



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute  
2005 Volume IV: The Sun and Its Effects on Earth

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## **Solar Effects on Global Warming**

Guide for Curriculum Unit 05.04.08  
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This unit will be used to introduce children to the Sun and its effects on global warming. The intent of this unit is to ignite their interest so that they will study this subject further on their own. The unit is designed for children in grades 5-8 and will be taught for approximately ten days. Because students are limited in their knowledge about the Sun, greenhouse effect, climate and global warming, this topic can be explored only to a somewhat limited extent. What I have tried to do is to incorporate four main ideas: 1) to study the Sun; 2) to examine the greenhouse effect to see if it is affecting Earth's climate; 3) to examine temperatures over time to see if global temperatures have any effects on weather patterns and 4) to examine whether a brighter Sun is also responsible for rising temperatures.

Several strategies are used in this unit. Learning packages are used with specific goals and objectives with guided instructions from the teacher. Whole group and small group discussions and individual activities are used with each lesson. Each lesson has a specific stated goal and is guided by one of the main ideas of this unit. The lessons have been constructed to have students 1) Discuss prior knowledge; 2) Explore by doing an activity; 3) Reflect by looking back at activity, analyze and discuss and 4) to come to some conclusions, communicate to others, identify next steps that lead to the next topic.

The design of this unit has been guided by New Haven Public School Curriculum Science Standards grades 5-8. Specifically, Content Standard 4.0 Earth Science will be addressed. This standard states that students will develop an understanding of the structures, properties and dynamic processes of the earth, the solar system, the universe and the galaxy; they will be familiar with the origins, evolution, movements and interactions of these systems.

(Recommended for Earth Science, grades 5-8.)

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