

Biscayne National Park Lesson Plan

Target Audience: All grade levels

The Commons Game

Subject: Sustainability

Duration: .75 hours

Desired Group Size: Divide the group into smaller groups of about fifteen each.

Location: This activity is very portable. It does not need to be conducted at the Park.

Florida Sunshine State Standards: SC.B.2.2, SC.H.3.2, SS.C.1.2, SS.D.2.2, SC.G.2.3, SS.D.1.2

Overview:

Even though individuals may benefit from the abuse of common resources such as land, air, water, timber, fish, etc., the community as a whole suffers from the environmental degradation. For example, in Biscayne National Park the limit on spiny lobsters is six per person per day. A dishonest individual may be able to catch 30 in a day, make a lot of profit and eat very well, but if enough people do this, the lobsters would be depleted and in a short time, there would be no lobsters left for anyone. The benefits to the individual were short term but the loss to the general public are felt throughout the rest of lobster season and maybe even longer. We can find examples like this throughout society including the consumption of clean water and the type of cars we drive which dirty the air around us to varying degrees.

When the global population was low, such problems didn't exist because resources could replenish themselves. With an increased population and the increased 'wants' of people living in this country, human restraint is necessary for the environment to recover.

Goal:

To show the detrimental effects of selfish use of the environment and to help participants understand the benefits of self-restraint.

Objective:

The students will be able to give a real world example where this scenario occurred or continues to occur.

Materials:

Tokens (i.e. poker chips or peanuts), container for tokens

Preparation:

Participants should form a circle. Put three tokens for each participant into the container and place it in the center of the circle. To help students practice their math skills have them figure



out how many tokens must be placed in the container.

Method:

Play the game as stated in the rules below. If at the end of round one, the commons is empty, state that the commons is empty and there can be no replacement. Also state that there are no winners since no one could possibly have eight tokens. If the commons has additional tokens in it for additional rounds, replace the tokens in equal amounts without discussion, except to let the participants know the total number of tokens in each round. When someone gets eight tokens, simply state that there is a winner or winners and continue the game until the commons container is empty. (NOTE: It is possible that the group will understand the principle and will have all winners within a few rounds. It is far more likely that the container will be empty in a short time.)

Play the game again with the same rules, but allow them to talk to one another prior to starting the next game (remember there is no talking once the game commences). Tell them that they must find a way for *everyone* to be a winner and agree upon their strategy. Play until all are winners or the commons is depleted.

Rules:

Carefully explain the following rules to the participants. Be sure to allow time for questions and answers because talking will not be permitted during the game.

1. The tokens in the center of the circle belong to all of you. They are valuable, because when you get eight of them, you are a winner.
2. The game is a series of rounds. A round is over when the commons container is empty, or when it is passed all the way around the circle and back to the leader -- whichever comes first.
3. Everyone must take one, two or three tokens per round -- the number taken is the decision of the individual.
4. At the end of each round, the leader will add to the commons container an amount equal to what is left. For example, if there are six tokens left at the end of the round six will be added to the container for a total of twelve tokens for the next round. The total number of tokens in the commons container may not be greater than the original number. For example, if you started the game with five participants then the original number of tokens equals fifteen.
5. Participants will not discuss the game once it begins.

Discussion:

Discuss how, in the long run, more can benefit if an individual restrains from taking too much. Draw a parallel between the tokens and fish in the ocean, sponges in the bay or trees in a forest. Point out how some who take more than their share deprive others. Explain how giving nature a chance to replenish itself would make everyone, including future generations,



winners.

Ask if communicating in the second game helped influence the outcome. Can we, as concerned citizens, influence others in real life situations simply by letting them know what is going on? Liken the communication prior to the games as a community meeting where individuals gather to discuss rules set forth for society.

Tips:

The game works best without any prior discussion except for the rules. Confusion may result at first, but the game will be more effective in the long run.

Extension:

Dr. Seuss' story The Lorax is a good follow-up to this activity for elementary grade levels.

Sunshine State Standards:

SC.B.2.2

Student recognizes the costs and risks to society and the environment posed by the use of nonrenewable energy.

SC.H.3.2

Student understands that through the use of science processes and knowledge, people can solve problems, make decisions, and form new ideas.

SS.C.1.2

Student knows possible consequences of the absence of government, rules, and laws

SS.D.2.2

Student knows that the government provides some of the goods and services that we use and that the government pays for the goods and services it provides through taxing and borrowing.

SC.G.2.3

Student understands consequences of using limited natural resources.

Student understands that humans are part of an ecosystem and their activities may deliberately or inadvertently alter the equilibrium in ecosystems.

SS.D.1.2

The student understands how scarcity requires individuals and institutions to make choices about how to use resources.

