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Conduit Kids Rally Around the Flagpole

An elementary school on the west side of Houston is serious about air quality. Every day, students are outside checking weather conditions and posting a warning flag that corresponds with ozone levels.

Science students alert community to ozone levels

Sidebar: Ozone Levels Available Hourly

When air quality is deteriorating in Houston, some of the first to know are pint-sized climatologists who have to stand on tiptoe to read the thermometer.

Fourth and fifth graders at Condit Elementary in Bellaire change the ozone warning flag, which is visible to passing motorists./*photo by Condit Elementary School*

About 180 fourth and fifth graders at Condit Elementary School in Bellaire keep an eagle eye on weather conditions, temperature, and ozone concentrations. Four times a day they record the data and hoist an outdoor flag color-coded for current conditions. A green flag lets residents and motorists know that local air quality is within the "healthy" range.

But as the parts per billion of ozone concentration climb, students change to a yellow, orange, or red flag--in keeping with the colors of the federal air quality index. The ozone flag flies on South Rice, one of the busiest streets in Bellaire.

Two years into the project, Condit Elementary is winning kudos for its innovative style of teaching science and raising youngsters' awareness of a potentially harmful environmental problem.

Recording weather and traffic conditions is part of the ozone monitoring project. Students keep a daily log to analyze trends and understand the science of air quality./*photo by Condit Elementary School*

Dubbed "Condit Kids for Cleaner Air," the science students have been recognized by the TCEQ with an environmental excellence award. Other awards have come from the Pollution Prevention Roundtable, Keep Houston Beautiful, and British Petroleum.

"One of the first populations to be adversely impacted by high ozone levels in the community is children, so it's fitting that this project is run by children," said Loren Raun, a parent volunteer who helped start the project.

She said science students learn how ozone is formed, the health effects, why trends and cycles occur, how to reduce levels, and the difference between stratospheric (upper) and tropospheric (ground-level) ozone.

One requirement is that they share what they've learned with their parents and other adults, said Raun.

Science teacher Evelyn Kuswara helps a student check weather conditions./*photo by Condit Elementary School*

The project was an outgrowth of a newly constructed outdoor science lab. The tiny Condit campus had no room for an indoor lab, so Raun and other members of the parent-teacher organization raised $20,000 from community and corporate supporters to develop an outdoor classroom and environmental lab.

A man-made pond stocked with fish and amphibians enables students to study life cycles, plants, and water ecosystems. Stone paths lead to butterfly and rock gardens, which help expand lessons on bird and plant identification and rock formation. At the weather station, youngsters learn to read meteorological equipment and understand units of measure.

In the classroom, students monitor ozone levels during the day by logging on to the TCEQ's Web site to obtain the ozone readings from monitors nearest to them. Students analyze how the data relate to local weather conditions.

Back in the classroom, another student monitors ozone levels at the TCEQ Web site./*photo by Condit Elementary School*

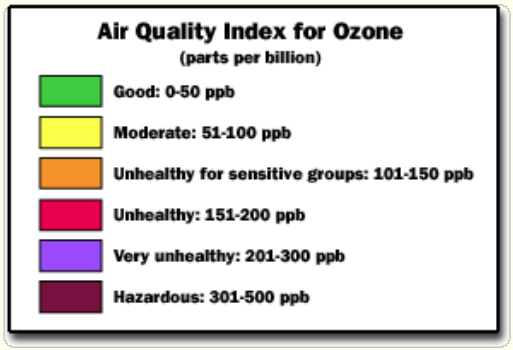
Science teacher Evelyn Kuswara says getting the students interested in air quality was not a problem.

"The children are always excited when they are chosen to be a weather forecaster and can report the current conditions to their classmates," she said. "We also have hands-on activities such as group projects and skits. Since the air we breathe is a real-life connection to the children, they are motivated to learn."

Kuswara says attitudes change as the children become aware of the importance of clean air: "I see more students coming to school with their scooters and bikes, and we have more walkers. Often the parents tell me their children remind them to recycle paper and plastics because manufacturing these items gives off toxins in the air from the factories."

One of the most valuable lessons, she said, is that students realize that "they can make a difference in their community."

Ozone Levels Available Hourly



The TCEQ issues public warnings based on measured levels of ozone in the atmosphere. Drawing from readings at 80 monitors, the warning system targets high ozone levels in the most populated areas of the state.

Air quality updates are posted hourly at www.tnrcc.state.tx.us/air/monops. Regional maps show which areas of the state are being affected and at what levels. Each ozone level is keyed to a color representing the concentration being measured.

"Level Orange" is primarily a concern for people who are more sensitive to high ozone levels, especially children and people with respiratory problems. When ozone reaches "Level Red," even people who are less sensitive to high ozone levels are affected, especially individuals who are active outdoors. Symptoms such as shortness of breath and coughing are more likely to occur during strenuous outdoor exercising. At "Level Purple," everyone should avoid outdoor exertion, and people who are sensitive should stay indoors. "Level Maroon" signals emergency health conditions.

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