

## EDUCATIONAL HANDS-ON ACTIVITIES TO TEACH ABOUT AIR QUALITY AND CLIMATE CHANGE

EPA researchers participate in educational outreach to schools, museums, and other locations to teach children about air quality and climate change research. EPA and partners conduct this research to protect the air we breathe and provide the knowledge and scientific tools to respond to a changing climate.

Researchers have developed several hands-on activities for teachers and others to use in the classroom and other educational settings.

### Particulate Matter (PM) Air Sensor Kits

Particle pollution, known as particulate matter (PM), is one of the major air pollutants regulated by EPA to protect public health and the environment. A PM air sensor kit has been developed by EPA researchers as an educational tool to teach children about air quality and air science.

A “Build Your Own Particle Sensor” guide is available online that includes the following information:

- Instructions for buying the parts and building your own particle sensor.



PM Air Sensor Kit and *Generate!* Game

- A 10-minute activity that includes information on air pollution and an explanation of how the PM air sensor works.
- Discussion questions to ask students after the lesson.
- Classroom handout.

### *Generate!* Game

An interactive board game developed by EPA researchers called *Generate!* enables players to explore energy choices and the environment and gets students “energized” in some friendly competition.

The game is a teaching tool that can be used to understand the costs and benefits of the energy choices we make, find out what happens if the mix of

energy sources changes in the future and learn what energy choices mean for our climate, air, water, and overall environmental quality.

Information on how to make your own *Generate!* Game and instructions to play the game are available online.

### For more information, visit:

<http://www.epa.gov/air-research/hands-activities-and-other-resources-air-quality-and-climate-change-teachers>

**CONTACT:** Gayle Hagler, [hagler.gayle@epa.gov](mailto:hagler.gayle@epa.gov), or Rebecca Dodder, [dodder.rebecca@epa.gov](mailto:dodder.rebecca@epa.gov).