

Four Easy Steps to Implement a School Flag Program

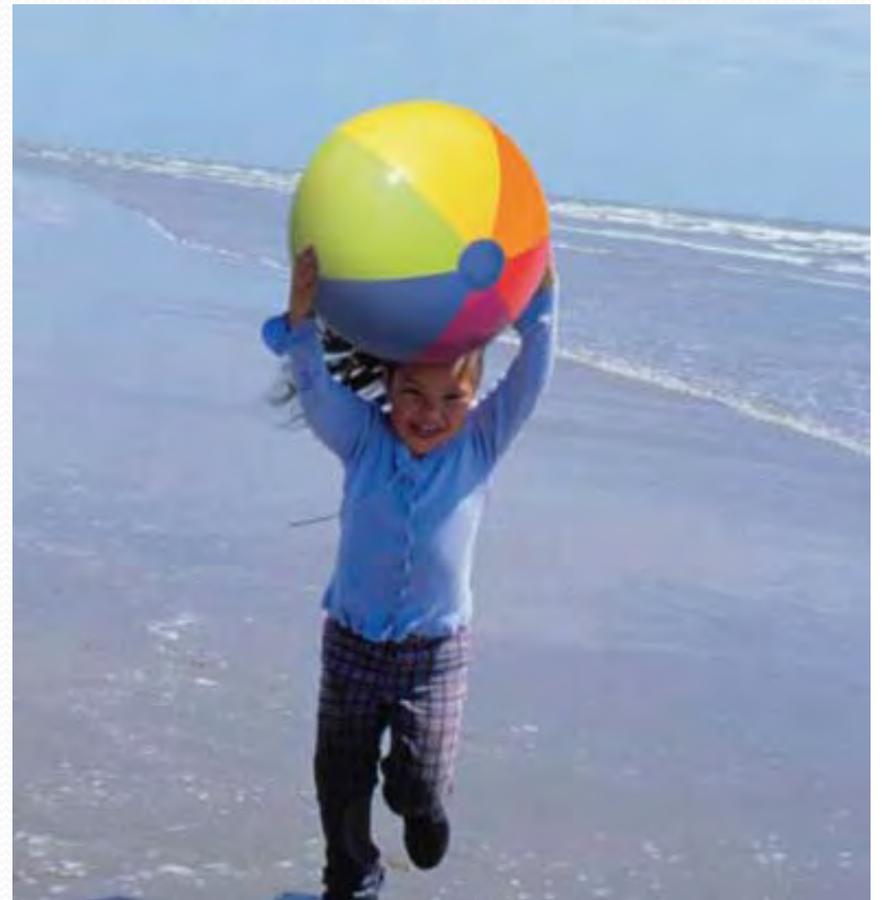


Jorine Campopiano
US Environmental Protection Agency
Region 9
Schools Environmental Health Coordinator

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Today we'll talk about...

- The Flag Program
- The purpose of the program
- Background information on pollutants
- How to get a program started
- Air quality resources for teachers



What is the School Flag Program?

- Schools raise a flag each day
- Flag colors are based on the colors of the AQI (Air Quality Index)
- The flag color signals the air quality forecast for the local area
- Recommendations provide guidance on how to modify outdoor activities when the air quality is unhealthy



Purpose of Program

- Create public awareness
- Protect children's health
- Provide activity guidelines
- Increase knowledge of air quality issues



What is the Air Quality Index?

- Guide for reporting daily air quality
- Indicates how clean or dirty the air is
- Identifies health effects
- EPA calculates the AQI for five major air pollutants regulated by the Clean Air Act:
 - Ozone (O₃)
 - Particulate Matter (PM₁₀ and PM_{2.5})
 - Nitrogen Dioxide (NO₂)
 - Sulfur Dioxide (SO₂)
 - Carbon Monoxide (CO)

Good

Moderate

**Unhealthy for
Sensitive Groups**

Unhealthy

Very Unhealthy

Air Quality Index (AQI) Colors

| Air Quality Index (AQI) Values | Levels of Health Concern | Colors |
|---------------------------------------|---------------------------------------|--|
| <i>When the AQI is in this range:</i> | <i>...air quality conditions are:</i> | <i>...as symbolized by this color:</i> |
| 0 to 50 | Good | Green |
| 51 to 100 | Moderate | Yellow |
| 101 to 150 | Unhealthy for Sensitive Groups | Orange |
| 151 to 200 | Unhealthy | Red |
| 201 to 300 | Very Unhealthy | Purple |
| 301 to 500 | Hazardous | Maroon |

Wood-Burning Stoves



Power Plants



Heavy Duty Diesel Engines



Natural Sources



Air Pollution Comes from Many Different Sources

Cars and Trucks



Non-Road Vehicles



Forest Fires



Industrial Sources



Effects of Common Air Pollutants

- Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing
- Decreased lung function
- Aggravated asthma
- Development of chronic bronchitis
- Chest tightness; chest pain
- Irregular heartbeat
- Premature death in people with heart or lung disease

Some Groups Are More Sensitive to Air Pollution

- People with heart or lung disease
 - Conditions make them vulnerable
- Older adults (age 55 and older)
 - Greater prevalence of heart and lung disease
- Children (birth to age 18)
 - More likely to be active
 - Breathe more air per pound of body weight
 - Bodies still developing
- People with asthma
 - Asthma is a serious, chronic respiratory disease that affects almost 25 million Americans, including an estimated 7 million children

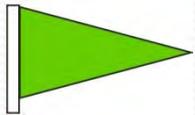


Children active outdoors can be sensitive to some air pollutants.

