United States **Environmental Protection** Agency

Office of Air and Radiation (6207J)

EPA 430-K-09-005 May 2009



The U.S. Environmental **Protection Agency** designed this curriculum packet for teachers of grades 6 through 8 to educate students about climate change, its possible effects, and the kinds of activities that individuals, families, schools, and communities can take to reduce their contributions to climate change. The activities in this curriculum are focused on the Global Warming Wheel Card, which is included in this packet.

Welcome to the Global Warming Wheel Card Classroom Activity Kit

What are the objectives of this curriculum packet?

The materials in this packet will introduce students to:

- The concepts of climate change and the greenhouse effect.
- Common sources of greenhouse gas emissions generated by humans.
 - The Global Warming Wheel Card, which enables students to see how their own actions generate greenhouse gas emissions.
 - Ways in which students might reduce their individual, family, school, and community contributions to the greenhouse effect.



What are the contents of this curriculum packet?

The packet contains the following items:

- Global Warming Wheel Card (assembled)
- Instructions for Making a Global Warming Wheel Card (unassembled)
- Guide for Teachers (including Teacher Notes on Activities)
- Frequently Asked Questions About Global Warming and Climate Change: Back to Basics
- Student Activities
 - Activity #1: Using the Global Warming Wheel Card
 - Homework for Activity #1: Electricity Use and Carbon Dioxide
 - Activity #2: What You and Your Community Can Do to Reduce Carbon Dioxide
 - Activity #3: A Simple Energy Audit



This curriculum packet is designed to be used in two ways: 1) for one session focusing on the construction and use of a Global Warming Wheel Card, or 2) for two or more successive classroom sessions that cover the construction and use of the Wheel Card plus a series of in-depth activities.

The Wheel Card introduces students to common sources of carbon dioxide, such as manufacturing processes, power plants, and automobiles. The front side of the wheel allows students to estimate how much carbon dioxide they and their families produce in a typical year through these sources. The back side of the wheel provides them with examples of activities that they can undertake to reduce carbon dioxide emissions.

Once students demonstrate an understanding of the concepts introduced in the Global Warming Wheel Card, a subsequent session (or more) can provide more challenging questions and in-depth activities related to reducing emissions of carbon dioxide.

The materials in this packet are designed to be photocopied. Feel free to make as many copies as you need to share with your students or other teachers.

www.epa.gov/climatechange