Name: $\qquad$
Date: $\qquad$
Class:

## Group Members:

## ROUND 1: COMMON POND

- You must supply food for your family.
- You share a fishing hole along with three other families.
- This fishing hole can only hold a certain amount of fish.
- You do not know that number at this time. You will do 4 rounds of fishing.
- After each round of fishing, you will trade who "fishes" first so that each person has a chance to go first.


## Please follow these instructions.

1. The pond is the cup, the fish are the $M \& M s$, and the straw is the pole. You will fish by sucking the straw until you feel you have a fish. You then pull the straw out of the pond at that time and remove your fish. YOU MAY NOT LOOK IN THE POND.
2. You have 30 seconds to fish. You may catch as many fish as you want. You have to catch at least $\mathbf{2}$ fish for your family to survive.
3. After your 30 seconds, allow each member of the group to record the number of fish you caught.
4. The next person fishes. After 30 seconds, record the number of fish caught.
5. At the end of the round (all 4 people have fished or pond is out of fish) return pond to teacher to allow fish to reproduce.

| ROUND: | \# of fish at <br> beginning of <br> round | \# of fish <br> taken by <br> fisher 1 | \# of fish <br> taken by <br> fisher 2 | \# of fish <br> taken by <br> fisher 3 | \# of fish <br> taken by <br> fisher 4 | Total fish <br> left at the <br> end of the <br> round |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| TOTAL |  |  |  |  |  |  |

## ROUND 2: COMMON POND AND PRIVATE POND

- In this round you will have two ponds, one common and one private. The rules for the common pond are the same as in the last round.
- This time you will be allowed to talk and strategize. You will also be able to look in the pond while you are fishing and while others are fishing.
- The common pond can only hold 16 fish.
- The private pond can only hold 4 fish.
- You must remove at least one fish from each pond each round.
- You may remove as many fish as you wish from each pond each round.
- After each round, return the common pond and the private pond to the teacher for "reproduction". Record your results for both the private and common pond.
- Record all group members' data for common pond only.


## COMMON POND:

| ROUND: | \# of fish at <br> the <br> beginning of <br> the round | \# of fish <br> taken by 1 st $^{\text {st }}$ <br> fisher | \# of fish <br> taken by 2 <br> nd <br> fisher | \# of fish <br> taken by $3^{\text {rd }}$ <br> fisher | \# of fish <br> taken by $4^{\text {th }}$ <br> fisher | \# of fish at <br> the end of <br> the round |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| TOTAL |  |  |  |  |  |  |
| ------------------------- |  |  |  |  |  |  |

## PRIVATE POND:

| ROUND: | \# of fish at the <br> beginning of round | \# of fish taken this <br> round | \# of fish at the end of <br> the round |
| :---: | :---: | :---: | :---: |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| TOTAL |  |  |  |

ANSWER EACH OF THE FOLLOWING QUESTIONS. You may work in groups to answer, but each student has to turn in his or her own answers. Some questions cannot be answered by the group.

## ANALYSIS:

1. What happened to the common resource in Part 1? Why?
2. Did you get different results for the common pond in Part 2? Why?
3. Explain how you fished and why in Part 1.
4. Explain how you fished and why in Part 2.
5. If you cooperated with other fishers, what was the result?
6. Did you fish differently in the common pond and in the private pond? Explain.
7. Why does common usage lead to exploitation (overuse)?
8. What would be the ideal way to manage the common pond?
9. If the "tragedy of the commons" is explained as the mindset "If I don't use it someone else will", would this describe your strategy in the first round?
10. What strategies help prevent "tragedy of the commons"?
11. If a new student had joined your group, how would it have changed your strategy?
12. Think of a situation in the world today that is "tragedy of the commons". What is that problem, how do you think it could be solved?

## CONCLUSION:

The "tragedy of the commons" is the situation in which individuals use a common resource for their own personal gain. Degradation of the common resources results, leading to a decrease in yield for both the group and the individual. The use of common resources is a tricky issue...who has rights to it? How are responsibilities shared? Write a concluding summary addressing these issues and potential solutions for maintaining "commons" sustainably.

