

CHAPTER 15	Thought Lab 15.1: Fossil Fuels and Climate Change	BLM 15.1.1
HANDOUT		

Natural gas, coal, and petroleum are fossil fuels, created deep in Earth's crust by the compression and heating of ancient organic matter. The combustion of *fossil fuels* to provide energy for cooking, transportation, and warmth is an essential part of your life. Our society's vast consumption of fossil fuels has an environmental cost, however. Both the production and the combustion of fossil fuels release millions of tonnes of gases into the atmosphere. What effect could these gases have on the global climate?

### Procedure

Use library and electronic research tools to find answers for the following questions:

1. (a) The *greenhouse effect* is a natural system caused by water vapour and other gases in the atmosphere. It protects Earth from extreme temperatures. Draw a diagram illustrating this effect.

- (b) Water vapour is a naturally occurring *greenhouse gas*. Define the term greenhouse gas.

CHAPTER 15	Thought Lab 15.1: Fossil Fuels and Climate Change (continued)	BLM 15.1.1
HANDOUT		

2. (a) Methane, carbon dioxide, and dinitrogen monoxide (also called nitrous oxide) are present in the atmosphere in increasing amounts as a result of human activities. Why is the increase in the concentration of these gases in the atmosphere a problem?

(b) What are the main sources of these gases?

### Analysis

1. What effect do you expect the burning of fossil fuels to have on the global climate? Explain your answer.

