

# OSP Interactive Educational Programming

**Lesson Title: What's in the Water?**

**Grade Level: 2nd**

**Teacher: Kathi Murray**

**Duration: 50 minutes**

**Essential Question(s)/Objective(s):**

**What are tadpoles?**

**Where do tadpoles come from?**

**What do tadpoles eat?**

**Do tadpoles turn into frogs and toads?**

**What do frogs and toads eat?**

**GPS:**

**S1CS1.**

**S2CS1. Students will be aware of the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.**

- a. Raise questions about the world around them and be willing to seek answers to some of the questions by making careful observations and measurements and trying to figure things out.

**S2CS3. Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities.**

- a. Use ordinary hand tools and instruments to construct, measure, and look at objects.

**S2CS4. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.**

- c. Describe changes in the size, weight, color, or movement of things, and note which of their other qualities remain the same during a specific change.
- d. Compare very different sizes, weights, ages (baby/adult), and speeds (fast/slow) of both human made and natural things.

**S2CS5. Students will communicate scientific ideas and activities clearly.**

- a. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.
- b. Draw pictures (grade level appropriate) that correctly portray features of the thing being described.

**S2CS6. Students will be familiar with the character of scientific knowledge and how it is achieved.** Students will recognize that:

- d. All different kinds of people can be and are scientists.

**S2CS7. Students will understand important features of the process of scientific inquiry.** Students will apply the following to inquiry learning practices:

- a. Scientists use a common language with precise definitions of terms to make it easier to communicate their observations to each other.
- b. In doing science, it is often helpful to work as a team. All team members should reach their own individual conclusions and share their understandings with other members of the team in order to develop a consensus.
- c. Tools such as thermometers, rulers and balances often give more information about things than can be obtained by just observing things without help.
- d. Much can be learned about plants and animals by observing them closely, but care must be taken to know the needs of living things and how to provide for them. Advantage can be taken of classroom pets.

## Life Science

Teacher note: Instruct students not to touch wild plants and animals when they observe them. Always wash hands after handling any plants or animals. Caution students not to eat wild plants they find.

**S2L1. Students will investigate the life cycles of different living organisms.**

- a. Determine the sequence of the life cycle of common animals in your area: a mammal such as a cat or dog or classroom pet, a bird such as a chicken, an amphibian such as a frog, and an insect such as a butterfly.

<b>Key Vocabulary</b>	<b>Egg, Offspring, Parent, Life cycle, Tadpole, Frog, Toad, Change</b>
<b>Teacher Materials</b>	Goldfish bowl or aquarium with tadpoles
<b>Student Materials</b>	Paper, pencil
<b>Teaching Strategy/Procedures</b>	<p>Introduce the tadpoles to the students and let them draw one.</p> <p>Let the students watch the tadpoles eat the algae ( or tell them if not evident)</p> <p>Let the student observe them a couple of minutes each day and observe the changes.</p> <p>Read a story of tadpoles turning into frogs.</p>
<b>Differentiation</b>	<p>Use meal worms and watch as they turn into beetles.</p> <p>Plant seeds and have them watch as they grow into plants.</p>
<b>Summarizing Strategy</b>	Explain the life cycle of frogs and toads.
<b>Assignment(s)</b>	<p>Have students color the picture of a frog's life cycle.</p> <p>Complete the matching activity</p>
<b>Assessment For and/or Of Learning</b>	Have students complete a fill in the blank life cycle of a frog.