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| **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.** | |