



EnviroKids' Club, c/o National Weather Service
2601 N. Rambo Rd.
Spokane, WA 99224

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Is Air There?

The cycle starts with you!

Get your free 2009 Spokane Recycles Calendar with great student art work and recycling tips for the whole year! Call the Recycling Hotline, 625-6800.

EnviroKids' Club is a way for you to team up with other kids in Spokane County -- exploring all aspects of the environment: air, water, weather, garbage & recycling, plants & animals, and you & your environment.

EnviroKids' Club members will receive an activity in the mail four times a year. Complete the activity on the back of this page and return it to the Club Headquarters (address and form below) and you will earn points towards a special prize. The EnviroKids' Club is for children in grades K-6, who live in Spokane County.

MAIL COMPLETED ACTIVITY BY **APRIL 30, 2009** TO: EnviroKids' Club, c/o National Weather Service, 2601 N. Rambo Rd., Spokane, WA 99224

Name: _____ Age: _____ School: _____

Home Mailing Address: _____

Email Address: _____ Phone: _____

My child has permission to participate in EnviroKids' Club activities and to have name/picture used in ads/website.

Parent Signature and Date

EnviroKids' Club Partners:
American Lung Association of WA, Gonzaga University, National Weather Service, National Wildlife Federation, Spokane Aquifer Joint Board, Spokane County Water Resources, Spokane Regional Clean Air Agency, Spokane Regional Solid Waste System, WA Department of Ecology, and West Valley Outdoor Learning Center.

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EnviroKids' Club

Winter/January 2009

WHAT IS AIR?

When you stop and think about it, it may seem like there is an unlimited supply of air for us to breathe. Actually, our breathing space is a thin layer of air around the Earth (the trophosphere.) For comparison, if the Earth was the same size as an apple, the layer of air we breathe would be similar to the thickness of the skin of an apple. That's not very much - so we need to protect this precious resource.

Air is pretty important. Did you know the average human can live for three weeks without food, three days without water, but only three minutes without air?

Air contains many things, mostly gases that we can't see. About 20% of the air we breathe is made up of oxygen, 78% nitrogen, and the other 1% is small amounts of argon, carbon dioxide, water vapor, and other gases.

DIRTY AIR?

Air can get dirty. Some pollution is caused by natural events and some is caused by humans. Pollution from natural events usually comes in the form of particulate matter (dust, soot and smoke) and gases. Can you think of some natural events that can pollute the air?

Wind - Strong winds, dry weather, and area farm lands help create dust storms in our community.

Fire - Smoke from forest fires can impact air quality.



Volcanoes - Volcanic eruptions can pollute our air with gases and ash. In 1980, Mt. St. Helen's erupted and blew away part of the mountain. Even though the mountain is in western Washington, the winds carried ash to our area, polluting the air, land, and water.



Many different human activities create air pollution. Can you think of some things we do that dirty our air?

Transportation - Cars, trucks, motorcycles, buses, planes, and trains create pollution.

Combustion - Any type of burning creates air pollution. This includes wood heating, gas powered yard and garden equipment, and outdoor burning.

Products - Paints, solvents and cleaners also create air pollution.

The good news is there are lots of ways you can help keep our air clean. See the activity page for ideas.

AIR QUALITY, WEATHER & WATER

Did you know that weather can help clean the air, or it can make it even dirtier? Weather also can make our water clean or dirty. What we call weather is really the daily changes in temperature, wind, precipitation (rain, or snow) and the movement of large masses of air (called weather systems.) Weather systems are often defined as being either a high or low pressure system.

High pressure systems usually bring clear skies, no wind, and temperature inversions with cold, stable air at the surface. During winter, these inversions can last for days, causing the build up of pollutants in the air, in addition to fog and low clouds.

Low pressure systems bring winds and/or precipitation, which disperse air pollutants. Light wind, rain, and snow storms are like scrubbers cleaning the air. Sometimes strong winds can create air pollution, such as dust storms, or carry smoke from a wildfire into our air shed. Also, precipitation can carry the air pollutants into our streams, lakes and ground water.



WEBSITE! www.SpokaneEnviroKids.org

EMAIL! Envirokids@gmail.com

Community Calendar

Want to learn more about the environment and what you can do to help protect it? Attend one (or all) of these community events - where there will be a lot of hands-on activities for you to look, feel and learn!

January

30 11 a.m.- 2 p.m. I Love Clean Air Day Mobius Kids (808 W. Main) Admission Fee
Come learn about air, weather, and how air pollution can affect your health at the 4th Annual "I Love Clean Air" event at Mobius. Kids Club members show their member card can receive \$1 off regular admission.

