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| **1.2 The sun supplies the atmosphere’s energy** | | |
| 1. What two things happen to the sunlight that reaches Earth? | **1)Absorbed**  **2)Reflected** | |
| 1. What is radiation? | **Energy that travels across distances in the form of certain types of waves.** | |
| 1. What happens to most of the solar radiation that reaches Earth? | **70% of the solar radiation that reaches earth is absorbed.**   * **50% by Earth’s Surface** * **20% by clouds and atmosphere** | |
| 1. What different things do sand and air do with solar energy? | * **Sand absorbs solar energy all day and stores it in one place** * **Air absorbs solar energy all day but moves it around and spreads it out.** | |
| 1. What are three ways that atmosphere moves energy? | * **Radiation** * **Conduction** * **Convection** | |
| 1. What is conduction and how is energy transferred in conduction? | **Conduction is the transfer of heat energy from one substance to another by direct contact.** | |
| 1. What is convection? | **Convection is the transfer of energy from place to place by the motion of gas or liquid.** | |
| 1. What happens to the energy of heated air during convection? | **Cool dense air sinks downwards and pushes warm air out of the way. Warm air carries energy upward.** | |
| 1. Compare conduction and convection. How are they similar? | **Both are processes that move energy from place to place. Both involve the movement of molecules.** | |
| 1. What produces the motion of air convection? | **Differences in density produce the motion of air convection.** | |
| 1. What are the four layers of the atmosphere mentioned in the book in order from closest to farthest away? | **1) Troposphere 3) Mesosphere**  **2) Stratosphere 4) Thermosphere** | |
| 1. How does the temperature change in each layer? | **With altitude**   * **Troposphere temp decreases** * **Stratosphere temp increases** * **Mesosphere temp decreases** * **Thermosphere temp increases** | |
| **Using the diagram on page 20, answer questions 13-14** | | |
| 1. Does each layer have a set temperature or a range? | | **A range** |
| 1. Where in the troposphere would you find the warmest temperatures? | | **At the bottom** |
| 1. Where is the troposphere, and how is it heated? | | **It extends from 0 to 10km above Earth’s surface and is heated by the ground.**  **\*\*0 km is sea level on earth\*\*** |

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| **Atmosphere Layers Information** | |
| **Layer** | **Based on background information found on pg 20 and 21, list the important characteristics of each layer.** |
| **Troposphere** | * **0-10 km** * **Heated by the ground** * **Temp decreases as you move upward**   + **Temp is highest at ground level**   + **Generally decreases 6.5°C each km you rise** * **Contains 80% of the total mass of the atmosphere**   + **Including almost all the water from vapor present in the atmosphere** |
| **Stratosphere** | * **10 – 50 km** * **Temp rises as you move upwards** * **Ozone is in this layer**   + **Absorbs energy from the sun and heats this layer**   + **Absorbs harmful UV Radiation** * **Clear dry layer.** |
| **Mesosphere** | * **50 – 90 km** * **Air is extremely thin in this layer** * **Less than 0.1% of the total mass of atmosphere** * **Most meteors burn up in this layer** * **Temp decreases as you rise** |
| **Thermosphere** | * **90 km and up** * **Air becomes less dense as you rise** * **Temp increases as you rise** * **When you reach the edge of this layer you reach outer space.** |