

Protective Coloration (K-3)

Duration
30 minutes

Key Vocabulary
camouflage,
protective
coloration

Materials
Field notebooks
Pencils
50 each of blue,
yellow, red,
green, and
natural colored
toothpicks.

Objectives

- Students will:
 - understand the importance of camouflage for wildlife.
 - predict what colors are best for certain habitats and which are not.

Method

- Students will:
 - search in a designated area for 250 toothpicks.
 - count and record how many were found for each color.
 - compare the amount found vs. the amount hidden.

Background

Many animals have special coloration that enables them to be camouflaged in their habitat. Camouflage allows an animal to hide from predators, from its prey, or both. Camouflage is only an effective adaptation if the species' colors match the surroundings. For instance, predators would easily spot a red mouse hiding in a field. Likewise a coyote or cougar would not be successful hunters if their fur were blue or green.

Procedure *(this activity is usually done after the hike at one of the EE sites on the auto tour route.)*

- Spread the toothpicks in roughly a 40' x 40' area next to the stumps at the field site that is to be used that day *(Do not use the same site everyday as this will cause too much damage to the vegetation)*. This can be done before the students get off the bus at the field site or while they are listening to another facilitator. Make sure they are not watching whoever is hiding the toothpicks.
- Have the students find the "Protective Coloration" activity in their field notebooks.
- Explain that they will be doing an activity on camouflage and ask if anyone knows what the word means. Ask students why animals would need to be camouflaged.
- Inform the students that five different colors of toothpicks, 50 blue, 50 yellow, 50 red, 50 green and 50 natural, have been hidden around them.
- Tell the students they will need to try and find all 250 toothpicks.
- Ask them which colors they think will be the easiest to find and which will be the most difficult.
- Have them fill in the number hidden portion of the chart in their field notebooks
- Explain the following rules:
 - *No running.*
 - *Handle the toothpicks carefully because they are pointed.*
 - *No pushing or fighting for toothpicks. Those that due will have to sit down. This must be strictly enforced.*
 - *Moving slow and low to the ground (stooped over) will work best.*

- Have the students line up along the edge of the 40' x 40' area and show them the boundary, then let them *carefully* begin looking.
- Monitor how they are doing by asking who has found any blue ones or natural colored ones, etc.
- As the toothpicks get more difficult to locate, help the students locate ones that they have over looked.
- Allow the students 10 to 15 minutes to look and then have them return to where they were sitting.
- Have the students separate what they have found by color. Tell them they do not need to count them because the adults will do that.
- As the students get their toothpicks sorted, pick five adults to collect one color each from the students and count them.
- While the adults are counting and collecting discuss with the group which toothpicks were difficult to find and which were easy. Generally they will say the natural, yellow and green colored ones were most difficult to find.
- After the adults finish counting have the students get out their field notebooks.
- Begin with the first color listed in the notebook and ask a student to guess how many were found.
- After he or she guesses have the adult tell how many were actually found.
- Have the students write this total in the number "found box".
- Continue with this until all the "number found" boxes are filled.
- After the chart is completed have the students answer the questions below the chart and discuss their answers.
- When this activity is done with the morning group the facilitator needs to collect all the toothpicks the students found and put them back in the 40' x 40' area for the group that will show up after lunch. When the afternoon group is finished all the toothpicks from the students need to be collected. The afternoon facilitator(s) should make an effort to find any missed by the students, but all the toothpicks will never be located.
- *Remember to replace toothpicks that do not get found so that once again there are 50 of each color for the next time the activity is done. This can be done each morning when gathering other materials.*