**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_ Date: \_\_\_\_\_\_\_\_**

***Sunny Meadows Investigation***

***Directions for the Investigation***

1. Go to the following website: <http://puzzling.caret.cam.ac.uk/pregame.php?game=6>
2. Select the age group you belong to: Ages 11-14 or Ages 15-18
3. Click “Play Game”.
4. Before playing the game, select “Biomass” in “Choose View” and “4x” in “Game Speed.”
5. Now you are ready to play the game, but first look at the investigation questions below.

***Observations during the Investigation***

You have two questions to investigate in the Sunny Meadows investigation.

* How can you have the largest fox population at the end of 50 years?
* How can you have the largest total biomass at the end of 50 years?

Use the “+” and “-“ keys to set initial biomass for grass, rabbits, and foxes, then click “Start” and watch what happens to the populations until the game stops after 50 years. Click “Reset” to try again with different starting populations. Use the table below to record your starting and final biomass for each trial. (Do as many trials as you have time for up to 10 trials.)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Trial*** | ***Start*** | | | ***After 50 Years*** | | |
| Grass | Rabbits | Foxes | Grass | Rabbits | Foxes |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |

Write down results for your BEST attempt at answering each question.

**Question #1: Stable Fox Population Question #2: Most Total Biomass**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Start** | **50 Years** |  |  | **Start** | **50 Years** |
| **Fox** |  |  |  | **Fox** |  |  |
| **Rabbit** |  |  |  | **Rabbit** |  |  |
| **Plants** |  |  |  | **Plants** |  |  |
|  |  |  |  |  | **TOTAL:** |  |