Groups

Green Group: Location

- This group will see if they can identify pollution trends according to location.

Red Group: Time

- This group will see if they can identify trends in pollution concentrations by time of day.

Yellow Group: Health Effects

- This group will monitor the occurrences of asthma attacks at several schools throughout the district and see if there are any correlations with air pollution levels.

Blue Group: Weather

- This group will see if they can identify trends in pollutant concentrations with changes in weather.

Brown Group: Visibility

- They will try to identify trends in visibility with respect to weather, type of pollution and concentration.

Timeline

Data Collection

1st Week
(data entry)   30 minutes

2nd Week
(data entry)   30 minutes

3rd Week
(data entry)   30 minutes
(data compilation/report prep)   1 – 1.5 hours
(report to class)   30-45 minutes

Monthly   (through a cold & warm season)
(data entry, compilation, & report)   2-3 hours
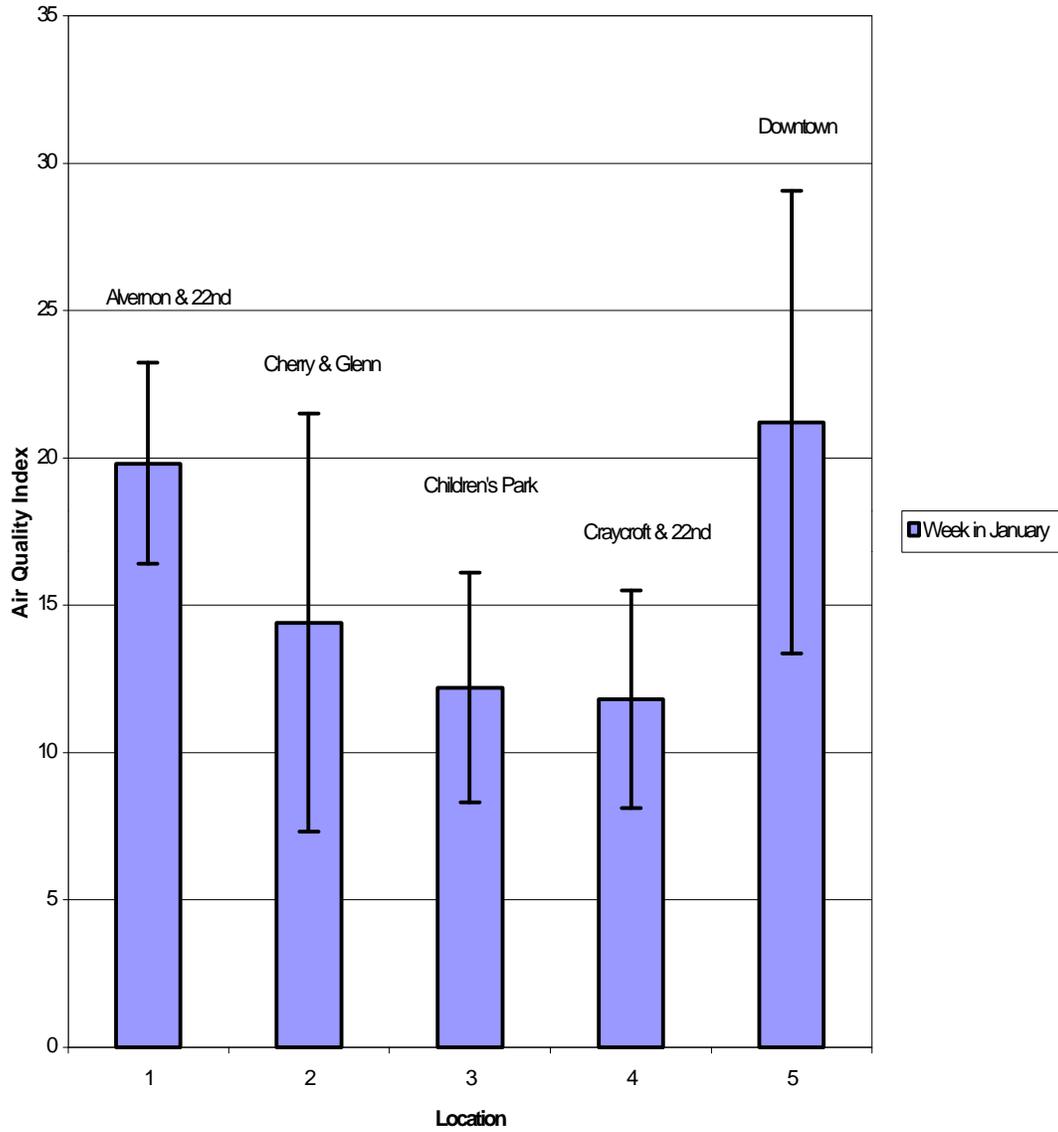   per month

