



## A Balanced Web

Grade 8 Science

Name: \_\_\_\_\_

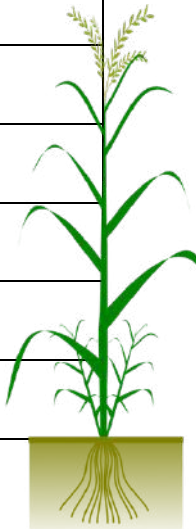
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### Activity 1:

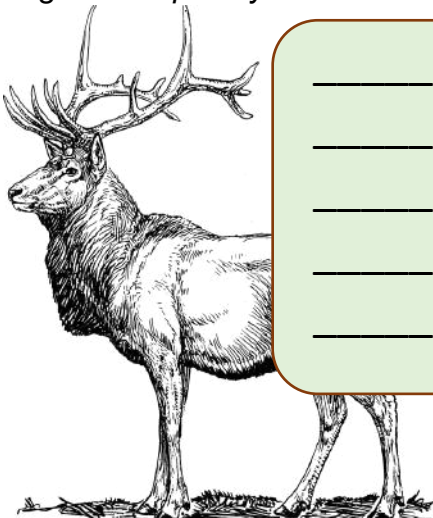
Categorize the highlighted factors below as biotic or abiotic factors of the local ecosystem.

Bethabara has a <u>stream</u> that runs through the area.	
The soil along the stream contains large deposits of <u>clay</u> .	
Grain crops like <u>wheat</u> do not grow well in clay soil.	
This environment received almost <u>no rain</u> this Summer.	
Vegetable crops like <u>pumpkins</u> require a lot of water.	
The native grass, <u>switchgrass</u> grows well in drought seasons.	
Wild game like <u>Deer</u> often make bedding in switchgrass.	



You can see how all of these biotic and abiotic factors work together to form a very specific community within this ecosystem.

Based on the factors listed above, what is a judgement you could make about sources of food for the human population within this ecosystem? Think about sources like grain, vegetables, and wild game. *Explain your reasoning.*



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### Activity 2:

Read the descriptions below of how some of the local populations interacted and categorize them according to the relationships in the word bank.

#### Word Bank:

Coexistence and Cooperation	Competition	Parasitism	Mutualism
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Native peoples would often plant beans and corn together because the beans added nutrients to the soil. And corn stalks gave beans a structure to climb and reach more light.

*The relationship of beans and corn is:*

Wolves were known to kill deer and cattle in the area, making it harder for humans to have access to meat.

*The relationship of wolves and humans is:*

The Carolina parakeet relied heavily on seeds and buds from weeds in the forest as their food source. Whereas passenger pigeons also relied on the forest for food but preferred larger seeds and nuts from trees.

*The relationship of pigeons and parakeets is:*

Emerald ash borers are beetles that lay their eggs in the bark of an ash tree, gaining shelter from the tree. The holes in the tree can introduce disease and bacteria, often killing the tree.

*The relationship of beetles and trees is:*





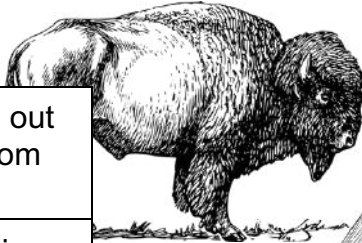
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### Activity 3:

The ecosystem that the Moravians moved into in North Carolina was home to many wildlife populations like elk, bison, passenger pigeons, wolves, and the Carolina parakeet. All of these populations are now either extinct or endangered in North Carolina because of important changing factors of their ecosystem.

*Read the descriptions below and draw a line connecting the organism to the proper factor:*

The local bison population died out primarily due to overhunting from humans.
The passenger pigeon population grew too big and led to crowding and over-competition for food.
A wildflower called "Barbara's Buttons" only grew in deep, flooding riverbanks. Over time, the local streams filled with sediment while humans took actions to reduce flooding. This led to the extinction of this population within North Carolina.
The Carolina parakeets faced destruction of their habitat as humans and pigeons destroyed forests, until there wasn't enough habitat space to support the crowded population.
Many local salamander species are endangered due to a disease introduced by Chinese newts brought in as pets.



**Density – Dependent Factors**

**Density – Independent Factors**