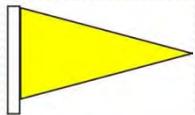


Sometimes people with asthma need help breathing.

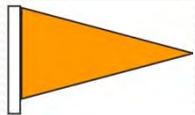
Four Easy Steps to Get Your Flag Program Started



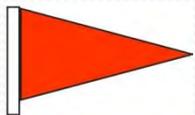
Purchase flags



Educate and inform the school and the community



Check the daily air quality forecast and fly the corresponding flag



Follow the recommendations for schools for outdoor activities

Flags

- Flags can be purchased by the PTA, a local health organization or business
- Cost is approximately \$100
- Order from local flag vendor or you can find flag vendors online
- Set of five flags: green, yellow, orange, red, purple
- Use pennant style flags, 5 x 3 ft.
- Recommend Plain flags - logos or graphics can be added, although:
 - Not easily seen from flag pole
 - Adds to the cost



Educate and Inform

- Educate and inform the teachers and parents
- Tell your co-workers about the AQI and flag program
- Recruit one or two teachers (or school nurse) to be the Flag Program Coordinator(s)
- Inform the school and surrounding community through:
 - Newsletters
 - Emails
 - Flyers
 - Local newspaper
 - Radio station
 - Word-of-Mouth



EnviroFlash

- Air quality forecast notification sent to your email
- Free and easy to subscribe
 - www.airnow.gov/enviroflash
- Other ways to get the air quality forecast:
 - Download the free AirNow app available at www.airnow.gov



Air Quality and Outdoor Activity Guidance for Schools

Regular physical activity — at least 60 minutes each day — promotes health and fitness. The table below shows when and how to modify outdoor physical activity based on the Air Quality Index. This guidance can help protect the health of all children, including teenagers, who are more sensitive than adults to air pollution. Check the air quality daily at www.airnow.gov.

| Air Quality Index | Outdoor Activity Guidance |
|---|---|
|  <p>green</p> <p>GOOD</p> | Great day to be active outside! |
|  <p>yellow</p> <p>MODERATE</p> | <p>Good day to be active outside!</p> <p>Students who are unusually sensitive to air pollution could have symptoms, so watch for coughing or shortness of breath. These are signs to take it easier.</p> |
|  <p>orange</p> <p>UNHEALTHY FOR SENSITIVE GROUPS</p> | <p>It's OK for students to be active outside, especially for short activities such as recess and physical education (PE) class. For longer activities such as athletic practice, students should take more breaks and do less intense activities. Watch for symptoms such as coughing or shortness of breath.</p> <p>Students with asthma should follow their asthma action plans and keep their quick relief medicine handy.</p> |
|  <p>red</p> <p>UNHEALTHY</p> | <p>For <u>all</u> outdoor activities, students should take more breaks and do less intense activities. Watch for symptoms such as coughing or shortness of breath. Consider moving activities indoors or rescheduling.</p> <p>Students with asthma should follow their asthma action plans and keep their quick relief medicine handy.</p> |
|  <p>purple</p> <p>VERY UNHEALTHY</p> | Move all activities indoors or reschedule to another day. |

Go for 60!

CDC recommends that children get 60 or more minutes of physical activity each day. www.cdc.gov/healthyyouth/physicalactivity/guidelines.htm

Watch for Symptoms

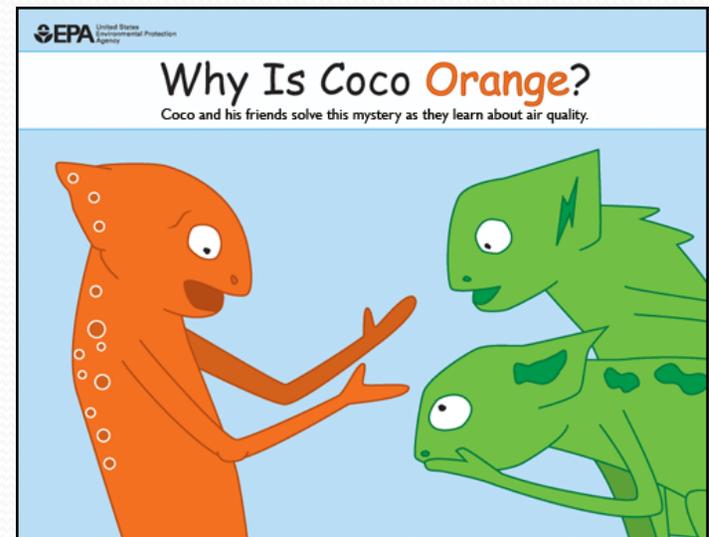
Air pollution can make asthma symptoms worse and trigger attacks. Symptoms of asthma include coughing, shortness of breath, wheezing, and chest tightness. Even students who do not have asthma could experience these symptoms when exposed to unhealthy levels of air pollution.

Plan Ahead for Ozone

There is less ozone in the morning. On days when ozone is expected to be at unhealthy levels, plan outdoor activities in the morning.

Air Quality Resources

- Resources for teachers are available on the AirNow.gov website: www.airnow.gov
 - Online curricula
 - Interactive games
 - Air quality simulator
 - Children's picture book
 - AirNow Learning Center
 - Free through the National Service Center for Environmental Publications (NSCEP) www.epa.gov/nscep



School Flag Program Website

www.airnow.gov/schoolflag

- Fact sheet
- Coordinator's Handbook
- Recommendations Chart/Activity Guidelines
- Press Release Template
- Registration Form
- Student Activities
- Teacher and student resources



Contact Information

Donna Rogers

US EPA

(919) 541-5478

rogers.donna@epa.gov

