**Unit 1: Learning Goals for Energy in the Biosphere 1**

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| **Big Picture**: Students should understand how position of the Earth, climate, and factors such as latitude, elevation, or geography affect the biotic and abiotic factors in a given area. |
| **Content Goals** | **Skills Goals** |
| Students will know how to:* Identify biotic and abiotic factors in an ecosystem
* Explain how the position of the Earth (tilt of the axis) affects the seasons / climate
* Discuss the effect of: latitude, elevation, proximity to water, topography, humidity, and wind on climate
* Determine most likely biome based on latitude and climate factors of an area
* Predict type of climate for given biome
* Identify common plants and animals in various biomes
* Describe interactions between abiotic or biotic and factors in an ecosystem or biome
* Identify parts of a microscope and describe their functions
* Describe characteristics of organisms in each kingdom
* Classify a variety of living organisms by kingdom
 | Students will be able to:* Support scientific explanation with a reliable source
* Properly cite the reliable source
* Write an APA bibliography for the source
* Make wet mounts of micro-organisms and use microscope properly to view them
* Make detailed sketches of organisms viewed under the microscope and label with appropriate scale
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| **Assessment**: How will mastery of content and skills be assessed?* Show understanding on quizzes and tests
* Write a well-organized paragraph with properly cited sources (biome poster, organism report)
* Write an APA – style bibliography (biome poster, organism report)
* Complete detailed sketches of micro-organisms
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| **Key Vocabulary:**AbioticBiotic LatitudeClimateElevationHumidityEcosystemCommunityPopulationOrganism | FloraFaunaBiomeTundraTemperate Rain ForestTropical Rain ForestTaigaGrasslandSavannahDesertChaparral  | ArchaebacteriaEubacteriaPlantAnimalProtistFungiCoarse focusFine focusStageObjective lensesDiaphragm |



“I lift, you grab … Was that concept just a little too complex, Hal?”