Air Quality Index

Air Quality Index Color	Air Quality Index Values	Air Quality Descriptor	Health Effects
	0-50	Good	No health effects are expected.
	51-100	Moderate	Unusually sensitive individuals may experience respiratory effects from prolonged outdoor exertion if you are unusually sensitive to ozone.
	101-150	Unhealthy for sensitive groups	Member of sensitive group may experience respiratory symptoms (coughing, pains when taking a deep breath).
	151-200	Unhealthy	Member of sensitive group have higher chance of experiencing respiratory symptoms (aggravated cough or pain), and reduces lung function.
	201-300	Very Unhealthy	Members of sensitive groups experience increasingly severe respiratory symptoms and impaired breathing.

Introduction to Excel: Data Samples

Day	Date	Alvernon & 22nd	Cherry & Glenn	Children's Park	Craycroft & 22nd	Downtown
1	1/27/01	22	15	16	15	20
2	1/28/01	15	3	6	6	8
3	1/29/01	19	14	12	11	26
4	1/30/01	19	22	15	12	25
5	1/31/01	24	18	12	15	27

Carbon Monoxide By Location

Height Statistics

	60"	61"	62"	63"	64"	65"	66"	67"	68"	69"	70"	71"	72"	73"
19														
18														
17														
16														
15														
14														
13														
12														
11														
10														
9														
8														
7														
6														
5														
4														
3														
2														
1														

Height

VOCABULARY

Air Quality Index (AQI) – A scale developed by the EPA (Environmental Protection Agency) to report the levels of certain air pollutants, and their effects on human health.

Parts Per Million – A unit of measurement that describes the number of parts of something within a million parts of something else.

Carbon Monoxide – A toxic gas made from incomplete combustion (burning) of carbon-based materials like gasoline, coal, and methane (natural gas). The abbreviation for carbon monoxide is CO, which shows its chemical composition of one carbon atom attached to one oxygen atom.

PM 2.5 – Particulate matter that is very small, less than 2.5 microns in size. These particles are created by combustion, mostly from vehicles. Because they are so small, they can go deep inside the lungs.

PM 10 – Particulate matter that is "larger", approximately 10 microns in size. These particles can include dust, pollen, and ash. They can irritate the upper respiratory system like the nose and upper lungs.

Micrograms – A unit of measurement that depicts very, very small quantities of a substance - 1/1,000,000 or 0.000001 of a gram.

Military Time – Time units that sequentially number the hours in a day from 0:00 (midnight) to 23:00(11 p.m.).

Ozone – A gas made up of three molecules of oxygen (O_3). In the upper atmosphere ozone protects the earth from ultra violet rays, but if ozone is created in the lower atmosphere (what we breathe) it can negatively affect plant and animal life.

DATA COLLECTION

STEP 1: Go to the Real-Time Air Quality Activity website.

STEP 2: Find your group on the webpage.

STEP 3: Click on <u>Your Spreadsheet.</u>

STEP 4: Save the spreadsheet in your file folder. Keep the Excel window open.

STEP 5: Open a new browser and go back to the Real-Time Air Quality Activity website.

STEP 6: Click on <u>Your Data.</u>

STEP 7: Follow the instructions in your folder to enter the data in your spreadsheet.

Real-time Air Quality Activity - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Stop

Bookmarks Location: http://swehsc.pharmacy.arizona.edu/coep/airexercise/ What's Related

Green Group	Red Group	Blue Group	Yellow Group	Brown Group
Location	**Time**	**Weather**	**Health**	**Visibility**
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Get your data	Get your data	Get your data	The Nurse Form	Visibility Page
Get your spreadsheet	Get your spreadsheet	Get your spreadsheet	Pollution Tracker Data	Get your data
			Get your spreadsheet	Get your spreadsheet

For all groups: Practice spreadsheet   Monitoring Location Maps

Document: Done

Monitoring Sites