

CERTIFICATE OF COMPLETION

Once this workbook has been completed, please fill in this certificate and be proud of what you've accomplished! You are now a **Certified Air Quality Investigator!**

CERTIFICATE OF COMPLETION



this Certifies that

_____ has Successfully Completed the Air Quality Workbook, and is now a Certified Air Quality Investigator! Congratulations!



For more information on air quality in your region and to download more workbooks or activities, please visit: www.AirQualityPartnership.org

WHERE'S MIKE?

Help Your Friends Prevent Air Pollution and Stay Healthy!



Color by the numbers:

- 1: Light Blue
- 2: Light Brown
- 3: Dark Brown
- 4: Dark Green
- 5: Light Green
- 6: Orange
- 7: Black
- 8: Light Gray
- 9: Dark Blue
- 10: Dark Gray

This Workbook Belongs To:

_____ This workbook is an activity book for 3rd, 4th, and 5th graders which meets the Common Core Standards for Health and the Environment.

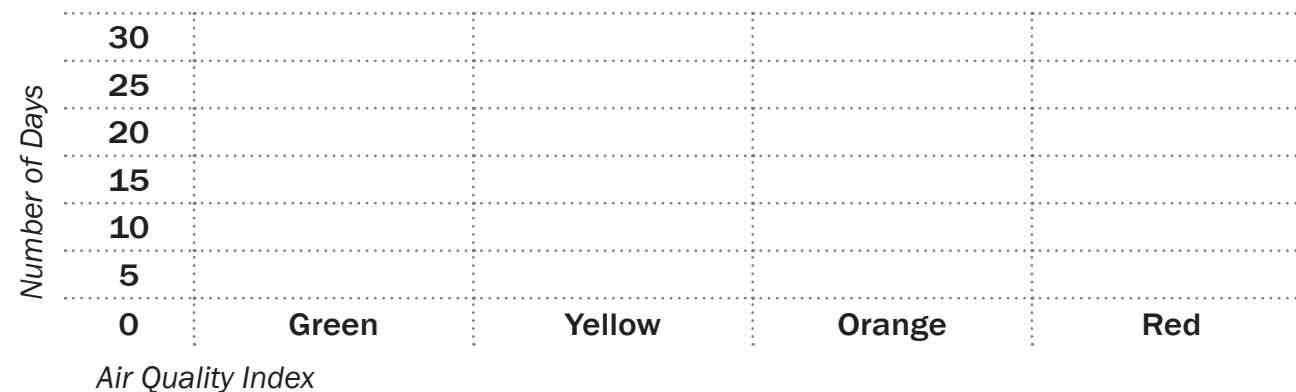
For more information on air quality in your region and to download more workbooks, activities, or teacher resources, please visit:
www.AirQualityPartnership.org

SPONSORED BY:

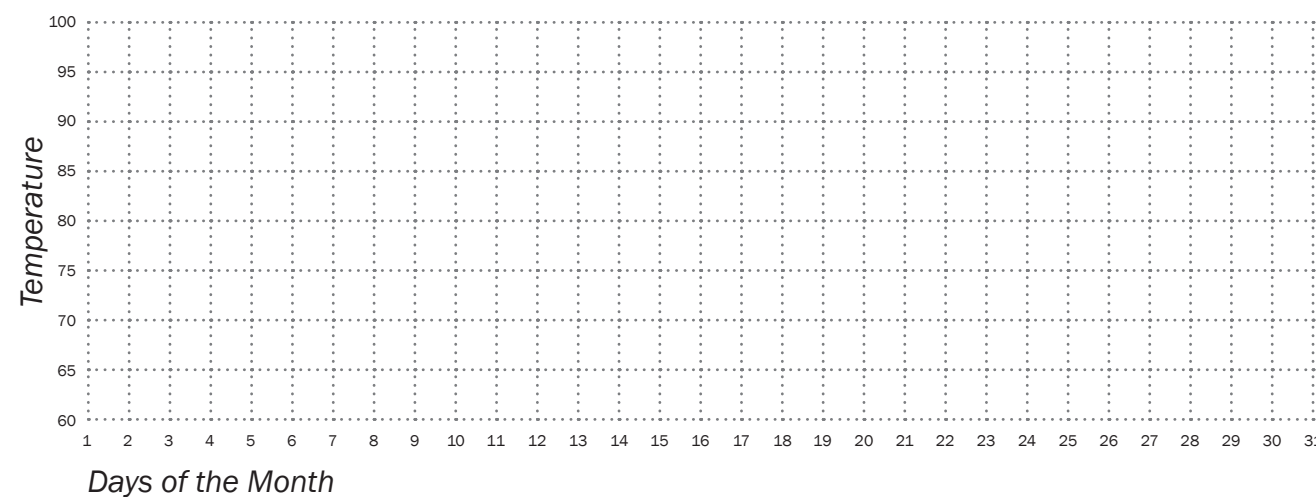
This workbook was made possible by an Environmental Education Grant provided by the Pennsylvania Department of Environmental Protection and additional support provided by Communities in Motion, the Air Quality Partnership of the Delaware Valley, the Delaware Valley Regional Planning Commission, and project partners.



