



Amphibians Pre-visit

Classroom Activities

Brief Synopsis

Students will create “Missing Amphibian” flyers with thorough description of an amphibian they have “adopted.” The amphibians will then be “hidden” in their correct habitat to be found by another group of students who will measure, weigh and “interview” the amphibian they found. Next, all students attend a “Missing Amphibians Meeting” in an attempt to reunite the original students with their lost amphibian.

Ages: Designed for 5th–8th grade

Time Considerations: 1 hour

Materials:

Set of amphibian pictures, dried rice or beans, small baggies with twist-ties, or Ziplocs, tape, brown lunch bags, rulers for measuring in centimeters or inches, scale for weighing in grams or ounces, wall space to hang 8.5x11 inch flyers, pencils, internet access (optional)

Vocabulary: Amphibian, Characteristics, Habitat, Identification

Outcomes:

1. Students will be able to list the characteristics of all amphibians.
2. Students will describe the life cycle of a toad using props.
3. Students will use sounds to re-create frog behavior.
4. Students will use careful observations to identify different species of local amphibians.
5. Students will understand how counting amphibians can be a good way to measure the health of our environment.

Minnesota Academic Standards:

Science: 4. IV. B. 1 & 4.V.B.1

Math: 4.V.B.1

Language Arts: 4.I.A.1, 4.I.B.1&2, 4.III.A.1&2, 5.I.A.1, 5.I.B.1, 5.III.A.1&2, 6.I.B.4, 6.III.A.1&3, 7.I.A.1, 7.I.B.1&5, 7.III.A.1

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Background:

Amphibians are a distinct type of animal, with physical characteristics that allow them to live their lives both in water and on land. Minnesota has 21 species of amphibians; 12 frogs, 2 toads, and 7 salamanders. During your trip to Eagle Bluff your students will be trying to find as many of these amphibians as they can and identify each of them.

Activity: Missing Amphibians

Learning to identify creatures by their characteristics can be tricky at first. To get your students familiar with Minnesota’s amphibians (salamanders can be included with information off the internet) they will, in pairs or small groups, adopt an amphibian and create a profile on a “Minnesota’s Most Wanted” flyer to be posted in the classroom to help them find their most wanted amphibian.

Procedures:

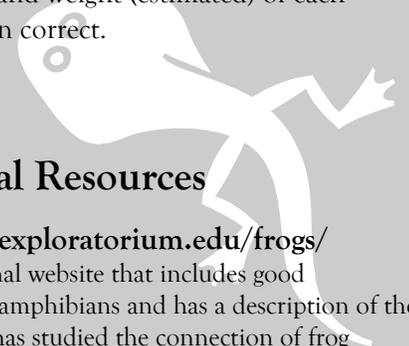
1. Have your students designate areas of the classroom as the three main habitat types in which Minnesota amphibians are found: Forest, Lakes and Streams, and Grasslands.
2. Go to the Minnesota Department of Natural Resources website and print off pictures of each amphibian
http://www.dnr.state.mn.us/reptiles_amphibians/index.html
or cut out their pictures from the poster or flyer sent to you from Eagle Bluff (available for current user schools only).
3. If you want your students to practice accurate measuring, make sure the pictures are the same size as the real amphibians (the line drawings in the flyer are accurate to size, but will need to be colored by you or your students). If you want your students to practice accurate weighing, attach each cut-out picture to a baggie with dried rice or beans of the correct weight. This could also be done by your students.
4. Place each completed frog in a brown lunch bag and distribute them to your students.
5. The students give their amphibian a name, examine it closely, and fill out a “Minnesota’s Most Wanted” poster, including a “police sketch” of the amphibian. Students may need to conduct some level of research in order to fill out all the necessary information. All needed information can be found on the back of the poster available on the MDNR website listed above.

