

1996 4-H HEALTHY WATERSHEDS PROJECT FINAL REPORT

Summary of Grant Activities

The 4-H Healthy Watershed Program began in February, 1996. A total of 150 youths from seven sites were involved in this project.

SITES: Sabin Elementary School (3 classes), Hillsdale Terrace Housing Development, Elliott Square Housing Development, Columbia Villa Housing Development and Townhouse Terrace Housing Development.

Since the fertilized fish eggs were only available in the Spring, the Sabin School classes were the only groups that completed all four phases of the 4-H Healthy Watersheds Project.

During the Spring of 1996 Sabin School completed the following:

1. STEP (Salmon Trout Enhancement Program): In this phase of the project the students were trained to use a classroom hatchery to hatch fish eggs in the classroom. They witnessed first-hand the process of hatching fish eggs. Students also learned about the natural environment of their fish.
2. WATER QUALITY MONITORING: The students from Sabin School took a field trip to a nearby stream where Marvin Welt, 4-H Program Assistant, worked with teachers to get students actively involved in testing and monitoring the water quality of their adopted stream. They also conducted a study for fresh water invertebrates.
3. STREAM SIDE ENHANCEMENT: Students were involved in cleaning up their surrounding area of their adopted stream.
4. ANGLER EDUCATION: The students took a fishing field trip as their final field trip.

In the Summer of 1996, the second group of Portland children were involved in the Healthy Watershed program. These children, ages 8-12, are residents of the Portland Housing Developments. Each site consisted of 12-15 children. Since Salmon and Trout eggs are not available after February, these students did not participate in the STEP program. However, they did participate in the three other phases of the project. A training was held in April for the additional staff who would be working with the children on this project. Additional lessons were added to the program to supplement the entire project.

1. **WATERCYCLES:** The children learned all about watercycles and watersheds in this program. Games and hands-on activities were used to teach the lesson. Lynn Vandercamp from BES was a guest speaker as well. Lynn used an interactive model of a watershed to teach her lesson.
2. **SOILS:** The children learned the value and role of soils in a healthy watershed.
3. **WATER QUALITY MONITORING:** Students took a field trip to a nearby stream where they conducted water quality tests and studied macroinvertebrates.
4. **PLANTS:** In this lesson, students learned about plants and pollution and why plants are important to healthy watersheds.
5. **STREAMSIDE ENHANCEMENT:** In this lesson, the children took a field trip to a nearby stream where they planted trees and cleaned up the debris around the stream.
6. **ANGLER EDUCATION:** In preparation for their final field trip, Marvin Welt, 4-H Program Assistant and Master Angler, prepared the students for fishing. In this program, students learned how to tie a knot, casting, fish identification and more.
7. **FISHING EXTRAVAGANZA:** The final program was a fishing trip to Small Fry Lake in Estacada. All four groups participated together in this field trip. Students put to practice their new fishing skills. Afterwards, a fish fry was held. Twelve Master Angler volunteers and several parents came to help with the event.

Written evaluation and comments:

If I were to do this project all over again there are several changes I would make to the project.

- Secure funding to purchase at least 3 incubators if you want to ensure that enough students can participate in this project. There are only three times during the year when eggs are available. These times are October, December, and February. One incubator can be used by a school or a class, therefore, only a total of three groups during the year could participate. An additional 1-2 incubators could allow this number to increase to nine.
- A teacher training/orientation should be mandatory for each group prior to the start of the program. Teachers are at different comfort levels for teaching this material so the training program should try and meet the needs of the experienced environmental educator to the teacher who will be teaching this subject matter for the first time.
- Groups of students should be limited to no more than 15 students for every leader. This is especially true for children in non-school settings.
- Hands-on and experiential activities should be emphasized and lecturing should be kept to a bare minimum.
- Children should be given ownership of the project. Let them get involved in the decision-making as to where and when they will take their field trips.

- It is critical to have at least one experienced angler for every 2-3 students on the fishing trip. The children need lots of assistance with untangling poles, etc.
- Provide an additional lesson in which the children learn to make their own water quality monitoring equipment with household items. Children can make nets, viewing scopes, but viewers, etc. all with materials that can be found around the house. It is fun for the kids, they take more ownership of the program, and they can test water near their own home with the equipment they made.
- As much as possible, get the parents involved. Learning is enhanced if it is reinforced at home. So let's sell the parents!

Photo documentation

(see attached)

Product of the grant:

As a result of this grant, we were able to pilot test and adapt a curriculum for teaching children about watersheds. This curriculum is currently being upgraded and finalized and will be used at Portsmouth Middle School this Spring and Fall. The grant also funded a cold water egg incubator for hatching fish eggs. In partnership with ODFW we plan to continue to use this incubator in Portland Public School classrooms. ODFW will provide the eggs and the technical assistance for raising eggs to fry, and 4-H will continue to provide curriculum support and training to teachers who use this 8 week program in their school.