Predator – Prey Tag

Introduction: The population of a species in an area is dependant upon the limiting factors of the ecosystem. One such factor is the population or availability of food. The relationship of predator populations and prey populations is very cyclical. This can be completed in one 80 minute class period, with some homework to complete the graph.

This can be done prior to or after playing *WolfQuest*.

Objectives:

At the end of this activity, the student will:

1. Understand that prey population will change and thus affect the predators population and visa versa.
2. Create a graph modeling the predator-prey population cycle.

Procedure:

This is an active activity that requires some room to run. It can be done outside or in a gymnasium.

1. Create a habitat for the interactions to occur. (Size of a basketball court works well.)
2. Line all students up at one end of the habitat. These kids will be the prey (elk) for year 1.
3. Chose 1 or 2 students to be the predators (wolves) for year 1. They should stand in the middle of the habitat.
4. The class will need 1 data recorder. (Teacher could do this.) Population of elk and wolves should be recorded at the beginning of each round. (year)
5. This activity is a version of freeze tag. The teacher blows a whistle and the elk try to run from one end to the other without being tagged (eaten) by a wolf.
6. Any elk tagged must immediately freeze so that any other wolves do not eat them.
7. Once the elk make it to the other side that concludes the year. These are the surviving elk. Any tagged (eaten) elk now become wolves. A wolf must tag (eat) a minimum of 1 elk to survive. If there is a wolf that starves (does not tag any elk) they must stand off to the side for 1 year and then return as elk.

Vocabulary:
Predator
Prey
Limiting Factor
Habitat

Materials:
• Cones to mark of field or boundaries.

Procedure (continued):

8. It is very important that time is taken before the start of the next round (year) to verify a correct population of wolves and elk.
9. Example Data Table

Year	# of Wolves	# of Elk
1	2	29
2		
3		

10. The teacher should decide how many rounds/years to go, but you definitely want the students to experience the up and down populations at least twice.
9. Upon returning to the classroom students should create a double line graph for the data collected.

Extensions:

Assign students to reflect on the fact that an ecosystem is an open system with many more factors that affect the populations of organisms. An ecosystem will have animals migrating in/out, there will be more predators/prey species, sickness/diseases, hunting, weather/climate, etc.