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| **Following the Big Ideas** | |
| **Big Idea 1** | Macroevolution, or the origin of a new species, results from the accumulation of micro evolutionary change over time |

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| **Essential Questions** |
| * What is the role of reproductive isolation in the evolution of new species? * How can species maintain reproductive isolation even when occupying a habitat with many other species? * How can adaptive radiation accompanied by convergent evolution produce similar morphological characteristics in geographically isolated, but similar environments. * How does the universal sharing of some developmental sense in all life forms provide evidence that macroevolution is the source of biodiversity on earth? |

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| **Vocabulary** | | |
| 1. Speciation. 2. Microevolution 3. Macroevolution 4. Reduced hybrid viability 5. Reduced hybrid fertility | 1. Habitat isolation 2. Temporal isolation 3. Behavioral isolation 4. Hybrid breakdown 5. Hybrid zones | 1. Mechanical isolation 2. Gametic isolation 3. Sympatric speciation 4. Allopatric speciation 5. Punctuated speciation 6. Gradualism |

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| **Chapter Outline and Reading Guide** | |
| **Section 1**   1. What was Darwin’s mystery of mysteries? 2. Use the biological species concept to define species. 3. What is required for the formation of new species? 4. What are hybrids? 5. Explain the two types of barriers that maintain reproductive isolation.   **Section 2 and 3**   1. Summarize these sections in your own words | **Section 3**   1. Stephen Jay Gould and Niles Eldredge coined the term punctuated equilibria. What is meant by a punctuated pattern? 2. Using Figure 22.14, explain how each of the pictures explains speciation.   **Section 4**   * Summarize this section in your own words |

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| **After You Have Read…** |

* What is the role of reproductive isolation in the evolution of new species?
* How can species maintain reproductive isolation even when occupying a habitat with many other species?
* How can adaptive radiation accompanied by convergent evolution produce similar morphological characteristics in geographically isolated, but similar environments.
* How does the universal sharing of some developmental sense in all life forms provide evidence that macroevolution is the source of biodiversity on earth?