



**SCIENCE AND TECHNOLOGY
FAIR INITIATIVES
2002/2003**

Final Report

August 2003



Prepared by the
First Nations Education Steering Committee
First Nations Schools Association

Table of Contents

Introduction.....	3
Summary.....	4

Program Reports

Boothroyd Indian Band.....	5
Canim Lake Band	7
Carrier Sekani Tribal Council	9
Chalo School.....	11
Cowichan Tribes	13
Eugene Joseph School.....	15
George Manuel Institute	17
Gitanmaax Band Council.....	19
Gitwinksihkw Elementary School.....	21
Hagwilget Village Council.....	23
Haisla Community School.....	25
Hartley Bay School	27
Katzie First Nation.....	29
Kispiox Community School	31
Klahoose First Nation.....	33
Ktunaxa/Kinbasket Tribal Council.....	36
Kwakiutl District Council	38
Kwakiutl Band Council.....	41
Lach Klan Elementary Junior Secondary School	43
Lhoosk'uz Dene Government	45
Lower Kootenay Band.....	47
Lower Similkameen Indian Band.....	49
Mamalilikulla-Que'Qwa'Sot'em Band.....	52
Moricetown Elementary School	54
Musqueam Indian Band.....	57
Nanoose First Nation	59
Nathan Barton Elementary School	61
New Aiyansh Village Government	63
Nuchatlaht Tribe.....	65
Pacheedaht First Nation.....	67
Saulteau First Nation.....	69

Senisyusten First Nation School	71
Secwepemc Natural Resources Society	73
Skeetchestn Indian Band.....	75
Squamish Nation	77
T'lisalagi'lakw School.....	79
Tsilhqot'in National Government	81
T'Sou-ke Nation	83
West Moberly First Nations.....	86
Whispering Pines/Clinton Indian Band.....	89
Yekooche First Nation	91
Participant Summary Table	94
Allocation Table	95

Introduction

The 2002/2003 Science and Technology Fair initiatives provided many opportunities for more than 3,336 First Nations youth to discover science and technology as a career choice by supporting science fairs that provided First the Nations youth with first hand experience in various science disciplines.

The First Nations Schools Association (FNSEA) and the First Nations Steering Committee (FNESC) administered the Youth Employment Strategies for the BC Region. Last year, some communities did not take advantage of their allocations for the Youth Employment Strategies (YES), resulting in some unallocated funds. Those funds, as well as some additional funding made available from Indian and Northern Affairs Canada (INAC), were reallocated to support Science and Technology Fairs.

A total allocation of \$179,146.00 was made available for 2002/2003 Science and Technology Fair initiatives for First Nations communities. These funds were available through a proposal call process that emphasized First Nations control and development of programs that were relevant and appropriate for their communities. The selection criterion was based on the local community design and control. Successful communities expended the funds by March 28, 2003.

The final reports for the 2002/2003 Science and Technology Fair Initiative demonstrate an enthusiastic response as well as outstanding results.

Program Objectives

The Science and Technology Fair program objectives were:

- To promote, amongst school age children, an interest in science and technology in the hopes of encouraging them to pursue sciences in school and as a potential career path;
- To promote an understanding of traditional sciences and an interest in First Nations traditional technology; and
- To promote information on science and technology through science fairs and/or career fairs and guest speakers.

This final report for the Science and Technology Fair initiative is a collection of condensed versions of the final reports submitted from the forty-one (41) First Nations communities and organizations that were funded through this program.

Summary

The First Nations communities who received funding indicated that the 2002/2003 Science and Technology Fair initiatives were beneficial for the youth in their communities. The Science and Technology Fairs were an inspiration to many participants and the program activities provided an opportunity for many participants to pursue their interests in science, technology and education.

Many of the youth were exposed to learning about career planning and developing education plans. In addition, they learned from many presentations that provided them with useful knowledge on specific careers.

The youth had excellent hands-on experiences, especially in science laboratories. The visits to the labs had the greatest response and enthusiasm from the youth.

One of the workshops had the participants learning about the scope of the career opportunities in computer systems technician (CTEC) and computer systems operation and maintenance (CSOM) fields.

Several students explored Mining and created a working model of simple machinery while the learning the various aspects of mining.

A Space Center visited a school and presented to five different groups and included a portable planetarium in their presentation.

