



A Nonprofit Education Corporation  
 P.O. Box 23228, Santa Barbara, CA 93121-3228  
 (805)967-6030  
 Web: [vistaslifelonglearning.org](http://vistaslifelonglearning.org)  
 Email: [vistas@silcom.com](mailto:vistas@silcom.com)

Presenting  
***UNDERSTANDING  
 CLIMATE CHANGE***

Presenter: *Barbara Levi, P.h.D.*

*Tuesdays, September 15, 22, 29  
 9:30 AM-12:30*

*Valle Verde Social Room  
 800 Calle de los Amigos*



Nearly every day the media report some evidence of climate change: Polar bear habitat is shrinking, glaciers are receding, oceans are becoming more acidic. Scientists tell us that human activity such as carbon dioxide emissions and deforestation have contributed significantly to the warming of our planet over the last century. What is the mechanism by which these activities affect the climate? How exactly has Earth's climate changed, and how have scientists measured these changes, even going back millions of years? What are the projections for the future? And last, but not least, what can society in general—and we as individuals—do about it? This class will examine such questions. I hope to foster discussion of the issues and tailor the presentation to the interests of the attendees.

The topics we explore will be tailored to the interests of the class but my initial expectation is the following:

Session 1: Understanding the Climate System. I will emphasize basic principles governing Earth's climate system. I will show measurements of the levels of atmospheric greenhouse gases over time and describe observed changes in the climate system parameters.

Session 2: The case for human impact on climate. This session will include a discussion of how scientists measure the various climate parameters of both modern and ancient climates. It will also include an overview of climate models, their input and their record in reproducing observed climates. We will also touch on what is still unknown.

Session 3: The possible remedies to climate change. This discussion will begin with an overview of projections for the future and include possible actions to mitigate those effects.

As background reading, I suggest one or more of the following sources:

1. Intergovernmental Panel on Climate Change, *Climate Change 2007: Physical Scientific Basis*, <http://www.ipcc.ch/ipcc-reports/ar4-wg1.htm>. (You might want to look just at the summary for policymakers and/or the technical summary.)
2. Robert Henson, **The Rough Guide to Climate Change**, 2nd Edition (paperback)
3. Elizabeth Kolbert, **Field Notes from a Catastrophe: Man, Nature and Climate Change** (paperback)
4. Michael Mann, Lee Kump, **Dire Predictions: Understanding Climate Change** (paperback)

**ENROLLMENT FORM: *UNDERSTANDING CLIMATE CHANGE***

**VISTAS Members \$30/per person — Non-members \$45/person**

Amount Enclosed \$ \_\_\_\_\_

Name(s): \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

**Mail to: VISTAS Lifelong Learning, Inc., P.O. Box 23228, Santa Barbara, CA 93121-3228**

**Deadline for registration: September 1, 2009**

**If you are interested in ridesharing, please circle**

Barbara Levi earned a PhD in particle physics from Stanford University in 1971. For most of the past 30 years, she has written for **Physics Today** magazine, reporting on new discoveries at the frontiers of physics. After rising to senior editor, she was in charge of **Physics Today's** news section, "Search and Discovery." In January of 2003, she stepped down from that post and now serves as a contributing editor. Her stories cover the full range of topics in physics today, from atomic to astrophysics, including environmental issues such as climate change. Because of Dr. Levi's interest in issues at the interface of physics and society, she became a consultant for the US Congress' Office of Technology Assessment, from the late 1970s to the Office's closure in 1995. From 1981 to 1987, Dr. Levi was a member of the research staff at Princeton University's Center for Energy and Environmental Studies. Her work there on arms control and the effects of nuclear weapons resulted in, among others, two articles in **Scientific American**.

Dr. Levi has been an active member of the American Physical Society (APS). She was the chair of the APS Forum of Physics and Society and has co-edited books on global warming and renewable energy produced under the Forum's auspices. She has served on the APS Executive Board and its Panel on Public Affairs. She is a fellow of both APS and the American Association for the Advancement of Science.

### VISTAS Fall 2009 Calendar

Seminar/Event	Inclusive Dates	Time	Venue
VISTAS Picnic	Sunday, September 13	1:00PM	Manning Park
Meeting of Minds	Monday, September 21	9:30AM	Valle Verde Social Room



P.O. Box 23228  
Santa Barbara, CA 93121-3228