Amphibians Around Us

Grades: K - 3

Time: 45 minutes

Rationale and Context:

Students will use inquiry science process skills to examine the characteristics and unique behaviors of Vermont's amphibian species. Amphibians are ecological indicator species meaning that they are sensitive to environmental changes that may go unnoticed by humans. This has become evident in the past few years as the populations of amphibians around the globe have declined in part due to chemical toxins and depletion of habitats. Students will come to understand the adaptive characteristics of amphibians and the importance of stewardship of this unusual group of animals.

TEACHER CONTENT KNOWLEDGE:

Amphibians are specialized group of vertebrate that include frogs, toads, and salamanders. Most amphibians lay their eggs and begin their life breathing through gills in the water. They metamorphose into air breathing adults. Amphibians have moist smooth skin that requires them to live in or around water. Adult amphibians breathe both through lungs and their skin. Amphibians are not able to control their own temperature but instead respond to the temperature of their environment by seeking warmer or cooler areas. Their specialized physiology and protective characteristics make them one of the lesser understood animal groups and one of the most fascinating for study.

DESIRED RESULTS:

Unit Essential Question:

What are the characteristics of an amphibian?

Vermont Standard(s):

Vermont Standard	Grade Expectations	Inquiry Skills and Content
7.1	S.1	Ask scientific questions and observe amphibian characteristics for survival.
7.13	S.30	Identify amphibian differences and similarities through observations, movement, touch, sketching and identifying mating and territorial calls.
7.16	S.31	Understand amphibian ecological importance and migration patterns.

Learning/Behavioral Objective(s):

1. Use an oversized frog model costume to discuss the features that distinguish an amphibian from other vertebrate groups.

2. Use small frog life cycle models to reconstruct a frog life cycle.

3. Through group discussion and a movement activity, students will become familiar with frog calls for specific regional frogs, and "travel" from an upland habitat to a vernal pond.

4. Students will be introduced to the term citizen scientist and learn what they can do to help our local amphibian populations.