Name: _____ Pd_____ Date_____

!HABITAT HAVOC!

Objective: demonstrate how limiting factors affect specific habitats by creating a before and after model of a chosen habitat that is then affected by a chosen limiting factor.

Materials:
* Pencil
* Poster Paper
* Colored Pencils or Crayons
* At least one person's "Eco-bulary"

DIRECTIONS:

A. With your group, make a chart that looks like the example below on your poster paper. Please be sure to only include the lines and numbers for right now. I know the numbers are a little bit scattered, but please write the numbers in the boxes exactly how you see them.

1. *First Habitat Model (BEFORE)*	3. *Limiting Factor* Time span: *(how long does the limiting factor take to affect the habitat?)*	4. *Resulting Habitat Model (AFTER)*
2. *Biotic and Abiotic Factors* BF | AF	6. *Changes that occurred and WHY they occurred.*	5. *Biotic and Abiotic Factors* BF | AF

B. Choose one of the six major biomes we discussed. Next, you should think of a habitat within that biome to focus on for this project (Ex. 1: Biome – deciduous forest // Habitat – bird's nest in tree tops // Ex. 2: Biome – desert // Habitat – a group of lizards dwelling near a group of rocks and cacti.)

C. Work together to create a detailed drawing of the habitat you are imagining. You will draw this in the box labeled with the #1.

D. Make a "T" chart in the box labeled #2. On one side, list the biotic factors (BF) in your habitat, and on the other side, list the abiotic factors (AF) in your habitat.

(Go on to STEP E)

E. Choose a limiting factor from the list below (or you can come up with your own). Record the limiting factor in the box labeled #3. Also be sure to include the time span (or how long it takes for the limiting factor to affect the habitat).

Possible Limiting Factors:
* Food: Pesticides/herbicides kill food source, competing organism are introduced, etc.
* Water: Pesticides/herbicides, water source drained or siphoned off for other purpose, etc.
* Space: new construction, non-native plant introduced, etc.
* Weather conditions: drought, hurricane, heat wave, late/early freeze, etc.

F. Create another detailed drawing to show the changes that occurred in your habitat as a result of the limiting factor you chose in Step E.

G. Make a "T" chart in the box labeled #5. On one side, list the biotic factors (BF) in your resulting habitat, and on the other side, list the abiotic factors (AF) in your resulting habitat. Remember, your resulting habitat is your habitat AFTER the limiting factor has affected it.

H. In box #6, list the changes that occurred to your habitat model and explain WHY each change occurred.

CHECKING FOR UNDERSTANDING :

1. Think of an animal or plant that has a habitat close to your home.
   * The animal or plant that I am thinking of is a/an: _____

2. Write a brief description of that plant or animal's habitat (how does it obtain food, shelter, and other things it might need to live, grow, and reproduce?):

3. In the left hand column, list three limiting factors that could affect the organism you have chosen. In the middle column, describe how these factors might affect the organism's habitat. Finally, in the right hand column extend your thinking by describing how the ecosystem you share with this organism might be affected by the limiting factors you listed.

Limiting Factors within My Habitat	How These Factors Affect My Habitat	EXTEND: How This Would Affect the Ecosystem We Share

Habitats - Ecosystems - Biomes

A **habita**t is the environment in which a plant or animal naturally lives and grows. In its own habitat, the living thing can find food, water, shelter, and raise its young. A place where plants and animals live

An **ecosystem** is a community of plants and creatures, including the ways that they relate to each other and their environment.

A **biome** is a large geographic area with common climactic conditions and shared ecology as in a tropical rainforest, grassland, or desert.

For example:

A baby zebra's

- **habitat** is where the baby zebra and its family find food, water and shelter.
- **ecosyste**m is the area that the zebra shares with other members of its ecosystem community such as elephants, antelope, and lions.
- **biome** is the warm, dry savannah grassland of Africa where the zebra lives.

A Boston squirrel's

- **habitat** are the particular trees and neighborhood where the squirrel finds food, water and shelter.
- **ecosystem** is the urban (city) area that the squirrel shares with pigeons, rats, crows, cats, dogs and humans.
- **biome** is New England, a large geographic area with shared climate patterns.