**Biology Virtual Lab Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Paramecium Population Dynamics Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block \_\_\_\_**

**Instructions:**

1. Go to [bit.ly/1qpo7TT](http://bit.ly/1qpo7TT).

2. Once you have clicked the hyperlink and the web page displays, you should notice that this lab has instructions on the left hand side to guide you through the laboratory procedure.

3. Collect and record data by following the procedure.

4. Answer the analysis questions thoroughly.

Data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | P. aureliagrown alone,cells/mL | P. caudatum grownalone, cells/ml ‑ | P. aurelia grown in mixed culture, cells/ mL | P caudatum grown inmixed culture,cells/ml‑ |
| Day 0 |  |  |  |  |
| Day 2 |  |  |  |  |
| Day 4 |  |  |  |  |
| Day 6 |  |  |  |  |
| Day 8 |  |  |  |  |
| Day 10 |  |  |  |  |
| Day 12 |  |  |  |  |
| Day 14 |  |  |  |  |
| Day 16 |  |  |  |  |

Graph your data on the graph on the next page. Use a separate line for each condition.



**Analysis Questions**

1. On what day did the *Paramecium* *caudatum* population reach the carrying capacity (maximum) of the environment when it was grown alone? How do you know?

2. On what day did the *Paramecium aurelia* population reach the carrying capacity of the environment? How do you know?

3. Explain the differences in the population growth patterns of the two Paramecium species. What does this tell you about how *Paramecium aurelia* uses available resources?

4. Describe what happened when the Paramecium populations were mixed in the same test tube.

5. Explain how this experiment demonstrates that no two species can occupy the same niche. What type of relationship did the two paramecium species have?