Final Report Form - Oil Spill Recovery Institute

This report may be submitted by mail, fax or e-mail
P.O. Box 705 - Cordova, AK 99574 - Fax: (907) 424-5820 - E-mail: osri@pwscc.gen.ak.us

Deadline for this report: Submittal within 90 days of grant/award expiration. Also, note that a summary Financial Statement shall be submitted within 30 days of the grant expiration.

Today’s date: 29 August 2008

Name of awardee/grantee: Lindsay Butters, Prince William Sound Science Center

OSRI Contract Number: 08-10-02

Project title: Science of the Sound


PART I - Outline for Final Program or Technical Report

This report must be submitted by all grantees. However, for those whose project work resulted in a peer reviewed publication (whether in draft or final form), this report may be abbreviated and the publication attached as part of the report.

A. Non-technical Abstract or summary of project work that does not exceed 2 pages and includes an overview of the project. This abstract should describe the nature and significance of the project. It may be provided to the Advisory Board and could be used by OSRI staff to answer inquiries as to the nature and significance of the project.

B. Review objectives as described in original proposal and state whether these objectives were achieved.

C. Describe problems or roadblocks encountered in project implementation.

D. Highlight accomplishments, whether or not they were part of the original proposal.

E. Conclusions.

F. Appendix including copies of all written reports or publications completed or in progress, resulting from the project work. This also includes abstracts of papers presented at conferences. Please note the acknowledgment of OSRI support stated in Section 10.3.4 of the Grant Policy Manual.
**Part II - Final Financial Statement**

This may be submitted on a separate sheet; it must include the following information.

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EXECUTIVE SUMMARY

The 2007-2008 Science of the Sound education programs at the Prince William Sound Science Center reached thousands of participants through a variety of innovative, hands-on science programs.

Every student in Cordova’s elementary school attended six Discovery Room programs related to the overall theme of Energy. Each month ten 4th-6th graders participated in an Energy Monitoring field trip where they conducted energy audits in several of Cordova’s public buildings. Their findings were incorporated into letters sent to each of the facilities with recommendations for ways to increase energy efficiency.

Science Center educators also took Outreach Discovery trips to the Alaska Native villages of Chenega Bay and Tatitlek. Discovery Room lessons on Energy were delivered to the entire student bodies in both village schools.

Science Center educators continued their involvement with Cordova high school students by facilitating field trips and classroom presentations, coaching a team for the regional National Ocean Science Bowl tournament and organizing the fourth annual Science Festival.

Thirty-eight Community Education programs were offered to the general public with a total attendance of 686 participants. These programs covered a wide variety of topics and featured presentations by local and visiting researchers about the local ecosystems of Cordova.

Regional science topics and Science Center research projects were brought to a wide audience through the Field Notes radio program and “Sound Science” newspaper column.

The following sections provide further detail on the accomplishments of each program in Science of the Sound.

DISCOVERY ROOM

Objectives for 2007-2008

- Develop a comprehensive curriculum on Energy for use in Discovery Room and Outreach Discovery programs in partnership with the U. S. Forest Service Cordova Ranger District (USFS).
- Create and implement a monthly field study for ten 4-6 graders that will compliment the theme of Energy and engage students in the use of technology, the scientific process and data collection in their own community.

The Discovery Room program addressed the School Year Programs portion of the OSRI FY08 Work Plan. The Discovery Room was implemented cooperatively by educators from the Prince William Sound Science Center and the U.S. Forest Service Cordova Ranger District. Additional support was provided by volunteer Barbara Smith, the Cordova Electric Cooperative, Prince William Sound Community College and several local businesses.

“Energy” was the Discovery Room theme for the 2007-08 school year. This topic encompassed many issues facing society today such as the availability and environmental impacts of fossil fuels, and the benefits of using alternative energy to...
supplant our energy needs. At the beginning of the school year, two essential questions were asked:

1. In what ways do people use energy?
2. How can we make and use energy more efficiently, effectively, and responsibly in order to reach our goals?

