

## Experiencing Education



Linda Guthrie, a long time resident of Valdez and elementary teacher at Hermon Hutchens Elementary School, believes that students are truly excited about learning and will learn more when they are given first-hand experience.

It is with this in mind that she has developed special classroom projects that go along with school curriculum, but teaches the material in a 'hands on' manner, making it exciting and memorable for the students. She has included a science unit on salmon since her first year of teaching and has expanded to other programs over the years.

She chose a salmon project because she thinks it's important for students to be familiar with the resources surrounding them. According to Guthrie, "it is easier to take something that is available right here and use it as a teaching tool." Student interest sparked other projects, such as the duck and chicken incubation projects and the plant care and potato growing projects.

Although the major emphasis of her classroom projects is on science, she integrates reading, writing, math, and art into them as well. She believes these projects also help develop leadership and team building skills because students work together on all of the projects. Students have opportunities to share their knowledge and new skills with each other as well as other classrooms.

The Crooked Creek Chum Salmon Incubation Project is definitely a 'hands-on' experience. The salmon project includes



a tour of the Valdez fish hatchery. Students begin the salmon incubation with a chum salmon egg-take at Crooked Creek orchestrated by retired Fish and Game Biologists, Fritz Kraus and Craig Baer. They then take the eggs back to the classroom where they will be incubated in a chilled tank. Students keep a daily record of the accumulated thermal units by measuring and recording the temperature in the tank each day and recording any observations. They experience the beginning of the life cycle as the eggs become eyed eggs and then hatch into alevin around the first part of January. The alevin stay hidden in the gravel of the tank until around March and then they emerge and begin to eat as soon as their yolk sac is absorbed. The students feed the salmon three times a day and change the water in the tank about once a week. In May the class will return to Crooked Creek where each of the students takes part in the release of the Chum Salmon Fry.

Learning about and caring for these salmon in their early life stages gives students an appreciation for salmon and their habi-

tat. They also learn about salmon anatomy by participating in fish dissection.

This project has grown over the years. Last year students learned fly tying and kicked off the project with a trip to Meares Glacier on a Stan Stephens Cruise. The cruise helps them see the “big picture”. Students learned about the Alyeska Marine Terminal, the Exxon Valdez oil spill, the clean-up, S.E.R.V.S., Prince William Sound Regional Citizens Advisory Council, salmon hatcheries, commercial fishing, view the animals and fish that inhabit Prince William Sound, and learn the importance of safeguarding the environment.

Students not only learn about the life cycle of Chum Salmon, but also learn about salmon habitat, conservation, food chains, permit process for the incubation project, water quality, salmon anatomy, salmon hatcheries, commercial fishing, sports fishing, subsistence fishing, and the history of fishing in Prince William Sound.

Last year this project was funded primarily through grant funding. In 2011, Guthrie applied for and received a grant from PWS Regional Citizens Advisory Council. Alaska Department of Fish and Game provide a salmon tank, salmon food, and some equipment. They also sent people to help with the egg-take in previous years. Bonnie Thiel and Jeannie Kirkland of the U.S. Forest Service have been supportive. Retired Fish and Game biologists Fritz Kraus and Craig Baer have also given a lot of their time and energy for this project.

Ken Morgan and Valdez Fisheries have been very supportive providing tours, lending their net pen, and providing fish for dissection as well as offering encouragement. Stan Stephens Cruises also contributed to this project by making the Meares Glacier trip affordable for the class, and KVAK provided a hotel room for Fritz and Craig when they were here for fly-tying.

According to Guthrie, they started hatching ducks in the classroom when one of her students, Kate Karna, came in with her parents and said they had some fertilized duck eggs. She found an incubator in the store room and put it to use. The project has been expanded from hatching just ducks to hatching ducks and chickens. Students candle the eggs, monitor the development throughout incubation, and watch them hatch. When the ducklings and chicks are in the brooder students feed, water, and get to play with them before they go to their new homes.

Guthrie finds homes for the ducks and chickens before they hatch. In the past, the class gave a few of the ducks to Libbey's Farm in Kenny Lake, and students later went to Libbey's Farm for a field trip. The students not only got to visit the ducks, but also saw cattle, horses, pigs, ducks, turkeys, geese, and chickens. They learned that these animals weren't pets but served a purpose. Kathy Libbey taught them about all the hard work it takes to operate a farm. Sterling Meadows Hatchery in Sterling, Alaska, Grant Aviation and the local post office have all helped



**Left, Ms. Guthrie's 5th grade students enjoy a tour of the Hatchery, a cruise aboard Stan Stephens Cruises and releasing Chum fry into Crooked Creek in May 2012 as part of the Crooked Creek Chum Salmon Incubation Project.**

**Above, ducks in Guthrie's 5th grade classroom begin to hatch after the incubation period.**

Photos courtesy Linda Guthrie

make this project successful.

The Plant Project came to life when Nancy Taylor, a custodian, who took such good care of the plants, was transferred to the Junior High School. Guthrie thought this would be another great opportunity for her students. Initially, local plant expert, Tillie Wonder, helped transplant all of the trees and Harris Sand and Gravel provided gravel for the transplant project.

Commercial fisherman and Guthrie's nephew, Ed Day, provided halibut tubs to pot the trees and Ben Olds made sure they had the soil they needed. Students check a meter to see if the plants need water, then water and fertilize them. They also pull weeds when necessary. One year, students planted lettuce and ended up with enough to make salad for the entire classroom. According to Guthrie, “it was very tasty and students were excited to taste something they actually grew”. They have also planted potatoes outside the school and the class the next fall harvested them. The students made potato soup with the potatoes they harvested.

When asked why she teaches this way, Guthrie says, “I want it to be fun.” She recalls how rewarding it was last year, on the Stan Stephens trip, when students came up to her and said it was their ‘best’ day of school ever. They were asking questions and really learning. According to Guthrie, “you can just see it in their faces.” ■