2 Use your records to create a bar graph to show how many of each kind of day there were in the month.



3 Use your records to create a line graph to show what the high temperature was each day of the month.



Conclusion: Overall, how was the air quality overall this month? What kind of days had the worst air quality?

.....

.....

Weather can help make air quality better or worse. Rainy and windy days can blow air pollution away. Sunny and warm days, with no wind, can help some kinds of air pollution to form.

BE AN AIR QUALITY INVESTIGATOR!

1 If we are going to fix some of the problems that pollute our air, we will need many smart people like you to work on the problem.

Directions:

First, go to www.AirQualityPartnership.org and record the AQI each day. Then record the temperature. Finally, observe and record the weather conditions for the day (rainy, cloudy or sunny, etc.).

Month:

	Sun.	Mon.	Tues.	Wed.	Thu.	Fri.	Sat.
Example: AQI: Yellow Temp: 85 F Weather: Sunny, Calm Winds							
AQI: Temp: Weather:							
AQI: Temp: Weather:							
AQI: Temp: Weather:							

Describe the days that have the worst air quality. What kinds of weather may be happening to make air pollution worse?

.....

.....

WHAT IS AIR POLLUTION?

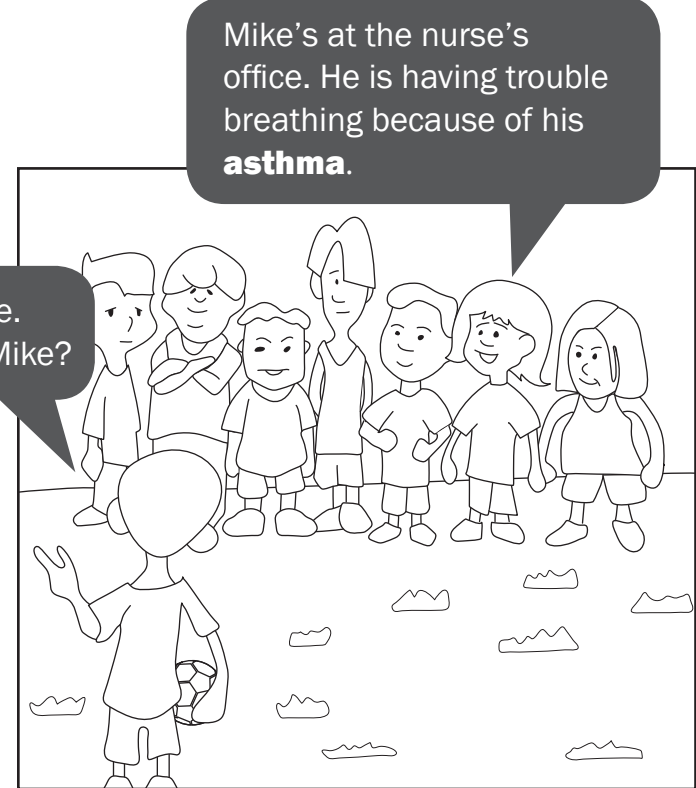
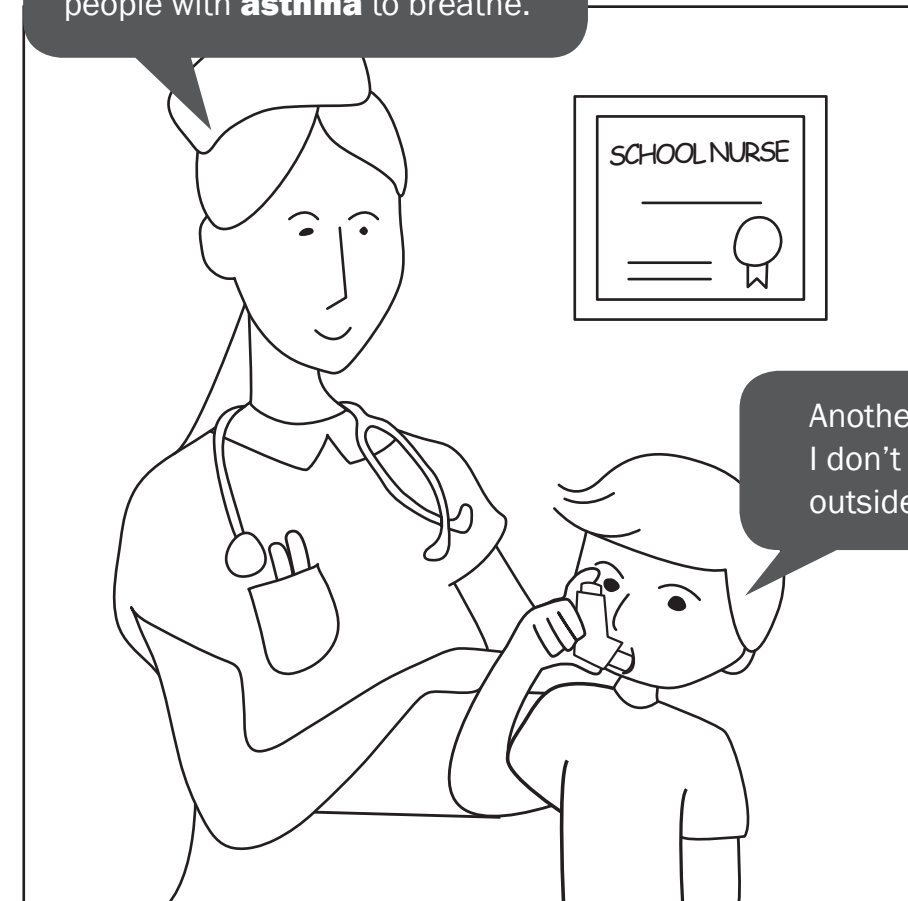
Air Pollution

Air pollution is made up of tiny particles or gases that can damage lungs or make it hard to breathe.

Asthma

A disease that causes the tubes that carry air into the lungs to feel tight. Asthma makes breathing hard and can cause wheezing and coughing.

You had an asthma attack. **Air pollution** levels are high today. Air pollution can make it hard for people with **asthma** to breathe.

