

Eco Data	Grade 7/8
Handout	

Section 1:

Name of Role _____

My role is (circle all that apply)

Biotic

Abiotic

Producer Consumer Decomposer

Section 2:

1. Describe two (2) independent relationships that you observed in the classroom ecosystem activity.

2. Describe two (2) dependent relationships that you observed in the classroom ecosystem activity.

3. Describe the interactions between the dependent relationships described above using an **if/then/else** statement.

IF

THEN

ELSE

4. Identify the following relationships as independent or dependent:

A pine beetle lays eggs under tree bark AND **A mushroom decomposes a dead tree**

Is this relationship independent or dependent? _____

A bat eats mosquitoes AND **A moose drinks water from a stream**

Is this relationship independent or dependent? _____

Grass needs sunlight to grow AND **Tall grass provides camouflage for mice**

Is this relationship independent or dependent? _____

5. Describe the following events using IF/THEN conditional statements

Frogs need water to lay their eggs.

IF

THEN

Flying squirrels nest in trees.

IF

THEN

6. Describe the following dependent events using IF/THEN/ELSE statements

Frogs need water to lay their eggs.

IF

THEN

ELSE

Flying squirrels nest in trees.

IF

THEN

ELSE

ANSWER KEY:

4. dependent (pine beetles laying eggs under the bark of pine trees and kill the trees, which mushrooms can then decompose), **independent** (a bat's diet of mosquitoes does not affect a moose's ability to drink from a stream, and vice-versa), **dependent** (if grass does not have enough sunlight to grow, it cannot provide camouflage to the mouse)

*you might choose to do the pine beetle example with the class to illustrate the activity.

5.

IF there is water available
THEN frogs can lay their eggs

IF there are trees
THEN flying squirrels can nest

6.

IF there is water available
THEN frogs can lay their eggs
ELSE frogs do not have a safe place to lay their eggs

IF there are trees
THEN flying squirrels can nest
ELSE flying squirrels cannot nest (and are less safe from predators)