

Hawk vs. Lizard Tag

First Grade



Science: 2.c.

Objective:

To teach the students that hawks prey on lizards.

Method:

Students play a game similar to 'tag' that simulates a hawk hunting for lizards in nature.

Materials:

An outdoor area, preferably with two trees spaced about 100 feet apart.
Optional: stopwatch

Background Information:

There are many different species of hawks in the San Joaquin Valley and Sierra foothills. They are some of the dominant predators in this area. Primarily, they like to feed on small animals, including lizards, rabbits, squirrels, and anything else they can get their claws into.

The relationship between hawks and their lizard prey is complex. Hawks need to eat a certain amount in order to reproduce and have chicks. They need to always be on the hunt to sustain themselves and their young.

Lizards also have to be on the move, despite the fact that coming out of hiding makes them more vulnerable to the hawks. While they can hide in a safe place for a certain amount of time, such as under a tree, they are ectothermic animals. That means that they need to get a certain amount of sunlight, or they will not have enough warmth to move and feed themselves. They also need to run beyond their hiding spots to hunt for insects, their main food source.

As a result of these influences, hawks and lizards have a relationship based on the tension of survival. The hawk needs to catch the lizards to survive and feed its young. The lizard needs to hide from the hawk as much as possible, but it must venture out to hunt and warm itself.

Procedure:

1. Find a location for the game (after reading the directions below!).
 - a. *Ideally, the game will take place between two trees that are about 50 feet apart. You should find the two biggest, shadiest trees that you can on your school grounds. If that is not available, you may have your students run between any two prominent objects.*
2. Discuss hawks and lizards with your students:
 - a. If possible, show them photos of a red tailed hawk and a western fence lizard. These can be found online.
 - b. What they look like. *Hawks have big wings and hooked beaks. Lizards have scales,*

long tails, and claws.

- c. What they eat. *Hawks eat lizards and small animals. Lizards eat bugs.*
3. Take your class out to the site you have selected for the game.
4. Explain the rules of the game to your students.
 - a. Set some boundaries so that your class doesn't scatter everywhere.
 - b. One student will be the hawk.
 - c. The rest of the students are lizards.
 - d. The hawk is going to try to catch the lizards. Because they're tasty!
 - e. The hawk and lizards can run anywhere within the boundaries.
 - f. If a lizard is tagged, s/he is out and has to sit on the sideline.
 - g. There are two bases spaced about 50 feet apart. If a lizard is on a base, s/he is safe and cannot be tagged by the hawk. However, the lizard is only safe for 5 seconds. After that, the hawk can tag the lizard.
 - i. *Why is the lizard only safe for 5 seconds? It can't just sit on a tree all day! It has to get warmth from the sunlight and go catch food to stay alive.*
 - ii. *For bases, I recommend using two trees. In nature, trees shelter lizards from hawks.*
 - h. If the hawk gets too tired, then they can sit on the side, and a tagged lizard can be the next hawk.
 - i. Once all of the lizards have been tagged or all of the hawks have perished, the game is over.
5. Choose one student to be the hawk.
6. Begin the game!
7. After the game is over, discuss what the students learned about the hawks and lizards.
 - a. Sample questions: *Is it hard for the hawk to catch lizards? Is it hard for the lizards to stay hidden from the hawk?*