

Earth System Evolution Storylines– Climate Change

Below are storylines that were designed by Cheryl Mosier, an Earth Science Teacher at Columbine High School in Littleton, Colorado.

This unit is supplemented with:

- time line construction and placement of major Earth events
- different models of the geologic time line

Big Idea:

3. Change through time produced Earth, the net result of constancy, gradual changes, and episodic changes over human, geological, and astronomical scales of times and space.
7. Dynamic environments and ecosystems are produced by the interaction of all the geospheres at the Earth's surface, and include many different environments, ecosystems, and communities that affect one another and change through time.

| | Activity 1 – The Fossil Record and Your Community | Activity 2 – North American Biomes | Activity 3 – Your Community and the Last Glacial Maximum | Activity 4 – The Mesozoic Boundary |
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| Key Evidence Learned Connection to: | - process of fossilization - why certain things become fossilized - where fossils form | - our communities biome - organisms have physical and chemical limits on where they can live - most common plants/animals in our community - how changes in physical and chemical conditions could change a biome - predictable relationships between where biomes occur | - pollen and spore data - forest coverage data - how our community has changed in the last 18,000 years - how climate change has affected plants/animals in our community | - how changes in climate have impacted organisms - organisms of today are different than those of the past - severe ecological conditions alter the course of life – extinction and recovery - similar body features have evolved |
| Big Idea | - how organisms have been preserved | - how ecosystems are formed and changed | - how a local ecosystem has changed | - how life has changed over time |
| Real Life and Chapter Challenge | - how and which organisms have been preserved | - what our biome is - how our biome has changed over time | - how our local ecosystem has changed - how plants/animals have changed | - how life has changed over time |
| Geosphere | - where/how fossils form | - how physical conditions change biomes | | |
| Hydrosphere | - water environments for fossil formation | | | |
| Atmosphere | | | | |
| Cryosphere | | | | |

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|------------------------|---|--|---|----------------------------------|
| Biosphere | - how organisms are preserved - which parts of organisms are preserved | - biomes - how biomes change - which plants/animals live in each biome | - how plants/animals have changed over time | - how life has changed over time |
| State Standard | 4.1.c | | | |
| Jeffco Standard | 4.1.c | | | |
| CSAP Framework | 4.1.3.g | | 4.1.3.g | 4.1.3.g |
| Jeffco PE | | | | |