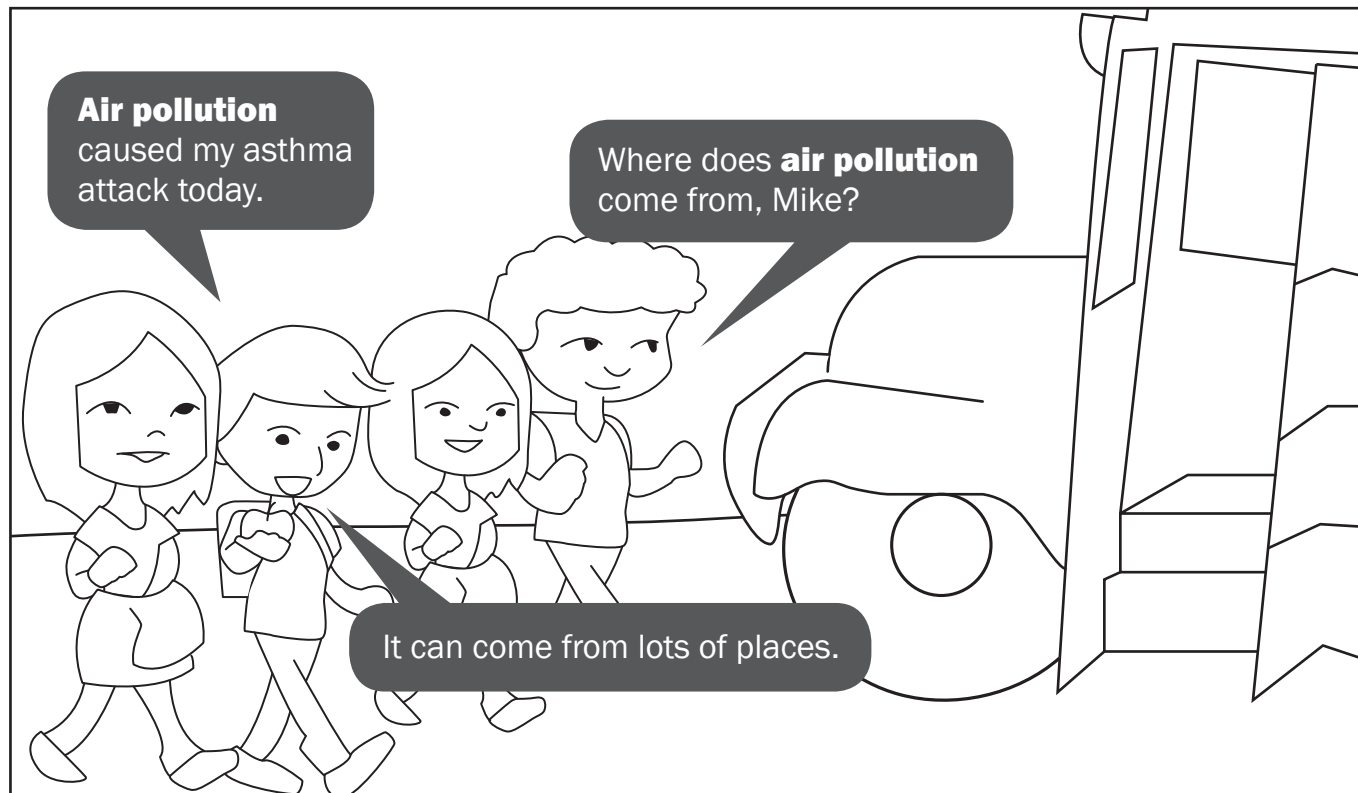


Another **Air Quality Action Day**? I don't like missing out on playing outside with my friends.