Each month, approximately 230 students in grades K-6 from Mt. Eccles Elementary School came to the Discovery Room for 1.5 to 2 hours of hands-on science education. The programs offered each month to students are listed below:

- **OCTOBER** – “Define Energy and its Forms”
- **NOVEMBER** – “What are Fossil Fuels and How do we Get Energy from them?”
- **DECEMBER** – “Fieldtrip to Cordova Diesel Electric Power Plant”
- **JANUARY** – “Alternative Energy”
- **FEBRUARY** – “Renewable and Nonrenewable Energy”
- **MARCH** – Staff visits to individual classrooms at teachers request
- **APRIL** – “Energy Season Wrap-up”
- **MAY** – “Shorebird Fieldtrip”

To meet the current trend in statewide schools for accountability in teaching, science standards were adopted this year in the Discovery Room program. Each of the following standards was addressed during the school year.

**Science Standards:**

SA1 - students develop an understanding of the processes & applications of scientific inquiry

SA3 - students develop an understanding that the culture, local knowledge, history, and interaction with the environment contribute to the development of scientific knowledge, and local applications provide opportunity for understanding scientific concepts and global issues

SB2 - students develop an understanding that energy appears in different forms, can be transformed from one form to another, can be transferred or moved from one place or system to another, may be unavailable for use, and is ultimately conserved

SB3 - students develop an understanding of the interactions between matter and energy, including physical chemical and nuclear changes, and the effects of these interactions of physical systems.

SE1 - students develop an understanding of how scientific knowledge and technology are used in making decision about issues, innovations, and responses to problems and everyday events

SG4 - students develop an understanding that advancements in science depend on curiosity, creativity, imagination, and a broad knowledge base

Science Center educators also implemented a monthly monitoring project to complement Discovery Room programming. Students in grades 4-6 participated in an Energy Auditing project to monitor the energy used in several buildings in Cordova. Lessons from the Alaska Oil Spill Curriculum, including School Energy Detectives and Home Electrical Audit were used as the basis for the auditing component of the field trips.

Students audited the community swimming pool, U.S. Forest Service, Ilanka Cultural Center, PWS Science Center, PWS Community College and Mt. Eccles Elementary School. Students looked at each facility to see if they made use of energy saving features such as compact fluorescent light bulbs, double-paned windows and arctic entries. Mt. Eccles Elementary School was the subject of a more in-depth survey with students placing a data-logging device in the school to monitor temperature and light use over a twenty-four hour period for several months. Cordova Electric Cooperative (CEC) provided the funds to purchase the data-logger and associated computer software.
After reviewing the accumulated data, students wrote letters to each of the facilities that were audited and made specific recommendations for what could be done to improve the energy savings of the facility. Colored posters made by younger students were posted at the CEC offices for public viewing and an article for the Cordova Times was written and published to let Cordova residents know about the project and its results. See examples of students’ work in Appendix items C and D.

In January, mid-year through the school-year programs, federal budget cuts forced a decrease of staffing support by our partner, the U.S. Forest Service. The Cordova Electric Cooperative offered to provide the resources necessary to retain the position. Because of CEC’s financial support, no reductions in programming occurred.

Science Center educators were able to serve an additional 60 students in K-6 grades through classroom presentations on local geology and a field trip to see the skeleton of Eyak the Orca whale housed at the Ilanka Cultural Center.

At the end of each Discovery Room session, educators from the USFS and Science Center met to debrief the month’s lessons and activities. Educators evaluated what worked well and what didn’t, and determined necessary changes to be integrated into the following month’s lessons. Such changes included modifying review questions to be “open-ended” to illicit more complete student responses, and taking a different teaching approach with the sixth grade students in order to increase student engagement and reduce behavior issues.

In addition, student achievement in our programs is evaluated based on their ability to understand and complete programming activities. Various assessment tools, such as worksheets, oral quizzes, games, concept maps, pre- and post-tests and creation of final projects were used to determine what knowledge and materials have been retained from the education programs.

**OUTREACH DISCOVERY**

**Objectives for 2007-2008**

- **Send two Science Center educators to deliver Outreach Discovery programs to the remote native village schools in Tatitlek and Chenega Bay in Prince William Sound.**
- **Build relationships with other communities in the Prince William Sound and Copper River Basin to expand the scope of the Outreach programs.**
- **Expand outreach of Science Center education program efforts via the website, radio interviews, newspaper/newsletter articles and presentations to a variety of audiences in the Prince William Sound and Copper River regions.**

Outreach Discovery addressed the School Year Programs and Coastal Community Outreach and Education portions of the OSRI FY08 Work Plan.

