



Pintail duck photo by Peter LaTourette

Climate Change, Wildlife, and Wildlands

Getting Started

Tips for using each of the major components of the toolkit and the CD-ROM are provided. To begin, you may want to print out this “Getting Started” section for ready reference, as well as the menus for the basic and advanced fact sheets.

EPA Publications You Can Order

There are six climate change brochures that you can view on your screen but cannot print out for reproduction and distribution. To order limited quantities of these brochures, contact the National Service Center for Environmental Publications at 800-490-9198:

- **Climate Change and Cold Water Fish**
(EPA 236-F-99-002)
- **Climate Change and Birds**
(EPA 236-F-99-003)
- **Climate Change and Public Lands**
(EPA 236-F-99-004)
- **Cool Facts About Global Warming**
(EPA 230-F-97-001)
- **Renewable Energy: The Road from Global Warming to a Cleaner Future**
(EPA 236-F-98-006)
- **Saving New Jersey's Vanishing Shores**
(EPA 236-F-99-005)



Climate Change, Wildlife, and Wildlands

Getting Started

2

Climate Change Basics and Case Studies

Black-and-white copies of all of the fact sheets, case studies, flash cards, and interactive activities contained on this CD-ROM can be reproduced in your office by simply hitting the “print” button.

To reproduce the publications and other materials in black and white, print them and produce the copies you need on a copy machine. If you prefer color copies and need only a few copies at a time, print them on a color printer, as needed, or reproduce them on a color copier.

You may wish to send the CD-ROM disk to a printer and have a one-time bulk order printed. The larger the quantity, the lower the per-item cost.

Trail Talk Outlines and Flash Cards

For all age groups

The CD-ROM includes sample outlines for talks to complement each of the four case studies, along with a flash card visual aid for each talk. The 8.5 x 11 visual aids are designed to graphically illustrate the single most important point that visitors/students

might take away from a talk or lesson. If you are talking about a case study to a group, you might choose to hold up the flash card during the talk or at the end. If you opt instead to pass it around, we suggest that you visit a print shop, copy center, or service bureau to have it laminated.

Ready-to-Go Interactive Activities

Two kinds of interactive/teaching activities are included in the toolkit. One includes interpretive/teaching activities that are provided in the kit in a ready-to-go form: a video, a set of trail cards, and a global warming wheel card for calculating greenhouse gas emissions and how to reduce them. The other set of activities are described on the CD-ROM and are easily adapted to either a classroom or a non-traditional educational setting.

Video

For all age groups

The video is designed to be shown in visitor centers and classrooms to provide an overview of the topic prior to or instead of a longer presentation by a ranger or teacher.

Trail Cards

For young people

The interpretive kit includes 12 trail cards, each picturing a wildlife species or ecosystem that may be particularly vulnerable to climate change. They are designed to complement the four case studies. The cards may be available in bulk quantities for resale at selected visitor centers. In addition to serving as a useful educational tool, they can be fun for children to collect and trade.

If you plan to use the trail cards during your interpretive talks—either as a complete set or in sets of three—you might want to laminate them before passing them around.

Here are some ideas on how to use the cards during campfire talks:

- Give each of three individuals in the group a different card and tell them to just look at the picture for now. Then ask them:

Have you seen that animal or landscape on your visit here at this park or other parks?

What kind of habitat do you think it needs to survive?

Climate Change, Wildlife, and Wildlands

Getting Started

3



Special Tips for Classroom Use

Here are some activities to do with trail cards in a classroom or other formal educational setting:

- A** After a general discussion on climate change, have three or more (depending on how many cards you use) children in the group or class read aloud from the backs of each card and then pass them around. Following this, have all the children in the group or class design their own cards (using 3 x 5 index cards), including researching the information to write on the back.
- B** Using a map of the United States, have the children locate the range that their card subject would call home. (This activity works best with students in the 4th grade or above.) If there are more children than cards, have them pair up or work in small groups.
- C** After a general discussion on climate change, have the children write a paragraph about how climate change is affecting or will affect their card subject. Alternatively, the children could write a story about where that subject may be living 100 years from now if humans do nothing to stop global warming. In another variation, students could write about what that subject's life was like 100 years ago—possibly relating it to a historical event tied to the area it is from—versus what it is like now. This exercise incorporates themes not only of climate change and its impacts, but also other societal and environmental changes. This activity would work best with children in the 6th grade and above.
- D** Following activities **B** and **C**, have the children write three things they think the card subject would “ask” people to start, stop, or continue doing to help lessen the problem of climate change. (This activity, called the “Stop/Go/Continue Game,” can be played by writing the answers on red, green, or yellow traffic lights made of paper and tacking them up around the room). It is most appropriate for children in the 4th grade and above.

