

# Pond Life

## WHO IS IT FOR?

- ◆ Young Scientists . . .
- ◆ Evolving Mathematicians . . .
- ◆ Emerging Linguists . . .
- ◆ Sprouting Historians . . .
- ◆ Budding Artists . . .

## TARGETED LEVEL:

(First Grade)

## THE CHALLENGE:

The students will . . .

- ⇒ be introduced to amphibians, reptiles, and insects.
- ⇒ recognize some of the attributes of the various organisms they analyze.
- ⇒ use their senses to make observations about their surroundings.
- ⇒ recognize and begin to analyze the differences between a variety of aquatic organisms.

## SAFETY ISSUES & CONCERNS:

- \* Students need to demonstrate care with sharp objects and writing utensils.

## WHAT'CHA NEED?

1. Two large sheets of poster paper.
2. Various colored markers.
3. An easel or chalkboard to put the poster paper on.

## TIME NEEDED FOR THE ADVENTURE:

Minimum of 45 minutes.

## Pre-visit Activity

When the children come to the pond at the Elm Fork Education Center (EFEC) they will find an ecosystem that has been fairly well established. They will not have the opportunity while at EFEC, to see how ponds are created. This pre-visit activity is designed to provide an opportunity for students to create their very own class pond in – the classroom.

Begin this activity with a discussion about what the children believe they will find in the pond at the EFEC. They will be able to name a number of organisms, like turtles, frogs, and fish, but what they might leave out are some of the fundamental aspects of pond life – algae, plants and insects. Discuss with the children the fact that ponds usually begin with water that trickles down from a creek or a stream. The water that flows brings with it plankton, which are microscopic organisms floating in the water. As time goes, algae will begin to form in the water and soon insects will discover the water and use it as a source for food, eating both the plankton and the algae. Organisms that feed on the insects might then move into the pond, like frogs for example. Birds might drop in for a rest and a swim between flights, also dropping plant seeds, which in turn will find fertile ground and begin to take root. Snails may slowly creep in to feed off the plants. Frogs will eventually lay their eggs in the water and eventually the pond will be teeming with tadpoles, larvae, plants, etc.

In this activity, the students will prepare an aquarium to represent a pond. They will finish their pond during the post-visit activity.



## WORDS TO KNOW?

1. Aquatics
2. Biology
3. Ecology
4. Ecosystem
5. Habitat
6. Pond



## PROCEDURES:

*Ready, Set, Go . . .*

**To make your classroom pond you will need access to an aquarium.**

1. Place an inch of mud in the bottom of an aquarium and then place an inch of gravel on top of the mud.
2. Add some pond plants, both rooted and floating. (*Elodea is a common example and can be obtained from a local pet store.*)
3. Add some decayed leaves to the top.
3. Place the aquarium in a window, out of direct sunlight, for a couple of days prior to coming to the EFEC.
5. Allow the students to make observations about what they see and what they believe will occur.
6. Discuss with the students the beginning of a pond. (see background information on first page)
7. Let the students know that pond water will be obtained from the EFEC when you visit.
8. Let the students know that they will be in charge of taking care of the pond after they return from the EFEC.

## DID YOU KNOW . . .

A habitat is a natural place where organisms live?

Animals and other organisms depend on ponds and other bodies of water for their food and water?

No two ponds are exactly alike? Their water quality and the living conditions vary with their size, depth and shape?

Conditions in any pond can change according to the time of day, the weather and even the season?

## EXTRA STUFF?

Related books/stories and on-line sources:

Trumbauer, Lisa. *Life in a Pond*. Newbridge Early Science Program, 1996.

Conant, R. *A Field Guide to the Reptiles and Amphibians*. Boston: Houghton Mifflin Co., 1958.

Farb, Peter. *The Insects*. New York: Time-Life Books 1962.

Frost, S.W. *Insect Life and Insect Natural History*. New York: Dover Publications, Inc., 1959.

## TEKS

### CONNECTIONS:

Science TEKS - First Grade:

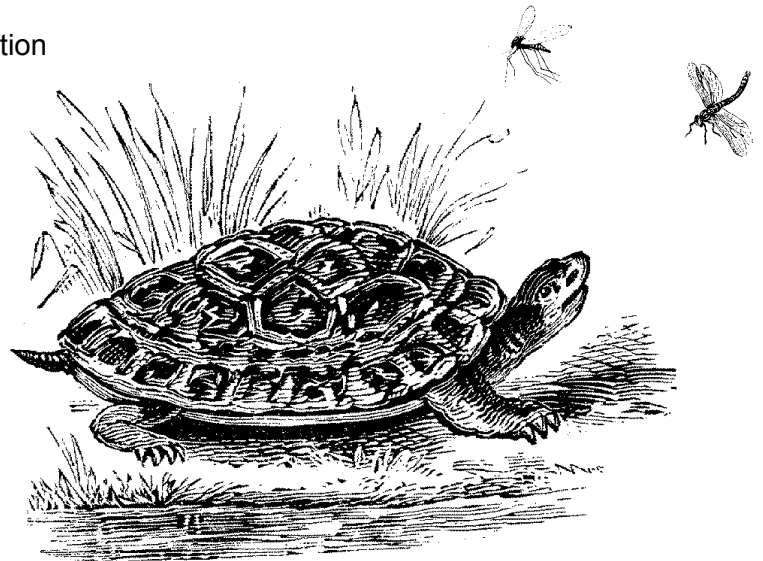
1.2 (A) – Students will ask questions about organisms, objects, and events.

Denton ISD, Science S.P.O. – First Grade:

S1.3 The student will exhibit enjoyment and curiosity when engaging in science endeavors through observations while using as many of their senses as they can during a whole class activity.

## Assessment

Teacher observation



## The

**Bottom Line:** The students will observe and explore the similarities and differences between the various organisms that live in and around a pond in order to understand how each organism's basic needs are met.