**Outreach Discovery**

Two Outreach Discovery programs were carried out in the native villages of Tatitlek and Chenega Bay. Each trip consisted of a three-day visit to enable Science Center educators to work with all students in Kindergarten through 12th grades in each school.

A total of 16 students in Chenega Bay and 13 students in Tatitlek were served by the Outreach Discovery program. Educators delivered a variety of hands-on lessons related to energy, including construction of a model wind turbine, energy audits of the school buildings and a “Does it contain Petroleum?” scavenger hunt (adapted from the Alaska Oil Spill Curriculum).
Outreach of Education Programs

Educators worked towards expanding the Outreach Discovery program to include visits to Whittier and Valdez, but due to scheduling difficulties with the teachers of each school, visits to these communities were not made.

The Community Programs email address list increased to well over 150 names this season. On a regular basis, “infoscience” emails covering various science topics ranging from astronomy to ocean science are sent out to community members and teachers. The following quote was received from a community member: “Thanks so much for updating me on the comet as well as including me on the email list of upcoming events. I am excited to get involved with the Science Center and all of its great activities.”

The contents of five “Discovery Packs” were updated and beautified by the education staff. These packs are available for free checkout to community members and visitors to Cordova. Each pack contains information sheets, identification cards and reading materials to help the user better understand our unique environment around Cordova. There are activity suggestions for families and users of all ages, as well as materials such as binoculars, small fish nets and magnifying glasses. The following kits are available for checkout:

- Plants- “Wandering Among the Wildflowers”
- Animal tracking- “Making Tracks”
- Birding- “For the Birds”
- Tide-pooling- “Exploring the Intertidal Zones”
- Geology- “Geology Rocks”

Science Center educator Allen Marquette started a new radio program in March of 2008 called “Binocular Astronomy and Sound Science.” The program is a live call-in radio program broadcast on Cordova’s local private radio station “The KLAM.” The program airs the first Monday of each month at 10:00 am and lasts twenty to forty minutes. After the basic astronomy segment of the program, the “Sound Science” part of the program begins with topics relevant to Prince William Sound and the Copper River Delta. One listener wrote, “These little tid-bits of science are a great way to start a day; a brain wake-up.”

HIGH SCHOOL OUTREACH

Objectives for 2007-2008

- Continue to help organize and facilitate high school science programs. This includes field trips, guest lectures, and the Iceworm Science Festival.
- To recruit, coach and chaperone high school students in the regional National Ocean Science Bowl competition held in Seward, AK each February.

The High School Outreach program addresses the Coastal Community Outreach and Education portion of the OSRI FY08 Work Plan.

High School Science Programs

During the 2007-08 school year, Science Center educator Allen Marquette facilitated 9 classroom presentations and field trips for 116 students and teachers in grades 7-12. Mr. Marquette developed a monitoring project for two Marine Biology classes at Cordova High School. The students and their teacher took monthly trips to the Cordova Boat Harbor to observe and record the diversity and quantity of organisms growing on several different substrates at various depths in the harbor. Students sketched, photographed the organisms they found, and recorded air and water temperature, salinity, water clarity, observable pollutants and surface oil sheen. Students also collected various invertebrates for observation in their classroom.
In mid-December, 18 Marine Biology students, their teacher and 14 adults, including community members and Science Center research and education staff, spent the day on the U.S. Coast Guard Cutter Sycamore on a science discovery cruise.

Once on station, researchers and educators lead participants in several physical and biological oceanography experiments. Using microscopes, students identified organisms they collected with a Petersen sediment dredge and plankton tow net; other students looked at physical data that was recorded on a computer from a CTD recording device that measures the conductivity, temperature and depth of the water column from the surface to the ocean bottom. Scott Pegau, Research Program Manager for the Oil Spill Recovery Institute, gave a presentation on the effects of oil spills on the ocean environment and its inhabitants. Neil Dawson, an Avian Biologist at the Science Center helped students identify seabirds observed during the cruise.

