**Case Study:Population Growth of an Introduced Species.**

Read the case study provided and answer the questions that follow.

1. What species was introduced to the island of Newfoundland in 1898 and in 1904?

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1. Where did these species originate from? Where on the island were they released?

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1. How many moose in total were released on the island to help grow the population?

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1. What was the moose population on the island in 2008?

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1. In what year did the first official moose hunting season occur in Newfoundland?

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1. How many animals are currently harvested in this province each year?

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1. What was the moose population in Gros Morne National Park in 2008?

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1. Explain what happens to a species when they are introduced to a suitable environment.

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1. Describe some of the environmental damage moose have caused to trees within the park and on the island.

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1. How much food does the average moose eat in one day?

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1. What affect are moose having on other species within Gros Morne park ?

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1. Describe one option that was discussed to control the overpopulation of moose within the park? Why does Parks Canada not want to use this option?

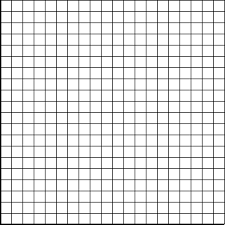
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1. If the population of moose continues to rise, what kinds of problems can we for see occurring?

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1. Using the information in the table provided, construct a line graph representing the population growth for moose in Newfoundland. Label Time on the horizontal axis and number of moose on the vertical axis.

|  |  |
| --- | --- |
| **Year** | **Moose #’s** |
| 1905 | 6 |
| 1915 | 1000 |
| 1925 | 2100 |
| 1935 | 4000 |
| 1945 | 10000 |
| 1955 | 22000 |
| 1965 | 50000 |
| 1975 | 75000 |
| 1985 | 90000 |
| 1995 | 106000 |
| 2005 | 12000 |



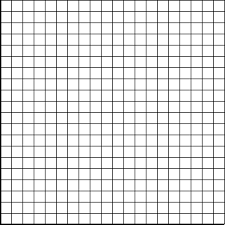
1. Using the graph constructed in number 14 extrapolate the graph to predict the population of moose in 2015 and 2025.

2015\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2025\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Using the information in the table provided, construct a line graph representing the population growth for moose in Gros morne Park. Label time on the horizontal axis and Number of moose on the vertical axis.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Year | 1971 | 1974 | 1976 | 1977 | 1991 | 1995 | 1998 |
| Estimated population | 271 | 1016 | 600 | 812 | 2700 | 7730 | 7753 |



1. Using the graph from number 16, extrapolate your graph to predict the number of, moose currently in the park (2016).

2016\_\_\_\_\_\_\_\_\_

1. What are some limiting factors that could influence the moose population in the next 20 years?

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Imagine you are a Parks Canada biologist and have worked at Gros Morne Park for the past 10 years. During this time, you have seen an increase in the moose population as well as in the numbers of moose/ vehicle accidents in the park. You are concerned about the impact of moose on the wildlife habitat. You would like to find ways to control the moose population. List 2 options you would consider.

Option 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Option 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Imagine you are a member of the Gros Morne Cooperating Association (Tourism). Each year thousands of people come to the park to view the scenery and try to get pictures of moose. It is common to see cars stopped along the road with in the park as people try to get a better look at these large ungulates. You do not support a reduction in numbers because you fear it would give the park a bad name and potentially reduce tourism revenues? List and explain 2 options to consider.

Option1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Option 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_