

Name\_\_\_\_\_

Age\_\_\_\_\_

Date\_\_\_\_\_

## Climate Change—Questionnaire

There is a great deal of controversy about whether or not Earth's climate is warming up. If the Earth's climate *is* changing, there is debate about what may be causing these changes and what may result.

### **The Greenhouse Effect**

1. Describe what occurs in a glass greenhouse so that it becomes warmer inside than outside.
2. How is the greenhouse effect in an actual greenhouse different from what occurs in the Earth's atmosphere?
3. What is the difference between the "natural" and "increased" greenhouse effect?
4. How would Earth's climate be different if there were no carbon dioxide in the atmosphere at all?

### **Carbon Dioxide and Other Greenhouse Gases**

5. Why does carbon dioxide absorb infrared energy while oxygen and nitrogen do not?
6. How could you measure the concentration of carbon dioxide in a sample of gas?
7. How do scientists measure the concentration of carbon dioxide in the atmosphere?
8. How does the concentration of carbon dioxide in the atmosphere change during the year? What causes the change?

9. How has the concentration of carbon dioxide changed since 1958? What caused the change?

10. Name at least three other greenhouse gases and where they come from.

### **Climate Change**

11. On the subject of global warming, what do scientists *agree* about?

12. Describe at least four issues on which scientists *disagree* about global warming.

13. Name at least four environmental changes that may occur if Earth's climate warms up, and *when* they might occur.

14. What actions have been proposed within the United States to reduce the possibility of global warming?

15. Why is it difficult for the U.S. Congress to come to agreement on actions to reduce the possibility of global warming?

16. What is your personal opinion: Should we take actions to reduce the possibility of global warming? If so what could you do *personally*? If not, why not?