This project incorporated the PWS Science Center, U.S. Coast Guard, Cordova School District and Cordova community members in a partnership encouraging strong community ties and education throughout all parts of the community. An article from the Cordova Times is located in Appendix A.

**Iceworm Science Festival**
Science Center education staff took the lead in the planning and presentation of the fifth annual Iceworm Science Festival held in early February. Educators from the Imaginarium in Anchorage traveled to Cordova and brought the Star Lab, the Brain Game and several other hands-on science demonstrations to entertain and educate festival goers. This year, the High School science teachers opted not to put on a Science Fair; local scientists from PWSSC, Alaska Department of Fish & Game and the U.S. Forest Service were recruited to participate in a poster session and lead demonstrations to educate the public about the environmental research occurring in this region. Approximately 200 adults and children attended the Science Festival.

**National Ocean Sciences Bowl**
This year, eight high school students were recruited to participate in the Alaska Tsunami Bowl, the regional National Ocean Sciences Bowl competition (NOSB). This was the first year Cordova has sent two teams to the competition. To prepare for the competition, students attended 17 evening study sessions coordinated by Science Center educator Lindsay Butters. To enhance to students’ exposure to ocean science topics, four guest scientists from the Science Center and Oil Spill Recovery Institute were invited to give presentations to the students.

In February, the teams traveled to Seward and joined 13 other teams from Alaska to compete in the Tsunami Bowl. Team “Visceral Mass,” comprised of three veteran players and one new player, performed well at the competition, ending with a Third Place finish. Team “Santos del Océano” competed with four new students, three freshman and one sophomore, and finished in 11th place. Please see a Cordova Times article about the program in Appendix B.

Team members were asked to complete evaluations regarding their experience in Cordova’s NOSB program. Highlights of their experience were traveling to the competition in Seward and interacting with guest scientists who assisted with practice sessions. One student said his favorite part of NOSB was “constantly being challenged.” Suggestions were made for next year, including having team members develop “specialties” and studying the rules of the buzzer competition.
COMMUNITY EDUCATION

Objectives for 2007-2008

• To organize a series of presentations and field trips on the ecosystems of Prince William Sound, Copper River, and Gulf of Alaska, including research currently being funded by the Oil Spill Recovery Institute.

• Develop, produce and archive a weekly “Field Notes” radio program and monthly newspaper articles incorporating information from the above presentations.

• To leverage the resources and efforts of other community organizations with similar goals and/or missions by partnering to organize and implement community festivals that will promote awareness and understanding of the local ecosystems.

The Community Education program addresses the School Year Programs portion of the OSRI FY08 Work Plan.

Community Education Lecture Series

Science Center education staff successfully implemented another year of Tuesday evening Community Education programs, which provide weekly science-based educational programs to all members of the community. These programs focus primarily on the coastal and marine environments of the Prince William Sound and Copper River Delta with connections on a global scale.

The Tuesday evening programs had great attendance this year with 686 people attending 38 programs. Of that number, 111 were students. The two Cordova High School science teachers offered extra credit to students who gave a written or oral report after attending one of the evening programs.

Partnering with the University of Alaska Sea Grant Marine Advisory Program and the Cordova chapter of the Audubon Society has provided a greater diversity in programs delivered. Eleven programs were presented by PWS Science Center researchers who gave programs on physical oceanography, plankton, global warming, fish waste disposal, herring research and ocean birds. Over 200 people attended these programs providing a great venue for researchers to share their research and study results within the community.

Other organizations and agencies providing programs for the community education series this season include the U.S. Forest Service, Alaska Department of Fish and Game, Native Village of Eyak, Copper River Watershed Project, Ecotrust, Cordova School District, Marine Advisory Program and U.S. Coast Guard. Many other programs were provided throughout the season by various organizations, agencies and individuals from throughout Alaska.

Field Notes Radio Program

The Field Notes radio program produced by the PWSSC and KCHU Terminal radio continued to be broadcast from Valdez, Alaska. The three to five minute science radio program is aired on Thursday and Saturday afternoons and evenings. The radio programs are produced by Science Center educator Allen Marquette, and afford the Science Center an excellent opportunity to reach a new and varied audience in the Prince William Sound and Copper River Basin regions. The broadcast is also available to other PBS radio stations throughout the state of Alaska and has been heard in Juneau, Dillingham and surrounding areas.

