Biology B

**Learning Targets (in sequential order according to unit)**

**Key Concepts**:

1. Describe how energy is distributed throughout an ecosystem.

2. Given a habitat, describe ecological succession that leads to a climax community. (Ex. Lake or Forest)

3. Explain how nutrients cycle through the biosphere.

4. Describe how humans impact the environment both positively and negatively.

**Unit Title**: Ecology

\*\*\* See Unit organizer for visual of unit map

**HSCE’S Covered in Unit** “Highlighted” = priority expectations

*Matter & Energy*

B3.2B Describe energy transfer through an ecosystem, accounting for energy lost to the environment as heat.

B3.2C Draw the flow of energy through an ecosystem. Predict changes in the food web when one or more organisms are removed.

B3.3A Use a food web to identify and distinguish producers, consumers, and decomposers and explain the transfer of energy through trophic levels.

*Human Impact*

B3.4A Describe ecosystem

I’m not finished entering the specific HSCE’S covered. (B3.4B, 3.4d, 3.4e, B3.5A,B,C,f)

 **“Student friendly” Learning Targets**

***Matter and Energy***

**LT 1: (B3.1A)**

**1:1 I can describe how all organisms acquire energy directly and indirectly from sunlight.**

**LT 2: (B3.2B)**

**2:1 I can explain how energy moves through an ecosystem.**

**LT 3: (B3.2C)**

 **3:1 I can construct a food chain including 3-4 trophic levels.**

**3:2 I can predict changes in a food web when an organism is removed.**

**LT4: (B3.3A)**

**4:1 I can identify and describe the roles of producers, consumers, and decomposers in**

**An ecosystem.**

***Human Impact***

**LT 1: (B3.4A)**

 **1:1 I can summarize the steps involved in ecological succession.**

 **1:2 I can distinguish between primary and secondary succession.**

**LT 2: (B3.4B)**

**2:1 I can define biodiversity.**

**2:2 If provided data, I can predict which environment is most likely to survive a drastic environmental change.**

**LT 3: (B3.4d)**

 **3:1 I can describe the greenhouse effect and list probable causes.**

**LT4: (3.5A, B3.5B, B3.5f)**

 **4:1 Given a data table I can graph and interpret changes in population growth.**

**4:2 I can distinguish between density dependent and density independent factors and provide an example of each.**

 **4:3 I can define exponential growth and identify this type of growth on a graph.**

 **4:4 I can define logistic growth and identify this type of growth on a graph.**

**4:5 I can define carrying capacity and list factors that prevent populations from exceeding it.**

**LT5: (3.5C)**

 **5:1 I can define invasive species.**

**5:2 I can describe the characteristics of an invasive species that allow it to thrive in a new environment.**

**5:3 I can explain the impact native species have on the native species in a particular environment.**