A Game of Selection

STUDENT ACTIVITY INSTRUCTIONS

Materials Needed:

- Timer/Stopwatch
- At least 15 small objects in at least three assorted colors (ex. Pipe cleaner segments, colored pieces of yarn, paper shapes, colored pasta, beans, popcorn, breakfast cereal, or anything else in assorted colors).
- Chart paper or ruler to make chart in notebook
- Crayons, markers or colored pencils
- Notebook/paper
- Pencil or pen

Preparation Instructions:

1. Find one large, open area (indoors or outdoors) for doing the activity.
2. Assemble at least 15 small, colored objects consisting of equal amounts of at least three colors. These will represent worms or bugs.
3. Make sure you have at least one color that matches the playing surface (ex. Gray for asphalt, green for grass, or brown/tan for carpet).
4. If you can, have someone else scatter the "worms or bugs" throughout the activity area. If you can't have someone else scatter them, scatter the worms or bugs yourself and then wait 10 minutes before doing the activity.

Introduction (Read before doing the activity)

What does it mean to be better suited to your environment? What advantage do Bullfrogs have because they are green and brown? What advantage do Great Horned Owls have to being brown, streaky and spotted? Camouflage is any coloration, body shape, or behavior that helps an animal blend in and hide. How does camouflage increase a prey species chance of survival? How does camouflage increase a predator's chance of survival? Camouflage is a trait that helps organisms survive in their environment.

Activity Instructions:

1. You are a hungry bird and your job is to gather as many “worms or bugs” as you can find. Pick a “starting line” in another room of the building or at least 30 ft away from where you scattered the “worms or bugs”.
2. Before you start, predict what color worm might have the best camouflage in the environment in which your worms were scattered.
3. When the time starts, you are going to go To the area where the worms are scattered and pick up the first one you see and return to your starting area.
4. For 30 seconds you are going to repeat this action and see how many different worms you can gather.
5. After the 30 seconds is up, it is time to evaluate. What color did you gather the most of? What color did you gather the least of? Make a graph or chart to display this information.
6. What if the worms were in a different environment or on a different surface? How might these results differ?
7. Select another playing surface you think would make this activity more difficult and do this activity again on the new surface to test your selection.

Conclusion

The items with the color closest to the color of the surface (or best camouflaged) remained because they have a trait that helped them survive in the environment. These items were harder to notice in their environment, so they got picked up less often. If you did this on a different surface, a different color would be left. The bugs or worms better camouflaged to their environment survived and are now able to pass on this color trait to their offspring. That is natural selection at work! Over many generations, it can cause major changes in living things.