**ARCTIC ECOSYSTEM LABS**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Permafrost Activity***

1. What will happen to your structure after it is placed on melting permafrost? Write a hypothesis (an educated guess).

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2. Explain your hypothesis. Why do you think this will happen?

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3. After three days describe what happened. Was your hypothesis right?

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***Caribou Carrying Capacity***

1. An average caribou weighs 189 kg and eats 2% of its body weight every day. Calculate how much (in kg) a caribou eats every day, every month and every year.

Every day: 189 x 0.02 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Every month: 189 x 0.02 x 30 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Every year: 189 x 0.02 x 365 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. If an average herd has 50 caribou, how much does one herd eat in a day?

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3. Cows also eat about 2% of their body weight every day. Do you think a cow needs more or less space to get enough food? Write down your hypothesis, an educated guess.

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4. Explain your hypothesis. Why do you think this is true?

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5. Were you right? Which animal needs more space?

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6. Write a conclusion that explains how sensitive the tundra is as a habitat for animals like caribou.

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***Blubber, Feathers and Fur***

1. Which do you think will protect animals best from the cold: blubber, feathers, or fur?

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2. Explain your hypothesis. Why do you think this will happen?

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3. Collect data below:

|  |  |  |  |
| --- | --- | --- | --- |
| Covering Type | Temp. Before | Temp. After | Difference |
| Fur |  |  |  |
| Feather |  |  |  |
| Blubber |  |  |  |

3. Describe what happened. Was your hypothesis right?

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4. Write a conclusion that explains what this means for tundra animals.

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