Many participants made site visits to modern science and technology locations in Vancouver, BC such as the MacMillan Space Centre, Vancouver Aquarium, and Science World.

One First Nation School prepared "Science in a Bag" event for the participants. Parents took home a bag full with materials so that their children could complete science experiments or conduct research. Many of the participants completed their science experiments and displayed them at their Fair events.

A television and radio tour provided participants with an opportunity to learn and understand about media stations operate, what type of skills were essential and what type of training was required.

Overall, it has been a very successful year and the FNSA and FNEC would like to acknowledge all of the participating communities and organizations for hosting excellent, worthwhile science and technology fairs. FNEC and the FNSA would also like to express great appreciation to Indian and Northern Affairs Canada for its support of this very valuable initiative.



Program Activities

The Boothroyd Indian Band Science and Technology Fair initiative exposed the youth, young adults and adults to a Reality Check for Indigenous People with the Vancouver Police and the Native Liaison Society. In addition, there was a Digital Camera workshop where the youth learned how to operate a digital camera, transfer pictures onto a computer, add text, and print each picture.

All of these activities were very beneficial for youth between the ages of 12 and 18.

Participant Learned Skills

The youth learned about drugs and its social issues, careers in sciences, and the prevention of drug abuse. The Digital Camera workshop was informative for the youth as they gained skills about camera equipment, computers, and the development of pictures to print form.

Participant Information

Total number of students:	42
Total number of female students:	28
Total number of male students:	14
Total number of students with disabilities:	0
Total number of students who attended the Fair:	42

Total number of students aged:	14 & Under	15 – 19	20 – 24
	25	13	4

Total number of students in elementary school:	17
Total number of students in secondary school:	21

Total amount spent on the Fair:	\$5,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The Boothroyd Indian Band felt that their initiatives provided their youth with a greater understanding and created an interest in the areas of science and technology careers. The Band promoted a keen interest in science-related activities.

The Reality Check for Indigenous People was geared towards helping young people avoid stepping into a self-defeating cycle, which was so prevalent to the Downtown Eastside of Vancouver, BC. The preventative program introduced high-risk youth to the realities of life on the street. Shocked by the reality of the day-to-day life on the street, the participants left with vital information and a new insight. The focus of the program was on prevention and leans heavily on the importance of making intelligent well informed decisions.



Program Activities

The Canim Lake Band hosted a Science and Technology Fair that included facilitators in various careers as follows:

- Doctor
- Forestry
- Tourism
- Guide and Outfitter
- Conservation Officer
- Fisheries Manager
- Helicopter Technician
- Certified Nurse
- RCMP Officer

There were special presentations from the Science departments of the University of British Columbia, British Institute of Technology, and Science World. The Canim Lake Band Education Administrator and Peter Skene Ogden, First Nations Liaison, presented the educational requirements for various careers.

Participant Learned Skills

The youth were exposed to learning about career planning and developing education plans. In addition, they learned from the many presentations that provided them with useful knowledge on specific careers. Other skills learned included the following.

- Observation skills
- How to apply for various funding sources for school or employment training
- Focusing on personal goals
- Nursing skills
- Good grades and higher learning
- What is needed to be successful at any kind of profession
- Wide range of employment and education skills
- What it takes to own a business
- The importance of education

Participant Information

Total number of students:	42
Total number of female students:	16
Total number of male students:	26
Total number of students with disabilities:	0
Total number of students who attended the Fair:	42

Total number of students aged:	14 & Under	15 – 19	20 – 24
	12	6	24

Total number of students in elementary school:	12
Total number of students in secondary school:	6

Total amount spent on the Fair:	\$4,250.00
Total contribution from DIAND:	\$4,250.00

Program Evaluation

There were a wide variety of presenters that expanded the participants' minds. The facilitators for the program were well prepared and the participants received all the information in science and technology.



Program Activities

The Carrier Sekani Tribal Council had twenty-five students and seven adults who enjoyed a Science and Technology Career Fair. The youth ranged from school grades eight to twelve, and they came from rural locations and the Prince George, BC area. The theme chosen was “Discover your Future.” All participants were given a tour of the College of New Caledonia residence and several of the institute’s departments.