How do you think its home will change in another 50–100 years if climate changes in the ways that I’ve described today?

After getting one or two responses, ask the individual with the card to read the back.

What can people do to help this species or ecosystem?

- Give individuals in the group different cards and tell them not to let anyone else see the back of the card. Let them have a few moments to read the back of their card. Then let each one show the group the picture of their animal. The rest of the group then takes turns guessing how climate change could affect the animal.

Global Warming Wheel Card

For all age groups

“Global Warming: What’s Your Score?” is a hand-held tool that interpreters and educators can use to illustrate the importance of energy savings for slowing climate change. To see an electronic version and to view the assumptions used to generate the figures in the wheel card, visit EPA’s web site at

<http://www.epa.gov/globalwarming/climatelink>

and look for the greenhouse gas calculator.

Climate Change, Wildlife, and Wildlands

Getting Started

4

One side of the card illustrates how much carbon dioxide (a greenhouse gas) an individual contributes to the atmosphere by various activities such as driving a car, while the other side (“Global Warming: What Can You Do?”) shows how a change in behavior (e.g., buying a more fuel-efficient car) can make a significant contribution to solving the problem of global warming.

If you are talking to a group, you can request a volunteer who would like to know their household’s approximate greenhouse gas emissions and how he or she can reduce them. In front of the group, ask the volunteer the questions printed on the wheel card and tally up the answers. Explain to the group that the card provides only a set of sample activities, and so the total does not represent all of the household’s greenhouse gas emissions.

Then flip the card over to reveal ways that the household could reduce its greenhouse gas emissions (“What Can You Do?”). Ask the group for other suggestions that they may have.

CD-ROM Interactive Activities

Additional interactive activities are contained on the CD-ROM, where they complement the informational case studies. Like the case studies, they can be printed out in black and white or color. They are intended to help you present climate change in creative ways that engage people of all ages. Below are some suggestions on how to use these tools.

Global Warming Word Find and Word Scramble

For 4th grade reading level and above

The word find and word scramble use vocabulary that would be introduced during an interpretive talk on the potential impacts of global warming on wildlife and wildlands. The word games can serve as an extra, follow-up activity that reinforces the information that children and adults have gained during interpretive talks.

Animal Coloring Sheets

For pre-reading age groups

There are four animal coloring sheets, one to correspond with each of the four areas of the country highlighted in the kit. The sheets can be used in classroom settings or other places where it is convenient to use paper and crayons. If tables aren’t available, you could mount the sheets on cardboard so the children can hold them on their laps. You can present the coloring sheets after talking about weather and climate in basic terms to a very young group or as a follow-up or distraction for the youngsters while their parents listen to a climate change talk. If your setting prohibits you from using these suggestions, you can distribute the sheets for children to use at a later time.

Landscape Line Drawings

For pre-reading children through about 4th grade level

Children can create a habitat on the landscape line drawings using crayons, markers, stamps, or stickers. Additional materials such as crayons, stamps, and stickers are not included in this toolkit.

Climate Change, Wildlife, and Wildlands

Getting Started

5

This activity is best conducted in classroom settings or other sites where children can sit down and use art supplies comfortably.

In the past, climate change educators have found that children really enjoy imprinting landscape sheets using rubber stamps and coloring the stamp imprints. Appropriate stamps and colored stamp pads can usually be purchased at local stores for educators or stores oriented toward crafts or nature. It is beneficial to teach the children about the typical inhabitants of a particular ecosystem, but they should be given freedom to be creative.

Slideshow Presentation and Script

Is Global Warming Happening? is a PowerPoint presentation you can use for talks before large audiences or school groups in classrooms. Your computer will open the slideshow automatically when you click on *Is Global Warming Happening?* under the Interactive Activities menu.

You can also have overhead transparencies made in order to do a presentation with an overhead projector.

Now That You're Started...

We hope that you find it rewarding to give interpretive talks on this serious threat to national parks and wildlife refuges. And we ask that you complete the evaluation form under the Conclusion section of this CD-ROM. You are the only ones who can tell us about your visitors'/students' reactions to the methods that we use in this kit to reach the public about the issue of global warming and the steps that they can take to help protect our wildlife and wildlands for future generations.