February

13 11 a.m. - 2 p.m. EnviroKids Day Mobius Kids (808 W. Main) Admission Fee
Celebrate Valentine's a day early with EnviroKids' Club "I Love Earth" Day at Mobius Kids. Fun hands on activities for kids and adults - make Valentine's by making recycled paper, learn about animals and their tracks and more! EnviroKids' Club members who show their member card can receive \$1 off admission.

April

25 11 a.m. - 2 p.m. Arbor Day Finch Arboretum Free
Celebrate trees and learn about their role in the ecosystem. Fun hands-on activities for kids.



EnviroKids' Points and Prizes!

You can earn points for participating in each EnviroKids' activity. Whether it's visiting the EnviroKids' booths at community events, or completing the activities in the mailer, you will earn points that you can redeem for a COOL EnviroKids' Club prize. Visit the club website for prize descriptions, www.SpokaneEnviroKids.org.

Look at the mailing label on this newsletter. You will see a number by your name. That is the number of points you have earned by participating in EnviroKids' Club activities. Here's an example of what the mailing address looks like, and where you can find your prize points number.

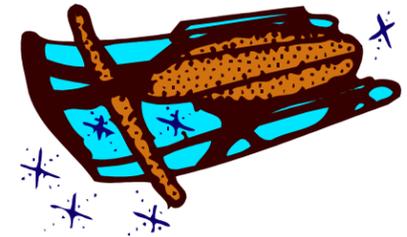
Suzy Que, **25**
1010 Environmental Ave,
Spokane, WA, 99201



Clean Air Choices

Everyone in our community has the chance to help keep the Earth clean. Talk with your family and figure out what clean air actions you all can make. Mark your choices and send in this newsletter to earn points!

- Bike, walk or share a ride to school and/or to work.
- Bike, walk or share a ride to after school activities.
- Choose non-toxic household cleaners. For green cleaning tips, visit www.spokanecleanair.org/around_the_house.asp.
- If you heat with wood - build a small, hot fire using dry, seasoned wood. Check your chimney, if you see smoke, provide more air into the fire. Always check burning conditions before you start a fire, call 477-4710.
- Conserve energy - weatherize your home, turn lights off when you leave the room.
- Use electric or manual powered yard and garden tools.
- Reduce, reuse and recycle. Properly dispose of waste - it is never OK to burn garbage in fireplaces, wood stoves or burn barrels.



Word Scramble

Unscramble these words and match them to their definition. Hint, most of these words can be found underlined on the first page of this newsletter. Complete the activity and mail it in to earn points!

- | | |
|--------------------------|---|
| 1. DWNI _____ WIND _____ | Water falling in drops from the sky. |
| 2. ANRI _____ | A vent in the earth's surface that ejects molten rock, ash, gasses. |
| 3. PNROEICTIAPTI _____ | Make dirty. |
| 4. ONTILUOLP _____ | A gaseous element forming 78% of the volume of earth's atmosphere. |
| 5. XOGYNE _____ | The act or process of burning. |
| 6. NNIETGRO _____ | A gaseous element essential to life. |
| 7. ONTIUSMBCO _____ | Condition with respect to hotness or coldness. |
| 8. VLOCOAN _____ | A natural current of air. |
| 9. ETPMRETARUE _____ | Reverse in position or condition, turn over. |
| 10. INNOVIESR _____ | Rain, sleet or snow. |

Inversions

Typically, temperature decreases as you go higher in the atmosphere. For example, in downtown Spokane, it might be 30°, but at the top of Mt. Spokane it might be 25°. Sometimes the temperatures can change and cold air gets trapped at the surface, creating a temperature inversion. For example, it could be 30° in downtown Spokane and 32° at the top of Mt. Spokane. The warm air above is like a lid trapping pollution. Create your own inversion model at home - to see what an inversion might look like!

What you need:

Quart-sized canning jar, red and blue food coloring, stir spoon, luke warm tap water, 2 tablespoons of salt, 1-cup measuring cup, funnel with plastic or rubber tubing attached

Build the model:

- Fill the jar a little less than half full with water. Put three drops of red food coloring in and stir. The red water represents warm air, which is lighter than cold air.
- Fill the measuring cup with water. Add salt and three drops of blue food coloring, stir until salt dissolves. The blue salt water represents cold air, which is heavier than warm air.
- Fit the tubing snugly on to the end of the funnel. Place funnel/tubing into the jar and make sure the tubing rests on the bottom of the jar. Pour the blue water VERY slowly through the funnel. When done, slowly remove funnel/tubing so not to stir the water.
- There should be two layers - blue on bottom and red on top. This is what happens during an inversion, see pictures at right for examples. The stable air makes it easier for pollution to build up.