In each of the programs the participants were shown the use of plants and animals and the genetic analysis of bugs for salmon nitrogen content. Other program activities included:

- Student training
- Visit to a forestry lab
- Tour of Geographic Information Systems Lab
- Computer Lab
- Environmental Studies

Seven Aboriginal post-secondary students provided an excellent panel discussion on their career challenges and opportunities. These students were able to demonstrate the connection between their academic studies and their work during the summer months. These activities included pharmacy, environmental management, forest technology, geographic information systems, and nursing.

The overall career fair hosted by the post-secondary students was an excellent hands-on experience, especially in the science labs. As a result, some of the students are now interested in preparing themselves for careers in one of these programs.

Participant Learned Skills

The participants learned the following skills.

- Students trained themselves to not give up and quit
- Ability to identify important information
- Students understand the courses they need to enter academic programs

Participant Information

Total number of students:	25
Total number of female students:	15
Total number of male students:	10
Total number of students with disabilities:	0
Total number of students who attended the Fair:	25

Total number of students aged:	14 & Under	15 – 19	20 - 24
	0	25	0

Total number of students in elementary school:	0
Total number of students in secondary school:	25

Total amount spent on the Fair:	\$3,018.40
Total contribution from DIAND:	\$3,018.40

Program Evaluation

The tour of the labs in each of the programs provided hands-on experiences for all the participants. The evaluation forms stated the career fair was an overall success. The visits to the labs had the greatest response and enthusiasm from the youth. The post-secondary student responses revealed that returning to school included meeting new people from across Canada and international countries.

In conclusion, the participation and assistance from the students were greatly appreciated and it gave them training and practice in conducting presentations. The youth responded enthusiastically to interacting with Aboriginal role models. It is hoped the program will be repeated next year as it was a huge success.



Program Activities

The Chalo School hosted a Science Career Fair for students from grade one to eight Alternate Program. There were guests from traditional and non-traditional science careers representing their chosen field. Some of the guests included a doctor, computer programmer, pharmaceutical researcher and geologist. The guests provided information sessions that lasted about ½ hour. In addition, there were guest speaker representatives from various post-secondary institutions as well as individuals from trade industries who consulted with the older students on the educational requirements for various careers.

Participant Learned Skills

Prior to the Career Fair the students participated in an informal assessment to identify potential careers they would be interested in. In the primary grades, many responses indicated that the students did not have a realistic understanding of potential careers. After the completion of the fair, all grade level students were able to articulate at least five or more careers that were available, and students were able to indicate a career that most interested them.

Participant Information

Total number of students:	130
Total number of female students:	65
Total number of male students:	65
Total number of students with disabilities:	0
Total number of students who attended the Fair:	130

Total number of students aged:	14 & Under	15 – 19	20 – 24
	122	8	0

Total number of students in elementary school:	122
Total number of students in secondary school:	8

Total amount spent on the Fair:	\$6,535.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

Students had the opportunity to attend four information sessions. There were over twenty-five careers represented. The support from industry and the community of Fort Nelson and the Fort Nelson First Nation was magnificent.

The students were provided with careers that involved science and technology fields. In addition, they were provided with an understanding of traditional sciences through the science fair, and especially the guest speakers.



Program Activities

The Cowichan Tribes had a Science and Technology Career Fair with a cultural component that looked at science and technology careers with the inclusion of First Nations culture.

The participants and their teachers enjoyed looking at various careers and received copious amounts of information - both verbal and in informational handouts. The most wonderful part of the day was the cultural demonstrations of First Nations traditional foods, war canoes, and Cowichan sweaters. There were also Hul'qumi'num language, bone games, cedar basket making, weaving, drumming, singing and dancing demonstrations.

In addition, Cedar Kits were made and available for the cultural teachers in the local school district and Cowichan Tribes. The kits were utilized in conjunction with traditional teachings in science.

Participant Learned Skills

The participants learned how to obtain information on a career that they would like to pursue. The booths provided valuable career information from those that spoke on the careers. These individuals were also very influential role models.

Participant Information

Total number of students:	350
Total number of female students:	175
Total number of male students:	175
Total number of students with disabilities:	0
Total number of students who attended the Fair:	350

Total number of students aged:	14 & Under	15 – 19	20 - 24
	145	170	35

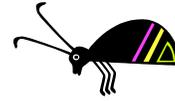
Total number of students in elementary school:	100
Total number of students in secondary school:	215

Total amount spent on the Fair:	\$3,100.00
Total contribution from DIAND:	\$3,100.00

Program Evaluation

The Science and Technology Career Fair provided the participants with valuable career information on the traditional sciences. The event had an added cultural component and included First Nations and non-native participants.

