|  |
| --- |
| **1.1 Earth’s Atmosphere Supports Life** |
| 1. What is the atmosphere?
 | **The whole layer of air that surrounds Earth.**  |
| 1. How does the atmosphere make life possible? Find these examples in the text above. (List at least three)
 | **The atmosphere supports life.** * **Gases in atmosphere keep earth warm**
* **Gases in atmosphere transport energy to different regions of the planet**
* **Oceans would not exist without the atmospheres**
 |
| 1. What is the altitude?
 | **The distance above sea level**  |
| 1. What is Density?
 | **The amount of mass in a given volume of a substance.** * **Amount of “stuff” packed into a given object**
 |
| 1. What happens to the atmosphere’s density as you travel upward?
 | **The atmosphere density decreases as you travel upwards.**  |
| 1. Look at the picture of the climber on page 10. Why does he need an oxygen mask?
 | **The air is less dense at that altitude, so there are fewer oxygen molecules to breathe.**  |
| 1. Nitrogen makes up what percentage of air? Is it the most prevalent?
 | **Nitrogen makes up 78% of the atmosphere and yes it is the most prevalent gas found in our atmosphere.**  |
| 1. What is the second most common gas in air?
 | **Oxygen at 21%** |
| **Using the diagram on page 11, answer questions 9 – 11.** |
| 1. Why isn’t water vapor included in the graph?
 | **Because it varies from place to place and from time to time.**  |
| 1. What percentage of the atmosphere is made up of oxygen?
 | **21%** |
| 1. How do the graph and the photograph show, in two different ways, that the atmosphere has substance?
 | **The graph shows the composition of the Earth’s Atmosphere. The photograph shows that there is something above the surface of the earth.**  |
| 1. What are cycles?
 | **A series of events or actions that repeat themselves regularly; a physical and/or chemical process in which one material continually changes location and/or form.**  |
| 1. What important cycles affect the atmosphere?
 | * **Carbon Cycle**
* **Nitrogen Cycle**
* **Water Cycle**
 |
| **Using the diagram on page 13, answer questions 14 – 19.** |
| 1. What do the arrows in all three diagrams represent?
 | **The movement of oxygen, carbon dioxide, nitrogen, and water in cycles** |
| 1. Compare the placement of the arrows in the diagrams. In each case, what are they pointing to?
 | **Diagram 1: the tree and the tiger****Diagram 2: The decaying leaves and tiny organisms in the soil.** **Diagram 3: rain and the lake** |
| 1. When the tiger exhales carbon dioxide, does it go directly into the tree? Explain
 | **No, it goes into the air first, and then is taken in by the tree.** |
| 1. How did the decaying leaves get nitrogen?
 | **They were once a part of the tree, which got nitrogen from the soil.**  |
| 1. If water vapor stayed in the atmosphere and did not return to Earth’s surface, how would it affect the tree?
 | **All living things need water to survive, so the tree could not live unless water cycled back to Earth’s surface, providing a source of nutrients.**  |
| 1. How are the three cycles similar? How are they different?
 | **Similar: In all three cycles, a substance leaves the air and is returned to the air again and again. All are important to living things.**  | **Different: The substances involved in the cycles are different, and they are removed and returned to the air in different ways.**  |
| 1. What are three sudden events mentioned in the book that can occur and change the atmosphere?
 | * **Volcanic Eruptions**
* **Forest Fires**
* **Dust Storms**
 |
| 1. Look at the satellite images of northwestern Africa on page 14. How does the second image differ from the first?
 | **In the second image, a dust cloud covers the blue of the ocean, and the white clouds in the upper left of the first image are gone.**  |