Weather Chapter 1 Section 2 Name_____
The Atmosphere

Topics	Notes, Diagrams, Drawings
Sun's Energy	The sun's energy comes to Earth in the form of electromagnetic radiation. The energy is transferred to the atmosphere and lithosphere.
Radiation	The transfer of energy as electromagnetic waves. When this radiation is absorbed by a surface, it heats the surface by causing the molecules to move faster.
Conduction	The transfer of energy from one material to another due to direct contact. Thermal energy moves from warm to cold areas. (High energy to low energy) When air molecules come into contact with a warm surface. The energy from that surface is transferred by conduction.
Convection	Convection is the transfer of thermal energy by circulation or movement in a liquid or gas. As air is heated it becomes less dense and rises. Cool air is more dense and sinks. As cold air sinks it pushes the warm air up and is then warmed by the Earth's surface. This air then rises and is replaced by cooler sinking air.

Topics	Notes, Diagrams, Drawings
Greenhouse Effect	The trapping of thermal energy by the Earth's atmosphere. Gases such as carbon dioxide and water vapor trap more thermal energy and are referred to as greenhouse gases. The natural greenhouse effect keeps the Earth warm and livable.
Global Warming	The rise in average global temperatures is called global warming. The cause of this is thought to be an increase in the amount of greenhouse gases in the atmosphere due to human activity. Burning fossil fuels, forest fires, and certain pollutants all contribute to global warming.
Radiation Balance	The balance between incoming radiation and outgoing energy must be maintained. If this balance is not, then the Earth will heat up or cool down.