Creepy Crawly Creatures
Pre Lesson

Audubon Center of the North Woods

Purpose: Students will identify characteristics that are unique to amphibians and reptiles, and also characteristics both animals have in common.

Concepts:

- Amphibians and reptiles are two separate animal groups with similar characteristics.

Learning Outcomes: Students will be able to

- Describe similarities and differences between amphibians and reptiles.
- Recognize the relationships between herps and other animals.

Minnesota Academic Standards: (example)

Science:
0.4.1.1.2 Identify the external parts of a variety of plants and animals including humans.
1.4.1.1.1 Describe and sort animals into groups in many ways, according to their physical characteristics and behaviors.
3.4.1.1.2 Identify common groups of plants and animals using observable physical characteristics, structures and behaviors.
7.4.2.1.2 Compare and contrast predator/prey, parasite/host and producer/consumer/decomposer relationships.

For Background Information see end of lesson

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CLASS LENGTH: 45-50 MIN

AGES: 4-8TH

SEASON: S, SP, SU

GROUP SIZE: 15-20

SAFETY: Students will be inside the whole class. Activities do not require physical challenge.

MATERIALS:
- Herp Pictogram Game cards.
- Who am I? Game cards.
- Extension games: arts and craft materials (kids could bring recycling products from their homes as well), paper, old magazines, markers.

PRE-CLASS PREP: Draw a big diagram on the board (as shown in the end of the lesson) and have the two sets of cards organized.

CLASS OUTLINE:
I. Introduction: 5 min.
II. Characteristics game and diagram: 30 min.
III. Closing activity: 15 min.

I. Introduction (5 min.)

Lesson Preview – Introduction, filling out the diagram through a card game (Characteristics Game), closing activity (Who am I? game).

Grabber – Introduction will start with a diagram with a balloon written herps, as shown below. Ask students "Does anyone know what a herp is?"

Explain that herp is a term used to talk about amphibians and reptiles.

II. Class Experiences (20-30 min.)

Students will be introduced to the characteristics of amphibians and reptiles, through the Herp Pictogram Game!

Herp Pictogram Game

Procedure: each group of students (3-4 people) will receive a card about one of the characteristics of reptiles and amphibians.

To involve students, the following questions should be asked:

- (Pictures of amphibians eggs) What can you see in this picture? What are the eggs from a salamander/frog like?
- (Snake and its eggs) What is the difference between the former picture and this one?
- What is the difference between amphibians and reptiles?

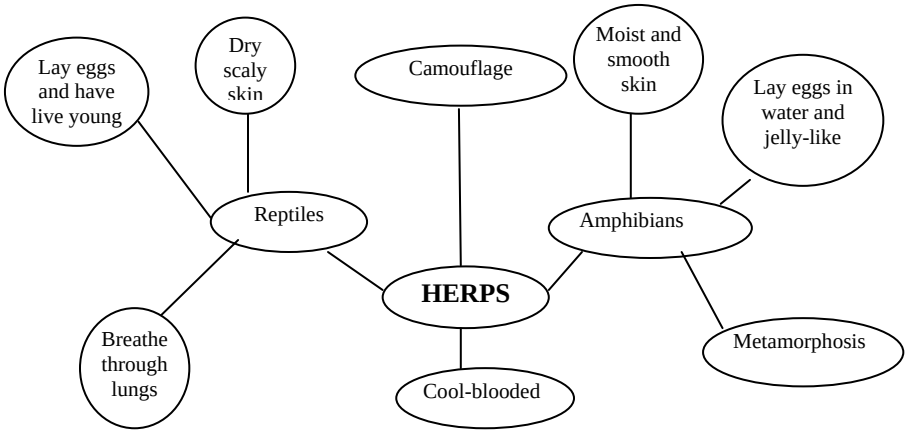
During this game, as a group, you should draw a diagram, as shown below. At the end of the game, they need to have answered two basic questions:

What makes an amphibian an amphibian? Moist and thin skin, lay squishy eggs in water and the young go through a process called metamorphosis to reach adult form.

What makes a reptile a reptile? Skin is scaly and rough, eggs are laid in land and are hard shelled, and young are like an adult miniature.

(Always going back and forward to the diagram).

At the end of the activity, the whole class will visualize a diagram kind like this:



III. Conclusion (15 min.)

Who am I? game: students will learn about some herps from Minnesota through pictures.

Procedure: Students will receive a card of an amphibians or reptile from Minnesota. Students will see the front of their card, and try to figure it out what animal it is. After this step, they can turn their cards and check the name of their animal. Then, they will hypothesize if it is an amphibian or reptile. Students will present their animal to the class, highlighting what they think is special about that animal.

IV. Authentic Assessment

Students will be evaluated through their participation in both games.

V. Extensions/Variations

1. Primary grades: Instead of receiving a card with a herp species, they will color one of the coloring sheets. They still can present their animal, if there is time available.
2. Creating an amphibian or reptile: This activity allows them to create a totally new herp! They need to describe its characteristics, its habitat and life habits. Guidelines: students will be split into 5 or 6 groups and a herp will be assigned to each group (frog, salamander, crocodile, snake, lizard, and turtle). A habitat will also be assigned, so they need to combine the animal with the habitat. Once everybody is done, about 15 minutes, the groups will present their animal to the rest of the class and how they came up with the idea.

VI. Background Information

The word *herps* comes from the word herpetology. This is the branch of zoology that studies reptiles and amphibians. Reptiles evolved from early amphibians. What, in general, do reptiles and amphibians have in common?
Cold blooded (this means that their body temperature adjusts to the air or water around them).
Most lay eggs.
Most shed their skins when they grow.
Most have an excellent sense of smell.
Some use chromatophores [pigment-containing skin cells] to change color in response to conditions in their environment.

Amphibians

Reptiles are one of the two major groups of herps.
Skin: moist and smooth with no scales.
Feet: without claws.
Eggs: soft, without shells, laid in water or a moist area.
Young: do not look like adults at birth. They go through a series of changes, called metamorphosis, to reach adult form. Young amphibian larvae breathe through gills. Simple lungs develop before the young grow into the adult form.
Two of the three groups of amphibians are found in Minnesota. One is frogs (which includes toads); the other is salamanders. The obscure, wormlike Ceacilians do not live in Minnesota.

Reptiles

Reptiles are one of the two major groups of herps.
Skin: heavy scales and dry.
Feet: most have claws on their feet.
Eggs: have tough shells, are laid on land.
Young: look like miniature version of adults at birth. Reptiles breathe with lungs their role life.
Some lie in the sun to raise their body temperature.
Two of the four groups of reptiles are found in Minnesota. One group includes snakes and lizards; the other group is turtles. The two groups not found in Minnesota are the Crocodilians and Tuatara (Tuatara are lizardlike reptiles found on about 30 small islands off the coast of New Zealand.)

VII. References

http://www.biokids.umich.edu/critters/Ambystoma_maculatum/
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