Popcorn Pesticides

Purpose: Students will understand the effect of pesticides on different levels of a food chain.

TEKS: 7.11C and 8.11C

Directions:

1. Color 1/8th of a large bag of popcorn with food coloring.
2. Scatter the plain and colored popcorn outside.
3. Divide your class up into the following groups:
    a. 60% will be grasshoppers. They each need a sandwich size baggie.
    b. 35% will be frogs.
    c. 5 % will be hawks
4. Release the grasshoppers into the area with popcorn first. They have 1 minute to collect as much popcorn as they can.
5. Next release the frogs. They need to capture as many baggies from the grasshoppers as they can. This represents them eating the grasshoppers. They only have 20 seconds to do this.
6. Finally release the hawks. They need to try to get as many frogs' bags as they can. They only get the last 5 seconds.
7. When the time is up, look at all of the bags. If a grasshopper has any colored popcorn in their bag they died. If a frog has 5 or more pieces of colored popcorn in their bag, then they died. Finally, if the hawk has any amount of colored popcorn, they live, but they are unable to reproduce because their shells will be too soft.
8. The colored popcorn represented pesticides. **Do not tell the students about it until the game is finished.**
9. You may wish to have the students graph and/or describe the results in their journal.