This season, 10 programs were produced and recorded from October 2007 through May 2008. This year’s highlights included “Understanding what conditions affect Herring Spawning Areas,” which documented physical oceanographic studies conducted by Science Center researcher Shelton Gay, and a two-part report on “Marine Debris in Alaska.” Radio programs are archived on the KCHU website at http://www.kchu.org.
There has been a good response this season to the radio programs with both emails and phone calls to the Science Center and KCHU radio station asking questions about the programs or requesting additional information pertaining to these programs. Following are a few responses to the program: “What great programs you’ve had lately-- hope you will have repeats and follow ups.” “This is so awesome!”

**Sound Science Newspaper Column**

A variety of local science-related articles and transcripts from the Field Notes radio program series were edited and printed in the Cordova Times under a column called “Sound Science.” Nine articles were published during the 2007-08 season. Titles included “Snowflakes and Avalanches” and “Spruce Bark Beetles in Alaska.”

**Community Festivals**

Community festivals allow Science Center educators to combine efforts with other community organizations to reach larger audiences and promote common goals. One of the more popular community programs this season was the “Alaska Ocean Film Festival” which saw 75 people in attendance; 25 of those were students in grades 7-12. The presentation included several short videos produced by independent videographers and film makers from around the world that focused not only on the beauty of the ocean environment and its inhabitants but also recognized the problems our oceans are facing from marine debris, oil and chemical spills, over-population by humans and global warming. The festival is sponsored by the Alaska Center for the Environment.

The Science Center and the Cordova Family Resource Center partnered to host the annual “Earth Day and Health Festival” in conjunction with the traveling Alaska State Health Fair. In honor of Earth Day and National Environmental Education Week in April, educators implemented a Marine Debris and Trash Art project. Students in fourth and fifth grades and two high school Marine Biology classes participated in marine debris clean-up efforts and created outreach materials to educate the public about marine debris. Several tables of the educational materials, including a song about marine debris titled “Why Trash?” and art work created from the collected debris were on display during the Earth Day celebration. Please see a Cordova Times article about this event in Appendix E.

This year, education staff participated in the planning and implementation of the 2008 Copper River Delta Shorebird Festival and coordinated educational programming for a school group visiting Cordova. Twenty-five 6-8th grade students and three teachers traveled from Healy, AK to Cordova to attend the festival and participate in hands-on activities with Science Center education and research staff. Activities included shorebird identification, mist-netting and bird banding demonstrations, and mud core sampling to locate the organisms upon which the migrating shorebirds feed.

**COMMUNITY PARTNERSHIPS**

Science of the Sound is a community-based and supported program. Our program partners for the 2007-08 school year include the U.S. Forest Service/Cordova Ranger District, Cordova School District, Chugach School District, PWS Community College, Alaska Department of Fish and Game, Native Village of Eyak, Copper River Watershed Project, Alaska River Expeditions, Harborside Pizza, Cordova Family Resource Center, PWS Audubon Society, the Alaska SeaGrant Marine Advisory Program, Cordova PTA, KCHU Public Radio Station and Cordova’s local station KLAM. These partners made in-kind contributions in many forms: staff time and expertise in education, physical program space, materials and outreach support. Community members and businesses such as Cordova Telephone Cooperative, Wells Fargo Bank, Cordova Electric Cooperative and Alaska Marine Lines also support Science of the Sound via financial contributions.
CONCLUSION
The Science of the Sound education program reached over 1500 individuals through our various school and community programs, with an uncounted number also served by newspaper articles and radio programs. Our small education staff is pleased with what we’ve accomplished with the help of our many program partners. We are looking forward to applying our successes and lessons learned to next year’s Science of the Sound programming. Our goal in the coming years is to continue to build a sustainable and far-reaching education program focused on the marine resources of the Copper River Delta and Prince William Sound.
Students visit Sycamore to learn about marine biology

JOY LANDALUCE
Joy.calvetimes@ctcak.net

U.S. Coast Guard Cutter Sycamore hosted more than 20 guests from Cordova High School on Monday, Dec. 9, for a marine biology field trip under windy, rainy conditions.

