

Counting Critters



Method

Students inventory wildlife and investigate their neighborhoods for “cause and effect” relationships affecting wildlife; develop and use Wildlife Observation Record sheets; and recommend actions to improve and/or maintain the quality of wildlife habitat in their community.

Background

Virginia is home to more than 10,000 species of wildlife which are found in every corner of the landscape: in backyards, schoolyards, and throughout communities. You don't need to travel to the Commonwealth's forests, mountains, rivers, or bay to see a variety of wildlife. They live right in your own backyard!

Since wild animals share our neighborhoods, we have a direct impact on their numbers (populations), the diversity of a particular ecosystem, and the general health of their habitats (homes). For the purpose of this activity remind students that “wildlife” also includes insects, spiders, reptiles, and all other forms of non-domesticated animals.

Careful management of such a wide spectrum of wildlife requires extensive surveys and inventories across the state. This activity introduces the concept of inventorying various types of wildlife found within a student's neighborhood, determining the effects that a student and others have on such wildlife, and comparing student observations with those of the Fish and Wildlife Information Service (FWIS), found on the Department of Game and Inland Fisheries web page: www.dgif.state.va.us. Click on wildlife information online. The FWIS is a database that uses a geographic information system (a digitized system) to store and retrieve information on wildlife and their related habitats. Schools may download a list of species that are known or likely to occur within a 3-mile radius of their property. The species list will note whether the species has been confirmed in the search area with a “yes” or “no” in the confirmed column. Therefore, students involved in the WildlifeMapping program can actually help supply data on specific locations of wildlife species and help to keep common species common.

Once students have completed their inventory, they may become motivated to enhance wildlife habitat on their school grounds. The WILD School Sites program at the Department of Game and Inland Fisheries can provide additional information on how to get started.

Procedure

With your students, brainstorm the types of wildlife and habitats you might see within your community. Post this preliminary list on the bulletin board or blackboard. For a one-week period, ask students to look for wildlife or evidence that wild animals exist in their communities. Students should also look for clues about how wildlife are affected by human actions. Ask each student to bring in at least one example to share with the class each day.

Grade Levels: 3 - 6

Science SOLs: 3.10, 4.8, 6.1

Materials Needed:

r Copies of Wildlife Observation Record (back side)

r FWIS on-line database

Objectives:

Students will be able to:

1. Conduct a wildlife inventory of their community;
2. Describe cause and effect relationships that help and hinder wildlife in their community; and
3. Recommend changes in their community that could benefit wildlife.

Vocabulary Words:

geographic information system
habitat

WildlifeMapping

Results can be written on the "Wildlife Observation Record" individually or in small groups.

Discuss what was found each day. Encourage students to explain their basis for identifying "cause and effect" relationships. Consider the following:

- u What were some of the most surprising observations you made?
- u How does this list compared to the preliminary list made at the beginning of the week?
- u Which species may be [more] affected by actions of people in the community.
- u What kinds of actions are people taking that directly affect wildlife?
- u Which actions harm, help, or have no effect on wildlife?

Have students compare their list of species with the list on the FWIS database. How many additional species were they able to confirm from their observations? Plan some action that will enhance wildlife habitat on the school grounds. [See resources for ideas.] Set aside time each week to check on the enhanced habitat site. Keep a record of the types of wildlife that visit the habitat throughout the year.

Assessment

Identify and describe three types of habitat in the community and list at least three species that may live in that habitat. List any actions that may impact those species in a positive or negative way.

WILDLIFE OBSERVATION RECORD	
Student name(s) _____	Date _____
Species _____	
Habitat / Location _____	
Impacts +/- _____	
Comments _____ _____	
Recommendations for action _____ _____ _____	



Bald Eagle Productivity in Virginia From 1980-1998

Year	Total Active Nests	Total Prod. Nests	Total Unprod. Nests	% Nests Prod.	Total Young Fledged	Fledglings per Prod. Nest	Fledglings per Active Nest
1980	35	23	12	66	35	1.52	1.00
1981	39	27	12	69	40	1.48	0.93
1982	45	28	17	62	41	1.52	0.93
1983	52	31	21	60	51	1.68	0.98
1984	60	34	26	57	58	1.68	0.97
1985	65	47	18	72	84	1.79	1.29
1986	66	42	23	65	83	1.93	1.26
1987	73	61	12	84	107	1.75	1.47
1988	81	65	16	80	118	1.82	1.46
1989	92	52	40	57	88	1.69	0.96
1990	99	75	24	76	142	1.89	1.43
1991	111	94	17	85	157	1.67	1.41
1992	131	82	49	63	140	1.71	1.07
1993	151	99	51	66	173	1.75	1.15
1994	144	96	48	68	158	1.65	1.10
1995	154	124	30	82	223	1.80	1.48
1996	180	135	65	75	243	1.80	1.35
1997	214	169	45	79	321	1.89	1.50
1998	229	184	45	81	314	1.70	1.38

u Using the data above, construct a bar graph that shows the number of nesting pairs for each year.

u How many total nests were active between 1980 and 1998?

u Between 1980 and 1998, what is the percentage increase in the number of birds fledged?