Name:_____ Period: _____ Date:_____

Asexual Reproduction Lab

Purpose: Why do most multicellular organisms perform sexual reproduction?

Procedure:

1) Retrieve bags of colored "paramecium" for your group.
2) Separate the circles into four colors: **purple, pink, white, and brown.** Each circle represents one *Paramecium* (a unicellular organism). The different colors represent different types of *Paramecia* with different genes.
3) Count 3 of each color and place the circles on your desk. The desk will represent the pond the *Paramecia* live in. The twelve circles will be the original population (Generation 0). Record the number of each color.
4) Follow the population of *Paramecia* through five generations by reading the Events. Be sure to record the number of each color after each event.

Perform the Experiment to Collect Data:

	Event	# Purple	# Pink	# White	# Brown
0	Original population. Record what you have on your desk when you start.				
1	Each paramecium reproduces once except the white paramecium because a chemical in the pond water kills all of them.				
	A disease strikes, killing all pink *Paramecia*				
2	Each surviving *Paramecium* reproduces once.				
	A predator strikes, killing all brown and ½ purple *Paramecia*				
3	Each paramecium reproduces once.				
	There is not enough food so ¾ of the remaining *Paramecia* die.				
4	Each Paramecium reproduces once.				

Analyze the Data:

1) How many offspring did purple have at the end?_____
2) How many offspring did pink have at the end? _____
3) How many offspring did white have at the end? _____
4) How many offspring did brown have at the end? _____

Draw Conclusions:

1) What type of *Paramecium* had the best "genes"? _____
How do you know?

2) If something happens to kill off a specific type of organism (ex. all red *Paramecia)*, will that type of organism ever appear again? _____
Why or why not?

3) Based on your results of this lab, why do you think most multicellular organisms perform sexual reproduction?

4) You just learned why asexual reproduction is bad for organisms, but many unicellular organisms like bacteria perform binary fission. Why?

5) What would happen if humans reproduced asexually? Explain what humans would look like and think about what would happen to society. (Hint: Would all of the jobs we need in society be taken care of? Would humans survive if a deadly bacterium infected people?)

Name:_____ Period: _____ Date:_____

Name:_____ Period: _____ Date:_____

Name:_____ Period: _____ Date:_____

Analyze the Data:

5) How many offspring did purple have at the end?

_____

6) How many offspring did pink have at the end?

_____

7) How many offspring did white have at the end?

_____

8) How many offspring did brown have at the end?

_____

Draw Conclusions:

1) What type of *Paramecium* had the best "genes"? _____ How do you know?

2) If something happens to kill off a specific type of organism (ex. all red *Paramecia),* will that type of organism ever appear again? _____ Why or why not?

3) Based on your results of this lab, why do you think most multicellular organisms perform sexual reproduction?

4) You just learned why asexual reproduction is bad for organisms, but many unicellular organisms like bacteria perform binary fission. Why is this?

5) What would happen if humans reproduced asexually? Explain what humans would look like and think about what would happen to society. (Hint: Would all of the jobs we need in society be taken care of? Would humans survive if a deadly bacterium infected people?)