The crew of the Sycamore provided a platform for the local high school students to conduct scientific experiments, observe local sea birds and learn about the environmental affects of oil spills.

Sea creatures such as starfish and other assorted sea life that inhabit the U.S. Coast Guard aids to navigation were provided by the Sycamore for scientific inspection and observation by the students.

The students and teachers are lunch on board and received tours of the Sycamore.

The field trip provided 18 high school students with a chance to conduct college-level experiments with esteemed scientists, along with a behind-the-scenes glimpse of the U.S. Coast Guard.

The education specialist for the Prince William Sound Science Center applauded the efforts of the Sycamore crew.

"Yesterday turned out to be a great trip on the cutter Sycamore with only light rain and mild winds during the activities on deck," Allen Marquette said in an e-mail to The Cordova Times. "The worst weather started once we got back to Cordova."

Joy Landaluce can be reached at (907) 424-7181.

Rasmuson Foundation awards $7.7 million for civil rights film

$100,000 to documentary on Alaska Native civil rights

ALASKA NEWSPAPERS STAFF
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Alaska Public Telecommunications has received $100,000 for the production of Jeff Silverman’s documentary, “For the Rights of All.”

The film chronicles the Alaska Native civil Residential Center for Help building.

ARCH is the only long-term residential substance abuse treatment program for youth ages 12-17 in Alaska. At any given time, from 19 to 40 youths are on its waiting list, with an average waiting time of 45 days.

Expansion will allow for a greater number of youth to be served at any given time, helping to lessen waitlists and provide timely therapeutic response to keep youth from placement out-of-state.

Juneau’s Eaglecrest Ski Area received $700,000 for a capital improvement project. Eaglecrest is Juneau’s primary winter recreation center with 31 official alpine ski runs and eight kilometers of cross-country ski trails. The improvements include new mid-mountain chairlift, a platter lift and trail resurfacing. Project completion is set for 2010.

Hospice of Tanana Valley received $381,384 for the construction of a new build-remodel the kitchen at the Yupiit Piciryarait Cultural Center.

• University of Alaska Anchorage Aviation Technology Division: $143,000 to upgrade its air traffic control tower simulator.

• Baranof Island Housing Authority, Sitka: $495,000 for the renovation of an elder housing building.

• Morris Thompson Cultural and Visitors Center, Fairbanks: $1 million toward construction of a new facility.
Fast answers, fast minds
Cordova’s teams dive right in on tough Ocean Bowl contest

CINTHIA RITCHIE
critchie@alaskanewspapers.com

Teams from Cordova High School and the Prince William Sound Science Center placed third and 11th in the Alaska National Ocean Sciences Tsunami Bowl in Seward held on Feb. 9.
Visceral Mass took third and Santos del Océano, 11th, against stiff competition vs. teams from around the state.
Fifteen teams competed in the event. Juneau-Douglas nabbed both first and second place and will represent Alaska at the National Ocean Sciences Bowl April 24-27, to be held in Seward this year for the first time.

Team Visceral Mass from Cordova had the best overall team record for the competition, winning seven games and only losing one. The team also beat the first and second place teams during matches earlier on in the competition.
Composed of three juniors and one sophomore, the team says it

See Page 5, Bowl
“These kids were at practice every day, asking good questions,” she added. Butters said that it helped that Cordova High School started offering a marine biology course last fall. That course, and frequent interaction with guest scientists from the Prince William Sound Science Center, helped the students prepare for the competition.

Hosted by the UAF School of Fisheries and Ocean Sciences, the finals in April will bring 25 teams of high school students and 250 volunteers, students, judges and family members from across the United States to Alaska. Visceral Mass and Santos del Océano will be there, ready to compete against winning teams from around the nation.

The National Ocean Sciences Bowl was established in 1998 to encourage learning about the oceans and increase the teaching of ocean sciences in high schools. Support for the Bowl is provided by the Consortium for Ocean Leadership. The regional competition is supported by the UAF School of Fisheries and Ocean Sciences, Alaska Sea Grant and the North Pacific Research Board.

Winning students received their choice of a $2,000 scholarship to University of Alaska Fairbanks or University of Alaska Southeast and a free trip to the bowl final in April.

