



## TEACHER'S GUIDE TO *AIR* – THE SEARCH FOR ONE CLEAN BREATH

Since its premiere in 2008, the District film, *Air – The Search for One Clean Breath* has been screened worldwide. Not only has the film received the prestigious 2009 United States Environmental Protection Agency's Clean Air Excellence Award and the International Mercury Communications 1<sup>st</sup> Place Gold Award, but a guide for middle and high school instructors is now available. It is an innovative way to increase our film's reach and educate students about this precious natural resource.

**The complete high-definition film and the Guide are now available at [www.vcapcd.org/airthefilm](http://www.vcapcd.org/airthefilm)**

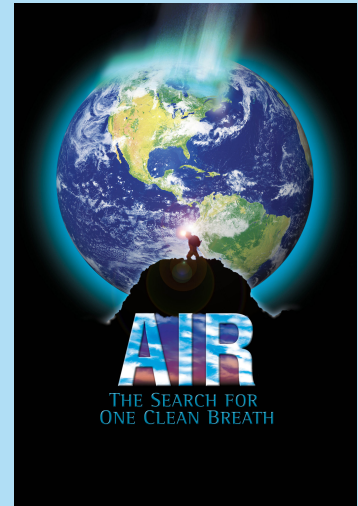
The Guide, and accompanying classroom lessons, will enable county students to not only see the film, but understand more about air quality by expanding upon the material presented in the movie. The project was directed by the Ventura County Air Pollution Control District's public information division. It was coordinated by the California Regional Environmental Education Community (CREEC) and written and field-tested by California classroom teachers.

### ABOUT THE LESSONS

The Guide contains nine original lessons that all meet California Educational Standards and Frameworks, as well as some national educational standards. As part of the project grant from the United States Environmental Protection Agency, the District was responsible for giving each air agency in the country a copy of the DVD. In addition, many air districts nationwide have bought more copies to give to teachers in their areas.

Lessons include - -

- **Navigating Opinion in Search of Facts** - - *California History – Social Science Grade 12; American Democracy 12.3, 12.6; Grade 12 Economics 12.1, 12.3, 12.5.* Students use the Socratic Method to investigate global climate change.
- **Commuter Match & Math** - - *California Science Standards, Grade 6, 6.a; HS Earth Science 7.b.; California History Social Science Standards Grade 9 – 12, 11.11.* Students learn about vehicle types and the carbon dioxide emissions they produce. Then, they test their knowledge with a classroom commuter activity.



The award-winning film, *Air – The Search for One Clean Breath* asks a vital question: How has air evolved and what does it mean for our human experience? Filmed in high definition, the 41-minute film traces the history of air. Viewers will visit a deserted steel mill in the Utah Valley, the continent of Antarctica, and the zero carbon community of BedZED outside of London. With state-of-the-art animation, an inspired soundtrack, and stunning visuals, the film gives new insight into this precious natural resource. Seen by viewers worldwide, this film is now available to classroom instructors.

- **Taking Action** - - *California Science Standards, Grade 6, 7.d; Grade 7, 7.e; Grades 9 – 12, I & E 1.1, 1.m.* Students develop an action project to promote the reduction of greenhouse gas emissions
- **Analyzing Energy** - - *California Science Standards Grade 6, 6.a, 6.b; HS Chemistry, 7.b, 7.c.* Students analyze the advantages and disadvantages associated with various energy sources: coal, natural gas, hydrogen, geothermal, hydropower, oil, solar and wind power, and nuclear energy.
- **Where does our Pollution go?** - - *California Science Standards HS Earth Science, 5 & 5.a.* Students use maps showing global air currents to trace the movement of pollutants around the globe, showing how one city's pollution can affect the lives of others around the world.
- **Our Energy Diet** - - *California Science Standards Grade 6, 6a; HS Ecology, 6b; California History Social Science Grade 9 – 12, 11.11.* Students explore the population of various countries and their oil consumption using graphs. They then determine ways to reduce energy consumption and their own impact on the environment.
- **Effects of Global Warming** - - *California Science Standards HS Earth Science 6.c., HS Earth Science 6.d.* Students read information on climate change and its effects on hurricanes, wildfires, animal populations, human health & allergies, and sea levels. They will fill in a graphic organizer and present information to the class in groups, after, each group will do an analysis of the causes, implications, and solutions to the eight different effects of global warming discussed in the articles.
- **Carbon Dioxide in Ice Core Samples** - - *California Science Standards Grade 7, 4.a, 7. 4.b., 7 4.c, 7 4.d; HS Earth Science 7.b* Students make scientifically based observations with frozen ice cores, quantify data, do hands-on data collection, chart data into a graph, and analyze data from the graph.
- **Air Pollution Tragedy: A Case Study** - - *California Science Standards, Grade 9 – 12, Ecology 6.b.* Students review historic accounts of Belgium's Meuse Valley air tragedy, to build awareness that many disciplines of study and areas of interest can contribute to solving a public problem.

## FIELD INSTRUCTOR COMMENTS

"Lesson content – excellent. Ease of delivery – excellent. . . students want to know what they and society can do to make changes."

-Diana Petropulos,  
Santa Paula High School

"Discussion information connected well with Standard F – Environmental Quality, Human induced hazards. . . the content is important and is covered in our general 9<sup>th</sup> grade physical science."

-Lorraine Wood-Newbury,  
Rio Mesa High School

"Overall the lesson was excellent as regards content, supporting materials, ease of delivery, and grade/subject appropriateness. The students felt they learned a great deal. . ."

-Mark Schmidt, Ventura High School

"The lessons were straightforward and grade appropriate. All of my students seemed confident that they would see a significant shift away from fossil fuels in their lifetime."

-John Forte,  
Atascadero High School

"The lesson content was excellent. It fits in perfectly with ecology and meets state standards. The students made a clear connection between the activities and the film. What is nice about the film and activities is that you can also present them independently from each other."

-Nathan Inouye,  
Adolfo Camarillo High School

"The movie is great, and the experiment with warm and cold water was a great visual! The standards tied in perfectly with the lesson."

-Josh Rubin,  
Woodside High School, Woodside CA

For more, visit

[www.vcapcd.org/airthefilm](http://www.vcapcd.org/airthefilm)

(8-22)

**THE COMPLETE HIGH DEFINITION FILM AND  
THE GUIDE ARE AVAILABLE AT  
[WWW.VCAPCD.ORG/AIRTHEFILM](http://WWW.VCAPCD.ORG/AIRTHEFILM).**