

Young children naturally build knowledge by being curious about the world around them.

When you do science with your children you get to share their sense of wonder about the natural world. They'll develop self-confidence when they ask and answer their own questions.

Blown Away! Moving Air

Air is made of atoms and molecules just like everything else in our environment. When we feel air on our skin, we are feeling atoms and molecules hitting us. Wind is moving air. The faster the molecules move, the stronger the breeze we feel. You can create our own "wind" with a paper or an electric fan.

What You Need

- Paper
- Paper fan (accordion folded paper)
- Electric fan
- Feathers, packing peanuts, crepe paper streamers, leaves, etc.

Hands-on

1. Wave a piece of paper to make air move.
2. Wave an accordion folded piece of paper slowly and then quickly.



Questions to Ask

How can we make air move?

What do you feel when you move the paper fan? Can you make the air move faster? Can you feel your hair moving?

When it is a windy day, what do you notice?

How else can we make air move?

What happens when we stand in front of the fan on low speed, then on high speed? What do you see that tells you the air is moving?

What happens to your feather when you let go of it? How come?

How to get the most out of your explorations:

- **Dress for the mess**
Science explorations can be messy.
- **Take your time**
Play for as long as the activity holds your child's interest. Don't rush towards the 'right' answer.
- **Be curious**
Ask "What would happen if..." and then find out. Let your child's questions guide you.

3. Stand in front of the fan on low speed, and then turn up the speed of the fan. CAUTION! Always have adult supervision when using the fan. Be careful that children do not stick their fingers or other objects into the fan blade.
4. Hold a feather in front of the fan, and then let it go.
5. Repeat with the fan on different speeds and with different objects.

What Next?

- Go for a walk on a windy day. What things are being moved by the wind?
- Can you hear the wind? Can you tell which direction the wind is coming from?
- Make a wind chime or other item that makes sound in response to moving air.
- Investigate wind dispersal of different shapes and types of seeds.
- Try *Blow Painting* (See *Big Science for Little Hands Wet & Dry*).

Windsock

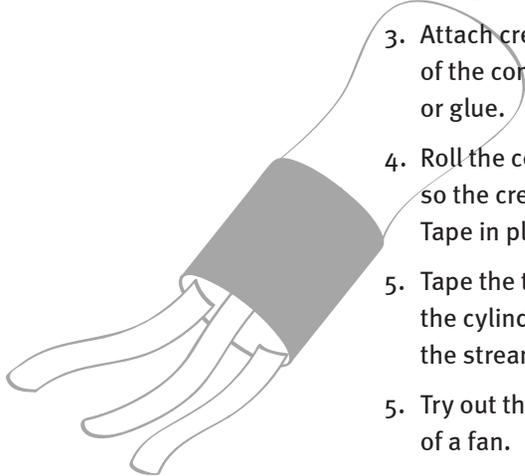
The earth's surface is made of various land and water formations, and therefore absorbs the sun's radiation unevenly. Wind outdoors is produced by the uneven heating of the earth's surface by the sun, which gets the air molecules moving. Scientists use a variety of tools to measure wind, including windsocks, anemometers and weather vanes.

What You Need

- Construction paper cut in half length-wise
- Three or four 15–30cm long crepe paper strips
- Glue
- Tape
- String (about 30cm)
- Electric fan (optional)

Hands-on

1. Discuss why it is important to know about the wind and who it is important for.
2. Discuss how scientists measure the wind using different tools.
3. Attach crepe paper strips to one long edge of the construction paper with either tape or glue.
4. Roll the construction paper in to a cylinder so the crepe paper dangles out one end. Tape in place.
5. Tape the two ends of the string inside the cylinder at the opposite end from the streamers (to make a handle).
5. Try out the windsock outdoors or in front of a fan.



Questions to Ask

- Who needs to know about the wind? Why might it be important for a pilot to know how windy it is outside?
- What kind of information could we find out about the wind?
- How will our windsock help us find out about the wind today?
- How can we tell if the wind is gentle or strong by looking at our windsock?
- Hint: a fan would help with exploring this.

What Next?

- Look for windsocks, turbines, and fans in your neighbourhood.
- Talk to a meteorologist, pilot, sailor or other professional that needs to know about the wind.
- Keep track of the wind everyday for a week or two, including direction and relative speed.



Looking for more?

More science activities for young children can be found at scienceworld.ca/preschool.html

This website has short videos, games and activities for 3–5 year olds peepandthebigwideworld.com

Our favourite books:

I Face the Wind by Vicky Cobb ISBN 0-688-17840-5

Air. Outside, Inside and All Around by Darlene Stills ISBN 9781404802483

The Preschool Scientist by Robert A Williams, Elizabeth A Sherwood, Robert E. Rockwell and David A Winnett ISBN 978-0-87659-130-7