

Activity Fourteen - Build a Wind Sock

Objective:

Children will make a model of a windsock and observe the direction of the wind.

Background Information:

Windsocks are used chiefly at airports to indicate wind direction for takeoffs and landings. The wind flowing through the ring causes the windsock to face the direction from which the wind comes. They help the pilots select the proper runway, so that they can take off and land into the wind.

Meteorologists also use them to help predict the weather. NASA uses windsocks to help guide the Space Shuttle pilots to a safe landing upon returning from space.

In the following activity, the students will make a model of a windsock, and use their model to observe the direction of the wind.

National Standards:

Science:

Content Standard D: Earth and Space Science

- Changes in earth and sky

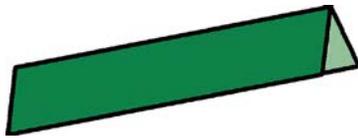


Materials (per student):

- One sheet of 8.5" x 14" colored construction paper
- Crayons or markers
- Cellophane tape
- One sheet of tissue paper or one roll of crepe paper
- Scissors
- Glue
- Single-hole hole punch
- Kite string or yarn

Procedure:

1. Discuss what the children know about flight.
2. Ask the children if they have ever seen a windssock. Show the class pictures of airport windssocks such as those pictured in this lesson.
3. Discuss windssocks using the background information.
4. Explain that they are going to make a windssock that shows the direction the wind is blowing. It will also give them an idea of how strong the wind is.
5. Hand out the materials, and review the following steps:
 - Fold the sheet of paper in half. See the diagram below.



6. Have the child write his/her name on one side of the folded paper, and decorate the other side of the folded paper. The fold in the paper will be at the top of the windssock.
7. Bend the folded paper to make a ring, overlapping the ends by .5" to 1". Make sure the artwork is on the outside of the ring. Tape the ring together. See diagram the below.



8. Cut out 10 strips of tissue paper measuring 1.5" by 15", or cut five strips of crepe paper 15" long. Note: Depending on the overlap made in step 3, one more or one less strip of paper may be needed.



Adding string



Adding streamers



9. Paste or staple strips of paper to the inside of the ring.
10. Punch three holes of equal distance around the top of the paper ring.
11. Cut three pieces of string 15" each. Tie one end of each piece of string to each of the holes. Tie the other ends of the string together. See the diagram below.



Discussion/Wrap-up:

1. Allow children to show their decorated windssocks to the class.
2. Explain that wind is a force that is important for flight. Windssocks allow pilots to see the direction and estimate the speed of the wind. Pilots take off into the wind to help push more air over the wing to achieve lift, and land into the wind to provide resistance or drag to slow the plane down. Both depend on how the pilot directs the wings into the wind.
3. Go outside on a sunny day, and have children suspend their windssocks from a pole or tree. Observe the windssocks, and tell children to write their observations in their science notebooks.
4. Display windssocks in the classroom.

Extras:

- Invite a pilot and a meteorologist to explain how wind and weather affect flying.
- Write a creative story about how a windssock helps pilots.
- Have paper airplane flying contests using the windssocks to direct the flights..