6. The sketch is then posted on the classroom's "Minnesota's Most Wanted Amphibians" bulletin board.
7. After the posters have been completed and posted, the original picture/weight of the amphibian should be put back in its brown paper lunch bag and placed in the correct "habitat" designated around the room.
8. Then, allow the class time to view the posters to familiarize themselves with the wanted amphibians before students choose a lunch bag with a "Captured Amphibian" in it. Students should be directed to choose a bag from a habitat different from the one they started with, to ensure that no group has received their own amphibian. Allow enough time for students to "interview" their "captured amphibian." Students should note in which habitat the amphibian was found and to measure and weigh their mystery amphibian, etc.
9. When all the "interviews" have been completed, begin the "FBA Captured Suspects" meeting. In this meeting each group will use the poster they created on their missing amphibian to give a report. The other students will listen to the entire report, and if they think they have captured the amphibian being described, they will raise their hand and give evidence for why they believe they have the wanted amphibian. If there is more than one group that believes they have the wanted amphibian, let each group give evidence and have the group that created the "Wanted Poster" of the amphibian choose which recovery team has their missing amphibian. At this time the amphibian picture/weight can be pulled from the lunch bag to reveal it and find out if it is the correct one. Continue until all the missing amphibians have been identified.

Species	Inches	Centimeters	Ounces	Grams
Chorus Frog	1 1/8	3	0.2	6
Spring Peeper	1 1/4	3	0.3	9
Cricket Frog	1 5/16	3.5	0.4	11
Cope's Gray Treefrog	1 7/8	4.8	0.8	23
Gray Treefrog	2	5	0.9	26
Wood Frog	2 1/4	5.8	1.2	34
Mink Frog	2 1/2	6.5	1.5	43
Pickerel Frog	2 5/8	6.5	1.7	48
Great plains Toad	2 15/16	7	1.9	54
Leopard Frog	3	7.5	2.1	60
American Toad	3	7.5	2.1	60
Canadian Toad	3 1/8	8	2.4	68
Green Frog	3 1/4	8	2.6	74
Bullfrog	5	12.5	6.4	181

Teacher Tips

- If you only have access to one scale, make sure each group has enough time to use it without other students seeing which amphibian they have.
- Have students weigh out the appropriate rice or beans to fill the baggie for the amphibian they are creating their "Minnesota's Most Wanted" poster.
- When your class is completely done with the "FBA Captured Suspects" meeting hang up the flyers and set the weighted pictures of amphibians out on a table for students to match them up.
- If you want your class to learn about all 21 species of amphibians we have in Minnesota, you will need to go on-line for more information. The MDNR site listed in the procedures only describes five of the seven salamander species. The missing two species are Mudpuppies and the Eastern Newt.
- Use the table below left to help get the size (average) and weight (estimated) of each amphibian correct.



Additional Resources

<http://www.exploratorium.edu/frogs/>

An informational website that includes good descriptions of amphibians and has a description of the professor who has studied the connection of frog deformities and water quality, and the frog freezing phenomenon.

<http://cgee.hamline.edu/frogs/>

A Thousand Friends of Frogs is a program from the Center for Global Environmental Education at Hamline University. The goal is to connect children, parents, educators, and scientists to study and celebrate frogs and their habitats and includes many amphibian resources. Use this link to request the colored frogs and toads poster from the DNR.

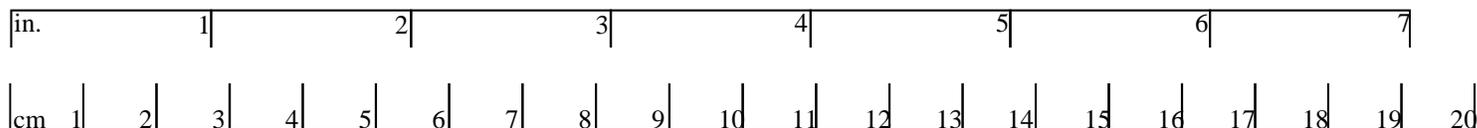
<http://www.e-tutor.com/demo/lessons/2/index.htm>

Students use on-line resources to determine the differences between frogs and toads.

www.herpnet.net/Minnesota-Herpetology/

List of all Minnesota reptile and amphibians species.

