Section 11.2
Human Activity and Climate Change
Study Notes

By the end of section 11.2 you should be able to understand the following:

- ❒ "Climate change" refers to long-term, consistent changes to weather patterns in a region.
- ❒ Global warming (an increase in Earth's average temperature) is one part of climate change.
- ❒ Global warming appears to be increasing at a faster rate than previous periods of warming.
- ❒ Global warming has coincided with increases on greenhouse gas emissions from the burning of fossil fuels.
- ❒ It is expected that various parts of Earth will see changes in temperature and water/ice levels, which will in turn influence society, economies and the environment.

NOTES

What is climate change? Why do some scientists believe that global warming is happening faster than it was in the past? Why are scientists concerned if certain places on Earth have rapid average temperature increases?	1. 2. 3.
What is the enhanced greenhouse effect? Why are scientists concerned about human activities and the enhanced greenhouse effect?	1. 2.
What chemicals have the highest global warming potential (GWP)? Which naturally occurring molecules are the most responsible for the greenhouse effect?	1. 2. 3.

NOTES

Why did global levels of carbon dioxide begin to quickly increase in the 1800s? Why does deforestation also add CO_2 to the atmosphere? What are two methods people can use to help slow the increases in CO_2 production?	1. 2. 3. 4.	
What are the primary sources of methane, another greenhouse gas?	1. 3.	2. 4.
What are the primary sources of nitrous oxide, the third-largest greenhouse gas contributor to the enhanced greenhouse effect?	1. 3.	2. 4.
The ozone layer is an important mechanism for filtering harmful UV radiation, but ozone is also a greenhouse gas when found lower in the atmosphere. What are the sources of surface ozone?	1. 2.	

NOTES

What are chlorofluorocarbons, and what are they primarily used for? What steps have been taken to try to limit their production?	1. 2. 3.
How does albedo influence climate?	1. 2.
	Do the Reading Check on page 487
Why is it important to take many measurements, over long periods of time, when studying climate change?	1.
What are GCMs? What factors do they take into account?	1. 2. 3. 4. 4. 6.
What are GCMs used for?	1. 2. 3.

NOTES

What is the purpose of the IPCC group? What is the purpose of the UNFCCC treaty?	1. 2.
What are three impacts of climate change globally?	1. 2. 3.
What are three impacts of climate change in Canada?	1. 2. 3.
What are three impacts of climate change in BC?	1. 2. 3.

Do the Reading Check on page 494

NOTES

Why would the United Nations suggest that governments should use the "precautionary principle" when deciding their responses to climate change?	1. 2.
What are six strategies for addressing climate change?	1. 2. 3. 4. 5. 6.