



School Program Description

Waterfowl Wet & Wild

Level: 5th-12th Grade

Saginaw Bay Visitor Center

Bay City State Recreation Area

PROGRAM DESCRIPTION:

Students will spend 1 hour indoors and 1-2 hours outdoors. Students will discover the rich variety of waterfowl which inhabit and stage in Michigan's wetlands. Students will be introduced to the waterfowl of Michigan through an indoor slide-talk presentation. The presentation will cover swans, geese, loons and ducks, identification, niche, habitat and special adaptations of these water-loving birds. Students will learn why Tobico Marsh and other remaining wetlands are important for migratory birds. Next, students will take a hike out to the marsh ponds and the Saginaw Bay to see the waterfowl congregating on the water. Binoculars and spotting scopes will be used to help with identification. Students will also take a close-up look at the waterfowl on a nearby pond through our hidden marsh camera, a remote wide-angle zoom camera whose monitor screen is accessible inside the museum.

PROGRAM GOALS:

Designed to stimulate an awareness and appreciation of the wide variety of waterfowl which depend upon Michigan's wetlands for breeding and staging.

PROGRAM OBJECTIVES:

1. Students will be able to distinguish between swans, geese and ducks
2. Students will be able to group ducks into three groups, based on their habitat and niche
3. Students will be able to define "field mark" and be able to give an example of one when shown a picture of a duck
4. Students will be able to list one endangered species waterfowl
5. Students will be able to define "staging area" and make inferences about the effects of its destruction on migratory waterfowl
6. Students will be able to give one reason why wetlands are important
7. Students will be able to give an example of one thing they could do to help out waterfowl

PRE-VISIT SUGGESTIONS:

1. Each student should be dressed for weather conditions, which are generally 10 degrees cooler near the Bay. Wind can be much harsher and a jacket or coat should be worn regardless of weather conditions at your school. Bring a box of trash bags with square bottoms to use as emergency rain ponchos. Shoes should be selected for outdoor explorations and boots worn when weather is snowy or muddy.
2. Discuss characteristics of the Bird Family.
3. List special adaptations of birds: beak shape, feet shape, coloration, length of legs etc.
4. Use black paper to cut out silhouettes of a duck, goose, swan, cardinal, robin, woodpecker, heron, eagle, owl, turkey, etc. and have the students identify them based on body shape.
5. Project WILD: Adaptation Artistry – students design and create imaginary birds, and write reports including description of the birds' adaptations. Oh Deer – students become "deer" and components of habitat in a highly involving physical activity.

POST-VISIT SUGGESTIONS:

1. Draw a class mural where each student draws his/her favorite duck in its correct habitat: wooded rivers and streams (tree ducks), shallow marshy waters (dabblers), deep water (divers).
2. Improve the nesting habitat for waterfowl in your area, build a wood duck box, goose nesting island or nesting cone and place it in a wetland for waterfowl to use. Ask us for a copy of the DNR instruction sheets.
3. Assign each student a duck species. Have them draw three color drawings of the male in breeding plumage, the male in eclipse plumage and the female.

4. Watch the video “Ducks Under Siege” by Ducks Unlimited, available through the Saginaw I.S.D.
5. Project Aquatic WILD: Migration Headache- students role play water birds traveling between nesting habitats and wintering grounds and are subject to ecological hazards along their way; Dragonfly Pond – students create a collage of human land-use activities around an image of a pond.
6. Project WILD: Migration Barriers – students draw murals showing deer migration routes and the consequences of development of a highway through the area; Who Pays for What? – students identify principal sources of wildlife-related funds; Can Do – students select a school environmental project, conduct research, make plans and follow procedures to accomplish the project.

COORDINATING WITH MICHIGAN SCIENCE Grade Level Content Expectations:

Science. Inquiry Process: S.IP.05.11, S.IP.05.12, S.IP.05.13, S.IP.05.14, S.IP.05.15, S.IP.05.16, S.IP.06.11, S.IP.06.12, S.IP.06.13, S.IP.06.14, S.IP.06.15, S.IP.06.15, S.IP.07.11, S.IP.07.12, S.IP.07.13, S.IP.07.14, S.IP.07.15, S.IP.07.16

Science. Inquiry Analysis & Communication: S.IA.05.11, S.IA.05.12, S.IA.05.13, S.IA.05.14, S.IA.05.15, S.IA.06.11, S.IA.06.12, S.IA.06.13, S.IA.06.14, S.IA.06.15, S.IA.07.11, S.IA.07.12, S.IA.07.13, S.IA.07.14, S.IA.07.15

Science. Reflection & Social Implications: S.RS.05.11, S.RS.05.12, S.RS.05.13, S.RS.05.15, S.RS.05.16, S.RS.05.17, S.RS.05.19, S.RS.06.11, S.RS.06.12, S.RS.06.13, S.RS.06.14, S.RS.06.15, S.RS.06.16, S.RS.06.17, S.RS.06.18, S.RS.06.19, S.RS.07.11, S.RS.07.12, S.RS.07.13, S.RS.07.14, S.RS.07.15, S.RS.07.16, S.RS.07.17, S.RS.07.18, S.RS.07.19

Life science Organization of Living Things: L.OL.04.16, L.OL.05.41, L.OL.05.42, L.OL.06.51, L.OL.06.52

Life Science Heredity: L.HE.05.11, L.HE.05.12, L.HE.07.21,

Earth Science Earth System: E.ES.05.61, E.ES.05.62, E.ES.07.41, E.ES.07.42

Life Science Evolution: L.EV.04.21, L.EV.04.22, L.EV.05.11, L.HE.05.12, L.HE.05.21

Earth Science Earth in Space & Time: E.ST.04.32

Life Science Ecosystem: L.EC.04.11, L.EC.04.21, L.EC.06.11, L.EC.06.22, L.EC.06.23, L.EC.06.31, L.EC.06.32, L.EC.06.41

COORDINATING WITH M.E.A.P. SOCIAL STUDIES CONTENT STANDARD BENCHMARKS:

Geographic Perspective

II.1—I.e.2

II.2—I.e.1, I.e.2, I.e.3, I.e.4

II.4—I.e.5

II.5—I.e.1