The winning coach gets a one-year membership in the National Marine Educators Association and a scholarship to the educator’s Marine Science Camp at Kasitsna Bay.

Cynthia Ritchie can be reached at (907) 342-2428 or toll free at (800) 770-9830, ext. 428.

2008 Alaska Tsunami Bowl Results

1. Juneau-Douglas High School, Naughty Nautilli
2. Juneau-Douglas High School, Megatron
3. Cordova High School and Prince William Sound Science Center, Visceral Mass
4. Skyview High School, Odd Pisces
5. White Mountain, Polar Bears
6. Mat-Su Career and Technical High School, Jackie’s A.I.D.S.
7. South Anchorage High School, Team Starfish
8. Soldotna High School, The Kraken
9. Skyview High School in Soldotna, Skyview Team No. 2
10. Seward High School and Kenny Lake School, Team Charybdis
11. Cordova High School and Prince William Sound Science Center, Santos del Océano
12. South Anchorage High School, Team Sea Urchin
13. Unalaska City School, Tentacular Nematocyst
14. Kenny Lake School, Sea Geeks
15. Unalaska City School, Peanut Worms and Jellyfish Sandwiches

Tattoo Removal $49.95
Fieldtrips explore energy options for local buildings

Editor's note: This year the Discovery Room at the Prince William Sound Science Center included activities to explore all aspects of energy, with a special focus on the ways residents make and use energy locally.

Mount Eccles Elementary School students in grades 4-6 were invited to participate in monitoring fieldtrips established and supervised by Discovery Room staff.

Through these fieldtrips, students evaluated energy use in six buildings in Cordova by conducting an energy audit in each.

The article that follows is a summation of their findings, written by sixth-graders based on information learned through Discovery Room activities and a visit to diesel power plant.

We use energy in a lot of ways. We turn lights on when it's dark. We watch movies when we're bored. It's a way we use electric energy.

We cook food when we're hungry. We take hot tubs. We ride the chairlift after a run down Moombo.

We use gas for our cars, dirt bikes and four-wheelers. We use food energy for running or jumping and to grow. We use biomass when using a wood stove.

Petroleum products and water are the primary sources of energy in Cordova. We burn diesel to heat most of our homes. We do this because of our remoteness. In a few houses people burn wood instead. For electricity we have a diesel power plant and a hydro plant at Power Creek.

In Cordova, we mainly use two different ways of producing electricity. We use diesel for electricity by burning it. We also use hydroelectricity for electricity in the summer because the rivers aren't frozen. When we use hydro, we are polluting less.

We are also thinking about wind as another way of producing energy, but this hasn't happened yet.

Let's compare diesel fuel to hydropower. Diesel is a nonrenewable resource that we should only use when water is frozen. Hydro should be used during the summer and as much as possible because water runs and doesn't cost anything.

We should build more hydro-plants. Hydro is a nonpollutant; diesel is a pollutant. Regardless of the source of energy, it is important to conserve what we can. In Cordova, many buildings have arctic entries that make them more energy efficient. The arctic entry traps the cold air out and keeps the house or building warmer.

Arctic entries also save you money because you don't use as much fuel. Fireplaces keep the house warm without using electricity and fuel. So make your house energy efficient and save more money.

Buildings in Cordova could save electricity by using fluorescent light bulbs, turning off lights when a room is empty and unplugging appliances when they aren't being used. Because it has a remote and it is ready to be turned on "when told," you can save more electricity when you unplug your TV.

How to conserve energy

A list created by Discovery Room students offers ideas on how to conserve energy.

