**Why Do the Seasons Change?  
Teacher Note-Taking Guide**

Consider using these notes as part of your modeling process. Feel free to add your own notes or modify these as needed to fit your instructional needs.

**Seasons Article: Simplified Version**

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| **Paragraph and Specific Text** | **Potential Note-Taking Strategy/Idea** |
| **Paragraph 1**  “Each season brings changes in temperature, weather, and the length of daylight.” | Highlight and discuss what students know about the temperature, weather, and length of daylight for winter, spring, summer, and fall. |
| **Paragraph 3**  “The four seasons are opposite in Earth’s northern and southern halves, called the Northern Hemisphere and Southern Hemisphere.” | Highlight and discuss why this might be. Students may not have a strong understanding of this yet, but it will develop throughout the reading. |
| **Paragraph 4**  “Earth is titled on its axis. The axis is an imaginary line through the North and South poles.” | Highlight and draw a small model of Earth tilted on its axis in the margins. Label the axis. |
| **Paragraph 5**  “When the North Pole is slanted toward the sun, it is summer in the Northern Hemisphere.”  “At the same time, the South Pole is slanted away from the sun, causing it to be winter in the Southern Hemisphere.” | Highlight and draw a small model of the Earth’s Northern Hemisphere tilting toward the sun and its Southern Hemisphere tilting away from the sun.  Use the included Change of Seasons picture to help students visualize why the seasons are opposite in the Northern and Southern hemispheres (based on the relative distance to the sun). |
| **Paragraph 6**  “Tropical areas”  “These areas are near the equator and get plentiful sunlight the year around.” | Highlight and discuss why proximity to the equator effects the type of seasons an area experiences. Describe the difference between the rainy and dry seasons these areas experience. |

**Seasons Article: Detailed Version**

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| **Paragraph and Specific Text** | **Potential Note-Taking Strategy/Idea** |
| **Paragraph 1**  “People commonly divide the year into seasons based on the typical weather at various times.” | Highlight and discuss what students know about the temperature, weather, and length of daylight for winter, spring, summer, and fall. |
| **Paragraph 2**  “The four seasons result from the tilt of Earth’s axis of rotation and the planet’s motion around the sun.” | Highlight and discuss why this might be. Students may not have a strong understanding of this yet, but it will develop throughout the reading. |
| **Paragraph 3**  “Summer occurs in the Northern or Southern hemisphere when that hemisphere is tilted toward the sun.”  “During winter, the hemisphere tilts away from the sun.” | Highlight and draw a small model of Earth tilted on its axis in the margins. Add a small drawing of the sun and label the hemisphere tilted towards it “summer” and the one tilted away from it “winter.” |
| **Paragraph 4**  “Most people mark the beginning of summer or winter as the times when Earth’s axis has its greatest tilt toward or away from the sun.” | Highlight this sentence as well as the phrases June solstice, Tropic of Cancer, December solstice, and Tropic of Capricorn.  Discuss the temperatures during the solstice and why people consider these days the start of summer and winter. |
| **Paragraph 5**  “Spring and autumn begin at the two times of the year when the sun lies directly overhead at the equator. These moments are known as the equinoxes.” | Highlight these sentences as well as the phrases March equinox and September equinox.  Discuss why all places on Earth receive approximately 12 hours of sunlight during the equinox and why people consider these days the start of spring and autumn. |
| **Paragraph 6**  “At some times of the year, areas near Earth’s poles have extended periods of sunlight or darkness.”  “On the June solstice, all places along the Arctic Circle, … receive 24 hours of sunlight. Regions farther north have progressively more days of constant sunlight.” | Highlight and use the included Change of Seasons picture to help students visualize why the amount of daylight differs as we move closer to the poles.  Discuss why the amount of daylight at the North and South poles are opposite. |
| **Paragraph 7**  “Although most people mark the four seasons by the solstices and equinoxes, meteorologists favor a different system. They use seasons that correspond more closely with the hottest and coldest times of the year for most places.” | Highlight and discuss why meteorologists may use this method of marking the four seasons. |
| **Paragraph 9**  “Instead of the four seasons, tropical areas often have one or two rainy seasons separated by one or two dry seasons.” | Highlight and discuss why proximity to the equator affects the type of seasons an area experiences. Describe the difference between the rainy and dry seasons these areas experience. |