

POND SUCCESSION MURAL

Source:

Project WILD: Activity Guide, The Council for Environmental Education, 1999.

Basic Description:

Students recognize that natural environments are involved in a process of continual change, and create murals showing three major stages of pond succession.

Materials:

Long pieces of drawing paper for murals; tape for securing paper to walls, crayons

Time Allotment: one or two 30-minute periods or longer

Procedure:

Introduction:

- Review with students the idea of succession (the orderly, gradual, continual replacement of one community of plants and animals with another).
- Ask if anyone can describe what a pond looks like.
- Then ask the students to imagine what a pond would look like from a side view, if you could see under the water and show the nearby environment.

Activity:

1. Explain to the students that they will be drawing a series of three views of a pond over a time period of about 800 years. The first section will show the pond as it is today, the middle section how it might look 500 years later after natural changes, and the third how the pond could look in 800 years. (note the approximation)
2. Discuss the possibilities of plant and animal life in the first section. What kind of plants and animals live in the water; along the shoreline; in the surrounding area?
3. Divide students into small groups, and give each a piece of paper, which will be divided into three equal sections (by folding or drawing). Instruct them to fill in the first section with their drawing of the pond and the surrounding area. Set a specific time frame for the students to draw (about ten minutes).
4. Bring the class together again for a discussion of the second section – to be labeled “500 years later”. Consider the following items:
 - What changes in the environment have taken place?
 - How will the pond look like now?
 - What lives and grows around the shoreline – which is now marshier? (marsh animals and plants, perhaps some willow bushes)
 - What lives and grows in the surrounding area? (larger trees, same types of animals)
5. Have each group complete the second section of their mural, labeling it “500 years later”.
6. Repeat the process of the third section, labeling it “800 years late” and discussing the following topics:
 - By this time the pond is almost totally filled with sediment, leaving only a small marshy area with perhaps a stream running through. What changes have taken place?
 - What lives and grows in this environment?
 - What lives and grows where the shoreline used to be? (bushes, small trees)

- What affects does the pond succession have on the surrounding area? (different animals, trees requiring less water)

Follow-up/Discussion:

After the murals are completed, students could sign them. Then they may be displayed in the classroom for all students to see and discuss differences and similarities between the various murals. Ask the students to summarize what they have learned, including how succession is one example of the ongoing process of change in natural environments.

Extension:

Use a stream table filled with standard soil to illustrate the three-dimensional, dynamic ways of pond succession. Fill the table with soil, make an indentation in the centre to represent the pond; run water into the table to represent rainfall, streams feeding the pond, etc. and watch the pond fill as sedimentation takes place. This can show the geological life cycle of the pond. Add replicas of plants and animals during successional stages for even more interest.

