**Trends in Population Dynamics of Species**

**Purpose:**  To determine if fruit flies and rabbits show similar trends in population growth.

1. Using the data provided in the tables, make a graph that shows the growth rate of a fruit fly population. Be sure to include all of the things needed for it to be a “good graph.”
2. Using the data provided in the tables, make a second graph that shows the growth rate of a rabbit population. Be sure to include all of the things needed for it to be a “good graph.”
3. What type of growth pattern is exhibited by the fruit fly population?
4. Is the growth pattern the same for the fruit flies and the rabbits? Explain.
5. Does either graph indicate that there is a carrying capacity for the population?   
     
     
   1. If so, **when** does the population reach its carrying capacity?
   2. What is the maximum number of individuals that can be supported at that time?
6. Animals such as foxes and cats often prey on rabbits. Based on the growth curve of the rabbit population, what might happen if a group of predators move into the rabbits’ habitat during the **10th** generation and begin eating the rabbits?

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| **Fruit Fly Population Growth** | |
| **Days** | **# of Fruit Flies** |
| 5 | 10 |
| 10 | 50 |
| 15 | 100 |
| 20 | 200 |
| 25 | 300 |
| 30 | 310 |
| 35 | 320 |
| 40 | 320 |

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| **Rabbit Population Growth** | |
| **Generation** | **# of Rabbits** |
| 1 | 100 |
| 2 | 105 |
| 25 | 1000 |
| 37 | 1600 |
| 55 | 2400 |
| 72 | 3350 |
| 86 | 8000 |
| 100 | 13,150 |

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