

## WHAT IS A WEED? NATIVE PLANT SPECIES GAME LESSON DETAILS

### *Native Plant Species Game*

(20 minutes)

**Begin** by telling the students that they are now going to look at how noxious weeds invade a landscape and out-compete native plant populations. Have the students hypothesize what happens when non-native species of plants are introduced into a habitat. Students should determine that there will be competition for water and space leading to a decline in the native population and possible extinction depending on the invasive species' characteristics.

**Explain** to your students that one of the most serious threats to the natural communities of plants and animals today is the introduction of non-native plants and species by humans. When a certain non-native or exotic plant species is allowed to invade a natural native plant population, the results can be devastating for the natives. Often natural diseases or predators are not brought with the plants to their new homes, therefore stress on the plants is not as great and populations may grow faster and larger. This can lead to a decrease in native plant and animal diversity in a region as these uncontrolled species increase in number. The non-native often out-competes native in obtaining the essential requirements for growth.

This decrease in diversity affects many different food chains and may lead to a monoculture of plants and animals where once there was a variety. Loss of endemic or native species may mean loss of valuable genetic material, which could someday provide valuable medicines or foods. Loss of diversity makes our world a little less interesting and less beautiful. The following game will introduce students to the dilemma of the noxious invaders.

#### ***Before Play Begins***

Designate a playing area by placing cones at edges/corners of the playing field. (30' x 60' area works well for 20 students.) Scatter playing cards throughout the area (each different colored card represents a different need for a native plant to survive. (White = Space, Red = Nutrients, Blue = Water) Be sure to provide enough cards so each player may collect one card of each color during the first round in order to survive.

#### **Round One**

All players will be native to the specific area. Everyone will line up along the edges of the playing field at the start of each round. At the designated signal, players will enter the playing

field, collect one of the three different colored cards and return to the edge of the playing field. The players go into the playing field again and collect another card of a different color. Once again, they go to the sideline, returning a third time for the third colored card. After a player has collected all three colored cards, he or she moves to the sidelines to wait for the signal to end the round. All players should survive the first round.

#### **Round Two**

This round will be played the same as Round One, but will now include non-native species. Two players wearing colored signs represent a non-native species. The non-native species are more aggressive and will be allowed to collect two cards per trip into the playing field. The non-native will also be allowed to return to the playing field as often as they are able but must collect three different colors in order to survive. The native species will be considered a survivor if he or she collects three different colored cards as they had done in Round One. Give the signal to end Round 2. Identify the survivors. Evaluate by comparing population size and impact the non-native had on the natives.

#### **Round Three**

Native species that did not survive Round Two become non-native for this round. Give each new non-native a sign. Continue to play Round Three just like Round Two. At the end of Round Three, most, if not all, of the native population should not survive. Evaluate as in Round Two.

#### **Wrap Up**

After Round Three, discuss with your students what they observed as they were playing the game. As a group, have them begin to figure out how and why those students who played as the initial non-native species were not only able to survive, but to actually take over the entire playing field.