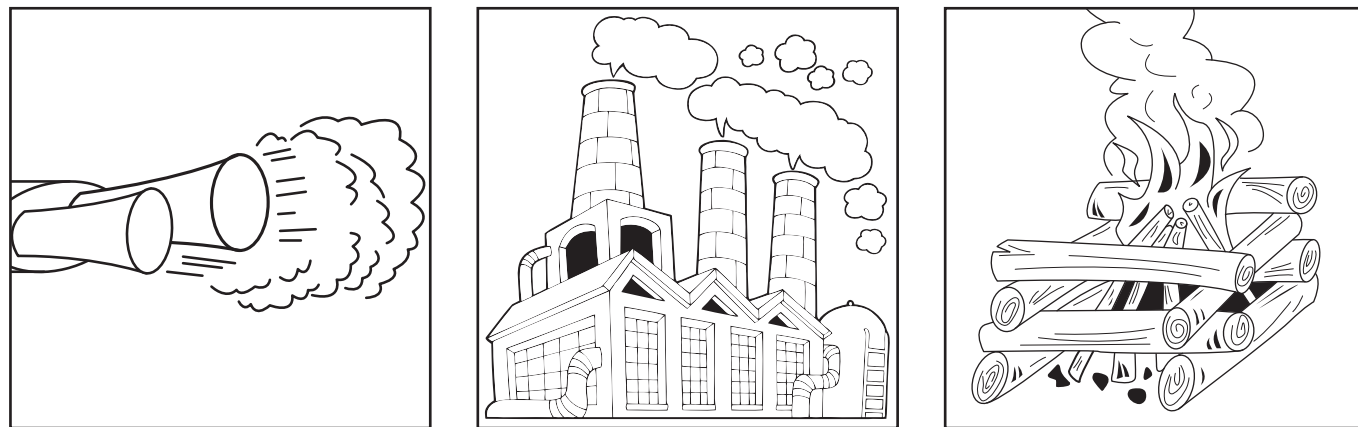
Air Quality Action Day

An Air Quality Action Day is declared when air becomes unhealthy to breathe for children, older adults, and people with breathing problems like asthma.

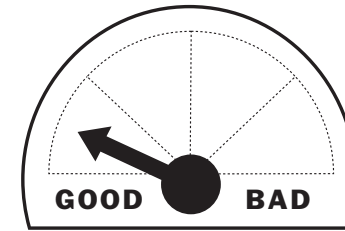
WHERE DOES AIR POLLUTION COME FROM?



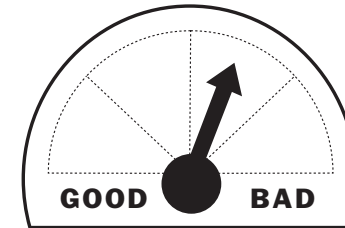
Sources of Air Pollution:



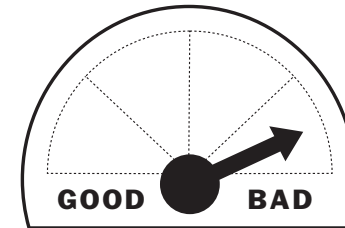
Color the AQI dashboards and draw a line from the AQI to the class's activities for the day.



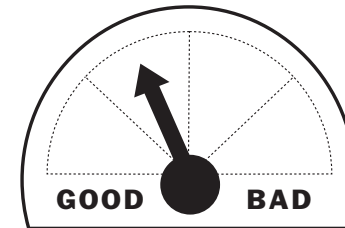
The air is unhealthy today. Today is a good day to take the train or bus. Everyone should avoid doing heavy exercise in the middle of the day. People with asthma should have their medicine handy.



Air quality is OK today. Go outside and play.



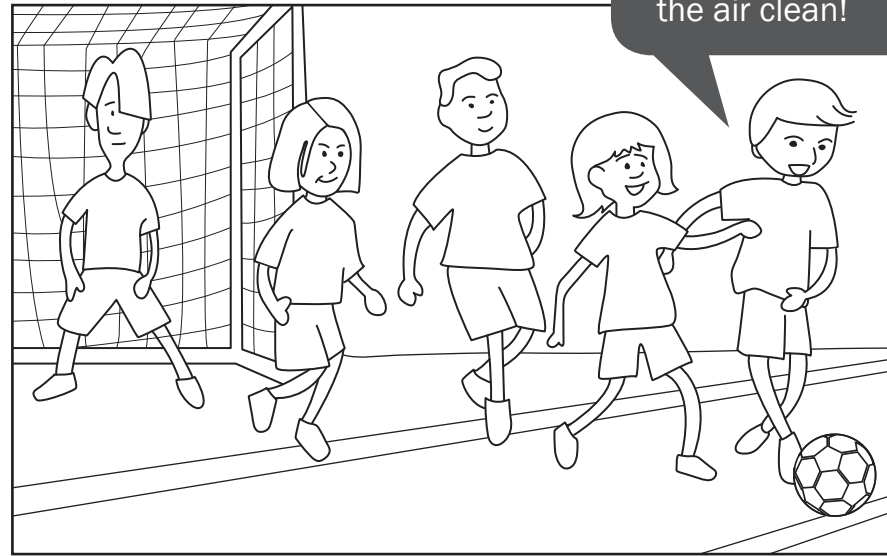
Air quality is very good today. Get some exercise!



