the star under their chair.)
"The star is over your right shoulder." (Children hold the star over their right shoulder.)
"The star is in your left shoe." (Children slide star stick handle into shoe.)
 - For variety, the teacher may use a star stick and ask the children to tell him or her where the star is located.

Tips:

For very young children, begin by telling the child where the star is located as you place it there. The child will use his or her star stick to copy the position of the star and will repeat the words. Then the teacher asks, "Where is the star?" and helps the children to make the proper reply.





SHADOWS

Make a sundial.

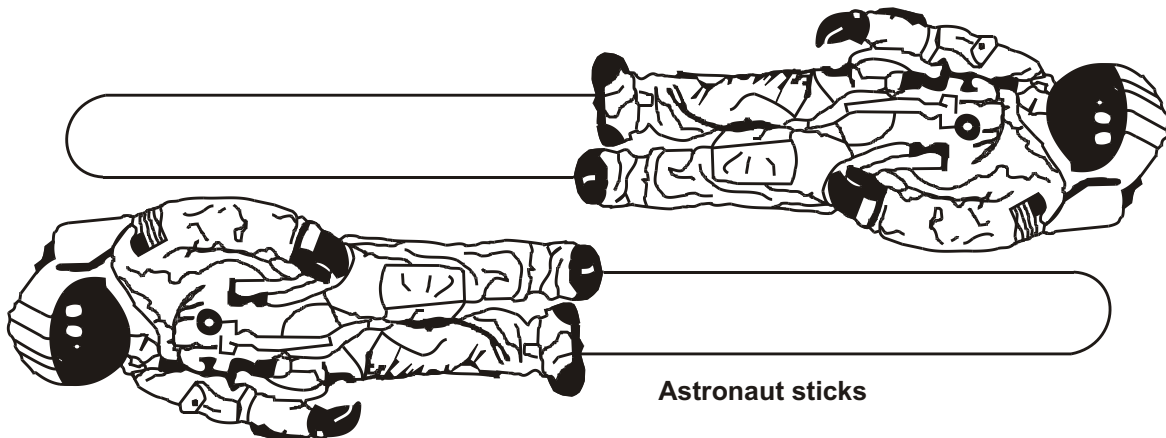
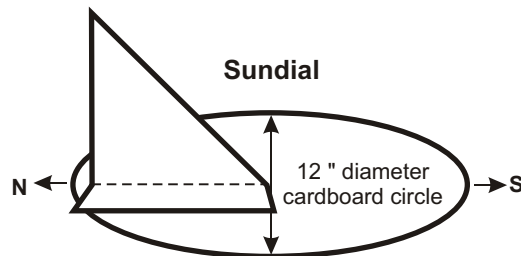
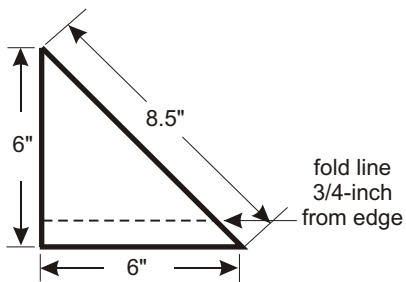
- Make a cardboard circle twelve inches in diameter.
 - Make a cardboard right triangle 8-1/2 inches on one side, and 6 inches on the other two sides.
 - Make a 3/4-inch fold along one 6-inch edge of the triangle.
 - Fasten the 3/4-inch folded part of the triangle to the circle. Be sure to place the right angle of the triangle at the outer edge of the circle with the point of the triangle at the center of the circle.
 - Place the sundial on a flat surface. Point the triangle in a north-south position.
 - Every hour, mark the position of the shadow on the cardboard circle.
- The shadow should travel the same distance each hour.

On sunny days, you will be able to tell the time by looking at the position of the shadow on the sundial.

Play shadow tag.

Use astronaut sticks to track the movement of the sun.

- Give each child an astronaut shape. Children color and cut out as appropriate.
- Attach an astronaut figure to the top of a craft stick.
 - Give each child six plain craft sticks, numbered "1" through "6."
- Early in the morning, put the stick in the ground in a sunny location.
 - Choose a spot where the sticks will not be disturbed.
 - Mark where the edge of the shadow falls using craft stick number "1."
- Mark the edge of the shadow of the astronaut stick every hour.
- What happens?
 - Help children draw conclusions about shadows and the movement of the sun.



THE EARTH AND THE MOON

Do an experiment to show that the sun warms the earth.

- Put water in two jars.
- Place one jar in the sunlight, the other in the shade.
- Check the temperature of the water in each jar after half an hour.
 - Discuss why the water in the sunlight is warmer.
 - Why is the earth warmer in the daytime and cooler at night?

Demonstrate day and night with a globe.

- Shine a strong light on a globe or on a ball representing the earth.
 - Spin the globe or ball.
 - Point out the lighted portion and the shadow portion of the globe or ball.
 - Explain that the light is daytime and the shadow is night.

To help children understand how this relates to them, mark the globe to show where they live or mark the ball to represent their town.

Demonstrate that the moon reflects the light of the sun.

- Shine a flashlight on a mirror.
 - Help the children to see the reflection.
- Shine the light on a ball. (The ball represents the moon.)
 - Help the children recognize that they see the ball because it reflects the light.

Make collages of the daytime or nighttime sky.

Make clouds.

- You will need:
 - a large jar with a lid
 - hot water
 - ice cubes
- Put three inches of hot water in a jar.
- Cover the jar with its lid.
- Place four ice cubes on top of the lid and watch the clouds form.

Make clouds on paper.

- You will need:
 - blue construction paper
 - cotton balls
 - glue sticks
- Have the children pull the cotton balls apart to make cumulous (fluffy) clouds, stratus (layers) and / or cirrus (curly, feathery) cloud formations.

Make clouds of Ivory soap.

- Beat a mixture of 2 cups of Ivory Snow and 1-1/4 cups of water with a hand mixer. Let the children use the Ivory soap to finger-paint clouds on blue construction paper.

Demonstrate the phases of the moon.

If possible, allow each child an opportunity to hold the moon-ball and to turn.

In this model, the child is the earth, the ball is the moon, and a strong light is the sun.

- Push a pencil or candy apple stick into a small, light colored, rubber ball.
- Use a black marker to draw a line around the ball. (This is the demarcation between night and day.)

- Begin the line where the stick goes into the ball.
- Make a big star on one side of the ball.
- Have a child hold the moon-ball by the stick.
 - The child holds the moon-ball slightly above his head and looks up to see it.
 - The child holds the moon-ball so that the star is facing him.
- From the other side of a darkened room, shine a strong light on the moon-ball.
 - The child will not see the lighted half of the moon-ball (the new moon).
- Keeping the star on the moon-ball always facing him, and keeping the moon-ball slightly above his head, the child very slowly turns in place. As the child turns, the moon-ball will display:
 - the crescent moon growing into the first quarter, to the full moon; then, becoming smaller to show the last quarter and the waning crescent.



