**Tragedy of the Commons Activity**

Materials:

Large (gallon or quart-sized), clear zip-lock bag filled with M&Ms or other small candies (Count and record number of candies ahead of time.)

Procedures:

Display the (pre-counted) bag of M&Ms where it’s clearly visible to all students.

**Explain the rules:**

* No talking; you may not consult with other people.
* “Claim” any number of M&Ms by writing the number and your initials on a scrap of paper.
* I will collect all the claims and you will receive the number of M&Ms you claimed IF the total claimed does not exceed the total number of M&Ms in the bag.
* Also, if the claims do NOT exceed the # in the bag, the following prizes will be awarded:
	+ $20 for the largest claim
	+ $15 for the 2nd largest claim
	+ $10 for the 3rd largest claim

**Debriefing Questions:**

1. What was your thinking in making your “claim”?
2. Why did the total claim exceed the total number of M&Ms? How did the rules of the game encourage this outcome?
3. Who owned the bag of M&Ms?
4. How could you establish ownership of M&Ms? By making a claim.
5. Suppose the M&Ms in the bag are fish in an ocean fishery. The decline of fisheries world-wide is a significant problem. Use the following questions to help students use their experience in the M&Ms game to understanding the tragedy of the commons in ocean fisheries.
6. Who owns the ocean fishery? How does a fisherman establish ownership (property right) to fish?
7. Suppose the fishermen know that the fish stock is declining and the fishery will collapse. How will they change their behavior?
8. What is the cost to each fisherman of conserving?
9. How could we change the rules of the game to provide incentives for conservation?

**Closure**

Display Visual 1. Discuss each situation noted there as an example of the tragedy of the commons. Each example involves a case where the thing in question is not individually owned. Stress the idea that when a re­source is not owned, nobody has a clear incentive to protect it.

Explain that the antidote to the tragedy of the commons is to provide clearly defined (know who owns it), enforceable (owned property pro­tected by law), and transferable (profits from the resource, or the re­source, itself, can be bought and sold) property rights. There are many ways to define property rights in circumstances in which property own­ership is not obvious. First, a government can assume ownership and thus restrict use—as in admission to national parks. Second, govern­ment can assume a monitoring role, as it does with air and water pollu­tion or fishing. Third, private ownership can be assigned. A private owner will profit from the resource and thus have an incentive to protect it.

Review the key points of the lesson. Ask:

What is the tragedy of the commons? (Resources owned in com­mon tend to be overused.)

How would a specification of ownership of the drinks in class have made a difference in who got what and how much? (If the teacher had owned the drinks, then the teacher might have moni­tored the students when they took drinks, ensuring everyone got some. If a student(s) had owned the drinks, the outcome might have been the same. Or student(s) might have sold drinks to other students. Either way, the quantity taken by each student would have been monitored.

Explain why the hallways in schools tend to be littered at the end of the school day. (No one seems to own the hallways. Students are tempted to treat them as long wastebaskets.) In discussing students’ responses, remind them that the analysis they have used here would also apply to water. Then move on to the assessment.

Assessment

Beach shorelines in Oregon are public property — in other words, they are owned in common. Periodically, beach clean-up days are organized and citizen groups are urged to volunteer. Why is that public service effort necessary? A nearby private lake owned by a group of fishermen has absolutely no trash floating in the water or littering the beach.

Suppose that following an earthquake that destroyed the water system of a large city, producers of bottled water contributed a convoy of trucks full of water to the citizens of the city. Predict what would happen, how people in the city would behave, if the water was a common resource. Predict what would happen and how people would behave if the water was given to a local fast-food restaurant to sell, under the condition that the owner donate 95% of the money to charity.