MINNESOTA'S MOST WANTED



You have been hired to investigate a suspected amphibian mobster, known to be responsible for thousands of invertebrate lives each year. The FBA (Federal Bureau of Amphibians) would like you to create a profile for this amphibian in order for an APB (All Points Bulletin) to be sent out for its capture. These infamous amphibians are needed all over the state to control insect populations and monitor water quality. The more accurate and complete your report, the faster a positive ID can be made to bring these hopping thugs to justice.

Investigators (your names): _____

Name of Wanted Suspect (amphibian): _____

Length of Suspect: _____ and mark on the ruler above.

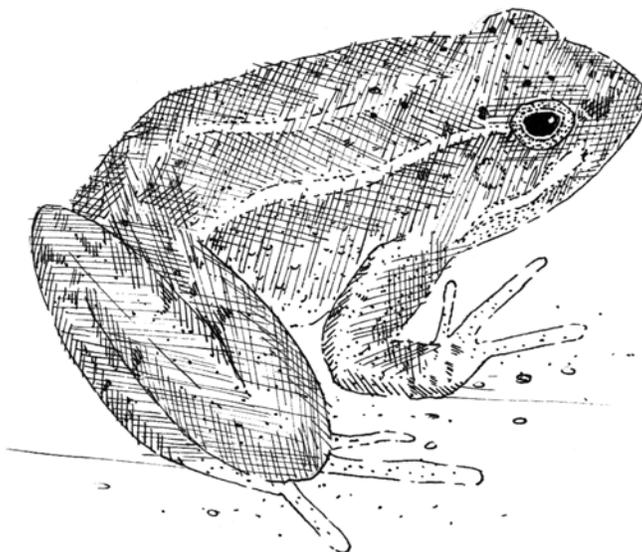
Weight of Suspect: _____

In addition to a sketch of the Suspect above, describe any unique markings: _____

List favorite hangouts (habitat): _____

MINNESOTA'S MOST WANTED

(Example)



in. 1 2 3 4 5 6 7

cm 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

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Investigators (your names): John and Joan

Name of Wanted Suspect (amphibian): Red Legged Frog

Length of Suspect: 9 cm and mark on the ruler above.

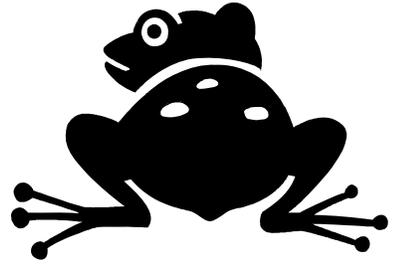
Weight of Suspect: 75 grams

In addition to a sketch of the Suspect above, describe any unique markings: The belly and hind legs are red or salmon pink, it has black flecks and splotches on its back, which is otherwise olive-green in color.

List favorite hangouts (habitat): Wetlands and Streams



Captured Amphibian Data Sheet



Investigators (your names): _____

Length of Captured Suspect (in centimeters): _____

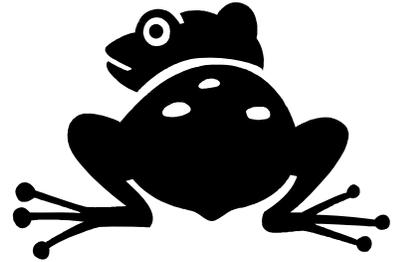
Weight of Captured Suspect (in grams): _____

Describe any unique markings: _____

List location of capture (habitat): _____



Captured Amphibian Data Sheet



Investigators (your names): _____

Length of Captured Suspect (in centimeters): _____

Weight of Captured Suspect (in grams): _____

Describe any unique markings: _____

List location of capture (habitat): _____