- Don't pollute. Litter and waste require extra energy to clean up.
- Use solar panels. Even if it is only a supplement for the energy your home or business requires, it will drastically reduce your dependency on fossil fuels.
- Don't leave your heater on when you aren't using it; turn the thermostat down when no one is home.
- Don't turn your heater off when you go out of town in the winter. Turn it down but keep your home warm enough to avoid frozen pipes.
- Don't flick the lights on and off.
- Cut down just the trees you need. Leave enough of the forest intact to ensure new trees keep growing to help clean the air and water and provide wood for fuel in the future.
- Don't leave lights on when you aren't using them or when you go to sleep.
- Don't leave your stove on when you aren't cooking.
- Don't have every light on in your home when you don't need it.
- Don't drive everywhere. Walk or ride a bike.
- Don't leave the water running. We all know it takes energy to heat the water, so you waste fossil fuels or electricity when you leave the warm water running. But even cold water requires energy to clean, filter, and process, so allowing the cold water to run puts a drain on energy too.
- Don't leave your cell phone on when you aren't using it.
- Use more solar power than coal or other fossil fuels. In Cordova, we can use solar energy to heat our homes passively just by leaving the blinds open on sunny days.
- Use sunlight instead of electric lights.
- Use LED flashlights or rechargeable batteries.
- Pace yourself to conserve “people power” too!
- Turn your TV and computer off when you aren't using them.
- Use wood fires to heat homes instead of fuel oil.
- Use candles instead of lights.
- Don't play with electric plugs.
- Use just the energy you need; don't use too much.
- Close the door all the way to reduce the energy required to heat your home.
- Reduce, reuse, recycle.

For more ideas about how to conserve energy and the many ways we use energy in Cordova, see the art display near the Cordova Electric Cooperative entrance showcasing creations by Discovery Room participants in kindergarten through fourth grade.

— Submitted by Krysta Williams, Prince William Sound Science Center.

Discovery Room is a supplemental science education program run through a partnership between the Prince William Sound Science Center and U.S. Forest Service Cordova Ranger District.

With help and support from the Oil Spill Recovery Institute, BP, Conoco Phillips, Alaska Commercial, Alaska Marine Lines, Cordova Telephone Cooperative, Cordova Electric Cooperative, and donations from community members, the Discovery Room program serves students at Mount Eccles Elementary School in kindergarten through sixth grade.

Got News? Call The Cordova Times at (907) 424-7181

Congratulations to Our 2008 Graduating Seniors!
April 21, 2008

Dear Ms. Robin Kashy,

Thank you for allowing the discovery room kids to audit energy used at the swimming pool. We were all very impressed with the energy you made possible by your fluorescent bulbs used in the lobby and your new German boiler. If you want to save more energy you can replace single-pane windows with double-pane windows or insulate the window with drapes.

Thank you.

K.

4/15/08

Dear Ms. Nancy Bird,

Thank you for letting us visit Prince William Sound Science. It's good that you have energy efficient light bulbs. Turning down the heat at night is very wise and will stop the robbers in those tracks (freezes it in his track). By letting in extra light with windows you don't need as many lights. You have too many lights and that burns extra electricity. Remember that if nobody is in the room you should turn off the lights. Also fix those drafts. It takes more fuel to keep a warm building warm when it is always warm than when it keeps getting cold.

Sincerely,

[Signature]
Cordova Health Fair promotes diabetes awareness

JOY LANDALUCE
joy.cdvtimes@ctcak.net

Jackie Ladd and Jeanna VanBrocklin of the Native Village of Eyak Diabetes/Wellness Program presented an introduction to the Cordova Challenge at the Cordova Health Fair.

“The Native Village of Eyak would like to see everyone in Cordova be physically active for 30 minutes a day,” VanBrocklin said of the challenge, which is based on the National President’s Challenge.

“People were provided with monthly tracking sheets, and ideas for a variety of physical activities,” she said.

“It’s not as difficult as people may think to get 30 active minutes everyday, especially when you count everyday tasks like vacuuming and shoveling snow.”

The Health Fair, which is sponsored by the Cordova’s Family Resource Center, was well attended.

Cordova students focused on marine debris at one of the many booths at this year’s Cordova Health Fair.

Allen Marquette, education program coordinator at the Prince William Sound Science Center, described the evolution of the booth.

“The trash collection and artwork creations as well as the marine debris collection and outreach was funded through monies from the National Parks Foundation, Oil Spill Recovery Institute and British Petroleum,” Marquette said.

“We at the science center organized students for the project. High school students made posters, brochures and two students even wrote and recorded a ‘trash song’ for the event,” he said.

“Students were all focused around outreach and education about marine debris and how it harms the environment and wildlife.”

Joy Landaluce can be reached at (907) 424-7181.