



EarthCircles

Water at Work

LESSON 4: DRAGONFLY POND

OVERVIEW:

Concept: Water can be dirtied by many small actions as well as by major polluters.

Lesson At A Glance:

Materials

Preparation

Background

LESSON PLAN:

Opening Circle

Activity: Kids interact with a story about the pollution of a pond.

Discussion

Principles in Practice

Story

Closing Circle



Materials:

- Shallow plastic bin for water
- 8 plastic snack bags
- 2 baby food jars or similar containers
- Dry Leaves
- Dirt
- Soda Can
- Popcorn
- Salt (road salt)
- Vinegar (dry cleaning solution)
- Instant Coffee (farm runoff)
- Baking Soda (chemical wastes)
- Molasses (used motor oil)
- Candy Wrapper
- Masking tape and marker

Book: *Keeper of the Swamp* by Ann Garrett

Option: Water Justice Taize Ritual at

<http://www.uusc.org/sites/default/files/waterjusticetaizeritual>

Copyright (C) 2019, Maureen Oates

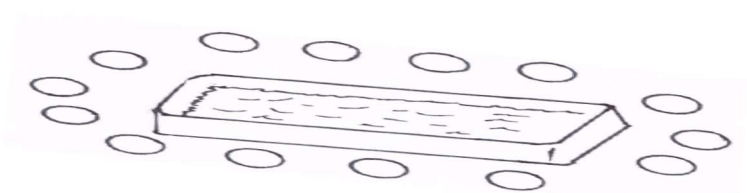
This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

Preparation:

This activity requires a variety of materials and preparation. All materials are easy to find and prepare, and the activity is very effective.

- Arrange chairs in a circle and place the bin in the center of the circle. An under-the-bed-storage bin is ideal. Or a tot's wading pool would work.
- Add several inches of water to the bin.
- Put some of each dry material into a separate snack bag and label each one clearly as in the parentheses above.
- Put the vinegar and molasses into the small jars and label them clearly as above.
- http://www.youtube.com/watch?v=rSwxIVP_RsE to access the video clip.

Read the story and decide how to distribute the materials, depending on how many Kids are in the class. If there are fewer than ten, some Kids may get two bags. If there are more than ten, you may want to make two of some packets so every Kid gets one.

**Background for Teachers:**

In the pond, natural matter such as leaves and dirt are carried in with runoff. Nature absorbs this kind of matter as it settles to the bottom of the pond or as animal life in the water feeds on it. But the pond cannot dispose of unnatural matter.

- Careless picnickers toss cans and food wrappers, even leftover food such as popcorn into the water.
- Runoff from the nearby highway can make the pond water too salty for the fish and other creatures that live in it.
- Businesses such as dry cleaners and chemical plants may dispose of harmful solvents in a waste water system that drains into the pond. This kind of system is now against the law in most places.
- Runoff from farms upstream from the pond can carry wastes from fertilizers, insecticides and animal feed lots down into the pond.
- Motor oil can get into the pond from highway runoff and from people discarding empty oil cans or used motor oil on the ground nearby.
- Who then is responsible when fish and frogs disappear from the pond and people no longer want to picnic there?

LESSON PLAN

Opening Circle: With everyone seated in a circle, exchange greetings and note who is present.

Begin by asking if the Kids have a favorite place to go for a picnic or a swim in the summertime? What makes a place special? Tell the Kids that today they will hear about a virtual pond where people once enjoyed picnicking and swimming. But over the years things happened that changed the pond. They will listen to a story about the pond and follow directions for what happened. Ask them to think about our Seven UU Principles as they carry out today's activities.

Activity: Each Kid gets a labeled packet (or two). In turn, as the story mentions what is in each packet, the Kid with that packet empties it into the pond. Kids will really need to listen for their cues. Read the story aloud, pausing for each Kid to dump a packet into the pond on cue.

The Story of Dragonfly Pond

Here is Dragonfly Pond as it was years ago. The water was clear and cool. You could even drink it. When I was a Kid we swam there, and my family used to picnic by the pond on hot summer evenings. But the pond has changed over time.

Dry leaves float into the pond and **dirt** washes in on the stream that feeds the pond. Nature does manage things like these. Leaves provide food for pond residents and they decay, enriching soil at the bottom of the pond. Dirt sinks to the bottom or washes on downstream as water drains from the pond.

People loved to picnic by the pond, watching the dragonflies flit over the water. Sometimes someone tossed an empty **soda can** into the water, or let a **candy wrapper** drop into the water when the wind blew it away. Sometimes bits of food such as **popcorn** got into the water. Now a highway runs by near the pond. In winter runoff from melting ice carries **road salt** into the pond.



Over time, businesses sprang up along the highway. A small mall includes a dry cleaner, where used **dry cleaning solvents** go into a waste water system that drains into the pond. A nearby industrial plant uses the same water system for **chemical wastes**. **Runoff from farms** upstream carries wastes directly into the pond. These wastes come from farm animals and from the fertilizers and insecticides used on crops.

Used motor oil is the final insult to the pond's water. Rain washes dirty oil off the highway and the mall's parking lot. People sometimes leave old oil cans on the pavement, or pour used oil out on the ground when they change the oil in their cars. Rain washes that oil away, too.

Look at the Dragonfly Pond now! Who would you say dirtied the water?



Discussion:

At the end of the story, ask who Kids think dirtied the water.

- How do Kids think such pollution would affect things living in the water?
- Would they drink water from a pond like this?
- Or swim there?
- Do they know ponds or streams that look like this?
- What can be done about such a problem?
- Do Kids have suggestions for controlling such sources of pollution?
- How would they go about cleaning the water?

Encourage creative thinking and list their ideas on the chalkboard.

Option: You may want to use one or more of the four rituals in the Water Justice Taize Rituals to help Kids make a spiritual connection with water. The web address is listed under materials.

Principles in Practice:

Is there a stream or pond nearby where Kids might check on how clean it is and organize a cleanup day if needed? Would doing this honor some of our Seven Principles? Which ones?

Story: *Keeper of the Swamp* by Ann Garrett

In this coming-of-age story a boy confronts his fears and learns the secrets of the swamp from his grandfather.

Closing Circle: Ask the Kids to repeat these words together.

Whatever befalls the Earth befalls the sons and daughters of Earth.

If men spit upon the ground, they spit upon themselves.

This we know:

The Earth does not belong to us, we belong to the Earth.

This we know:

All things are connected like the blood which unites one family.

All things are connected.

Whatever befalls the Earth befalls the sons and daughters of Earth.

We did not weave the Web of Life.

We are merely a strand in it.

Whatever we do to the web we do to ourselves.

Chief Seattle, *Earth Prayers*

