

Rationale

In order to understand the complex relationship between condors, poachers, and prey, students will engage in a role-play tag game.

Objectives

1. Students identify needs the needs and resources of the ecosystem that includes condors
2. Students understand the complexity involved with condor mortality and the poacher-condor relationship

Aligned Standards

NGSS: Communicating Information; Causation and Structure, Function and Stability, Change
 LS2.C: The hunter-prey relationship expressed in the game illustrates the complex relationship between poachers and condor's that allows some condors to reproduce while some die.

Time

One-day lesson
 Teaching time: one hour (approximately)

Vocabulary

prey
 ecosystem
 endangered
 lead poisoning
 carcass
 forage

Materials

Deer and infected deer id cards, stopwatch

Tech Integration

X-ray photo library

PROCEDURE – DAY 1**EXPLORE (15 minutes)**

In the classroom, the explain that historically, hunters shot with lead ammunition. The hunting community today is decreasing lead usage, but poachers still use lead ammunition. Explain that:

1. Condors eat large to medium mammal carcasses.
2. Deer carcasses and gut piles are seasonally available within their range.
3. These carcasses may be contaminated with lead from ammunition.

Split the class in to groups of 12. Each group will play their own game. Give roles for 6 deer (with id cards), 3 infected deer (with id cards), 1 condor, 1 poacher, and 1 timer.

PLAY (45 minutes)

Rules:

1. There are three infected deer that were poached with lead ammunition.
2. Any deer that is tagged is now a deer carcass and must put ID card face-down and sit down outside the area of play.
3. The condor must try to gather as many points without being infected.
4. If a condor becomes infected, (s)he loses and the round ends.

Game play:

1. Timer puts 30 seconds on clock and says, "Hunting season open!"
2. The condor sits out while the poacher chases the deer and tries to tag as many deer as possible.
3. After 30 seconds, the poacher and deer sit out.
4. The condor then has one minute to gather as many points as possible.
5. The condor can stop at any point, but the winner is the condor that collected the most carcasses by the end of class time.

Play as many rounds as class time allows.

DEER

DEER

DEER

DEER

DEER

DEER

**INFECTED
DEER**

**INFECTED
DEER**

Before you begin

Print enough copies of the deer/infected deer cards.

What to do

Explore

One of the major attributes of the condor species is that they are scavengers. This makes them vulnerable to ingesting contaminated food. Sometimes, contamination comes from lead-based ammunition used to shoot prey. Many times, this prey is left to decay, and the condor comes along to clean up the mess. Regardless of how long the lead is in the prey's system, it infects the carcass to some extent. It is a game of chance if a condor can survive without being contaminated itself. Historically, hunters shot with lead ammunition. The hunting community today is decreasing lead usage, but poachers still use lead ammunition.

This would be a good activity to do during PE since it involves running outdoors. After giving the class a brief background about lead contamination, explain that the goal this game is not to try to win, but to understand what condors face when foraging for food. Although it is a real problem in the wild, winning or losing is largely based on chance, not skill. This also means that condors cannot avoid this problem without intervention.

Play

In 2 groups of 12, each group will designate 6 healthy deer, 3 infected deer, 1 condor, 1 poacher, and 1 timer. Place tags around their necks to indicate what they are. (The status of the deer should be on the back, not the front.) Demonstrate how the game is to be played:

Rules:

1. There are three infected deer that were poached with lead ammunition.
2. Any deer that is tagged is now a deer carcass and must put down ID card face-down.
3. The condor must try to gather as many points without being infected.
4. If a condor becomes infected, (s)he loses and the round ends.

Game play:

1. Timer puts 30 seconds on clock and says, "Hunting season open!"
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