The air is unhealthy for people with breathing problems like asthma. Children should not play games that require a lot of running or heavy breathing and should take plenty of breaks.



THE AIR QUALITY INDEX



Air Quality Index

The Air Quality Index or AQI is a tool that shows how clean or polluted the air is.

Air Quality Index Colors

Each color on the AQI tells you something about the day's air pollution.

green

means air quality is good and safe for everyone to breathe.

yellow

means air quality is OK.

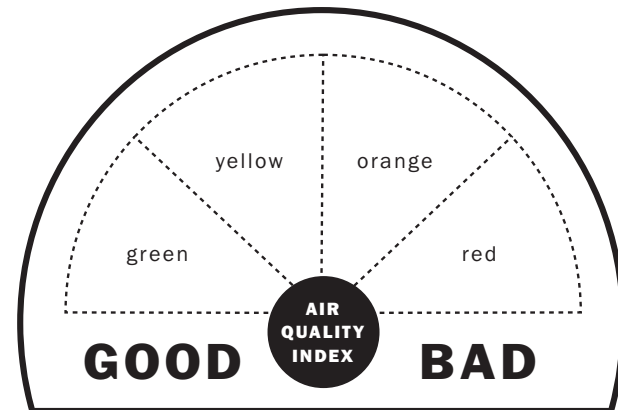
orange

means air quality is unhealthy for children, older people, and people with breathing problems like asthma.

red

means the air is unhealthy for everyone.

COLOR the segments of the AQI green, yellow, orange, and red to show different air quality levels.



Each day the Environmental Protection Agency (EPA) gives an air quality forecast, like a weather report, that tells us when the air is unhealthy to breathe. EPA uses the Air Quality Index to report daily air quality levels to our community.

You can view the AQI at www.AirQualityPartnership.org

Try to help Mike and his friends identify the different sources of air pollution by solving the math problem and then put the letter in the blanks below.

$9+8=$ ___ A	$5 \times 2=$ ___ G	$8+8=$ ___ M	$8 \times 4=$ ___ T
$5+10=$ ___ C	$9 \times 3=$ ___ H	$25-7=$ ___ N	$11-9=$ ___ U
$24 \div 3=$ ___ D	$16-5=$ ___ I	$6+3=$ ___ O	$4 \times 7=$ ___ Y
$3 \times 4=$ ___ E	$5 \times 4=$ ___ K	$10 \div 2=$ ___ R	
$17-4=$ ___ F	$2 \times 7=$ ___ L	$10-7=$ ___ S	

A	16	17	20	11	18	10	12	14	12	15	32	5	11	15	11	32	28
B	15	17	5	3	17	18	8	32	5	2	15	20	3				
C	13	17	15	32	9	5	11	12	3								
D	3	16	9	20	12												

Can you match the letter of the sources of pollution above to a solution listed below? Place the letter (A, B, C, or D) of the source of pollution next to the **solution**.

- _____ Reduce, reuse, and recycle. By using less products and materials, factories use less energy and pollute less.
- _____ Don't burn trash or leaves in your yard. Burning trash and leaves gives off smoke that is unhealthy to breathe.
- _____ Bike, walk, or take public transportation.
- _____ Save energy at home. Power plants that make electricity are a big source of air pollution.

Solution A way to solve a problem

Cross out the **POLLUTION**, and color the **SOLUTIONS**!

Find the sources of air pollution...

- Factory smoke stacks
- Cars with only one passenger
- Smoke from home chimneys
- Burning yard waste

Find the solutions to air pollution...

- Taking the bus to school
- Using a push mower
- Planting a tree
- Riding a bike
- Tuning up a car at Bob's Tune-Up Shop
- Recycling bottles and cans
- Going for a walk
- Taking the City Shuttle
- Hanging laundry to dry
- Riding a skateboard
- Using solar panels
- Walking to the grocery store
- Rollerskating
- Carpooling

