**Elk Herd Management Activity**

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**Objective:**

Students will take on the role of wildlife managers as they oversee a population of elk. They will make decisions for their herd, manage numbers, and keep track of a budget.

**Vocabulary:**

Population, Carrying Capacity, Biotic Potential, Exponential Growth, J-Shaped Curve, S-Curve, Limiting Factors, Biotic Factors, Abiotic Factors, Population Density, Density Dependent Factors, Density Independent Factors, Immigration, Emmigration

**Materials:**

\*Graph paper or computer with Microsoft Excel

\*Calculator

\*Student made cards with seasons (Spring, Summer, Fall, Winter) 3 of each on one side and limiting factors (hunting, starvation, poaching, disease etc…) or gains (births, immigration, etc…) on the other side.

\*Predator Cards (Wolves) 3

**Rules/Guidelines:**

\*Start with 100 elk

\*Go over 200 elk--your fired

\*Go under 10 elk—your fired

\*Budget = $500 per year paid each spring

\*Expenses=

 Feeding (optional)-- $10 per elk/year

\*Income=

 Hunting-- $20 per elk taken by hunters

\*Wolves will be released into the decks at the discretion of the students

\*Winner of the game is the manager with an elk population at or closest to 100. In the event of a tie, the winner is determined by the manager with the highest amount of money in their budget.

**Conclusions:**

\*Students determine the actual Carrying Capacity by extrapolation

\*Student look for trends in the graph (5 successive up or down points) and try to explain these trends.

\*Students reflect on what they would have done different in their management style.