All day, the Fair was humming with the beautiful sound of people communicating. There were Elders, staff, and participants exchanging information, asking questions, touching wool and cedar, tasting fried bread and smoked fish, but most of all they were looking at each with a new understanding of the science and technology careers.



Program Activities

The Eugene Joseph School Science and Technology Fair focused on students in grades three to six with an emphasis on examining careers in science and technology-related fields. Two teachers with extensive science experience facilitated the Science and Technology Fair. The fair was called “Science in our Lives.” The participants had an opportunity to observe the role science plays in their daily lives and in the lives of their ancestors.

The Fair was also attended by participants aged nine to twelve who belonged as members of the Tl’azten Nation. Throughout the two days participants were involved in learning about their Carrier Sekani history, magnetism, science of a public swimming pool, as well as color and fabric use today and in art and clothing created by their ancestors.

Participant Learned Skills

The participants were given the opportunity to expand their knowledge in the Science and Technology fields. The participants learned about hands-on experiments and gained a love for science.

Participant Information

Total number of students:	14
Total number of female students:	9
Total number of male students:	5
Total number of students with disabilities:	0
Total number of students who attended the Fair:	14

Total number of students aged:	14 & Under	15 – 19	20 – 24
	14	0	0

Total number of students in elementary school:	14
--	----

Total number of students in secondary school:	0
Total amount spent on the Fair:	\$2,450.00
Total contribution from DIAND:	\$2,165.00

Program Evaluation

The participant's experiences from the science and technology activities has proven that the one-day project provided many opportunities for the instructors to discuss various career options that required training in science.

The school believes that students who are given exposure to science outside of the classroom on a regular basis will not only find pleasure in it, but may also carry that interest into future studies. The event reinforced learning.



Program Activities

The George Manuel Institute (GMI) Science and Technology Fair initiative was a one-week computer-troubleshooting workshop for 15 high school students. Many of the adult and youth students did not possess the basic troubleshooting skills of a basic personal computer (PC) user. Two qualified computer systems technicians facilitated a workshop in the practical aspects of troubleshooting basic hardware and software problems.

Throughout the week-long workshop the technicians supervised the participants in understanding basic components and the functions of an everyday personal computer. The participants worked in groups of three's and disassembled and reassembled one of either the Band office or GMI's due-to-be-replaced PC's.

The final day of the workshop included the assembling of a computer with all new components. The participants reviewed, installed and set-up the BIOS, CPU operating system, hardware drivers, windows operating system, and basic word processing programs.

Participant Learned Skills

The program activities allowed the participants to learn about the inner working of a PC including the functions of internal components (i.e. motherboard, CPU, RAM, Network/video/audio cards etc). The participant also obtained an understanding of basic maintenance and upgrading techniques for installing RAM, and modems, changing network, video, and audio cards.

The participants learned about the scope of the career opportunities in computer systems technician (CTEC) and computer systems operation and maintenance (CSOM) fields. In addition, they learned about the college entrance requirements of the IT/IS related career opportunities.

Finally, the GMI staff and the Band Administration impressed on the participants the forecasted demand for qualified members who possess these valuable skills.

Participant Information

Total number of students:	7
Total number of female students:	3
Total number of male students:	4

Total number of students with disabilities:	0
Total number of students who completed the Fair:	7

Total number of students aged:	14 & Under	15 – 19	20 - 24
	2	0	5

Total number of students in elementary school:	0
Total number of students in secondary school:	7

Total amount spent on the Fair:	\$4,290.00
Total contribution from DIAND:	\$4,290.00

Program Evaluation

Everyone who started this program stayed until the end and was able to take a computer home. The whole class of seven can now add peripherals to the computer and remove components properly. The participants have an understanding of how the components work and what they do. They also know how to problem solve with components that don't work by using trial and error and process of elimination. In addition, they can jumper set to the proper locations, and reboot a computer, install an operating system successfully. The participants know how to use the scandisk operation and defragmentation operation to keep their computer running efficiently. Moreover, they know how to make a boot disk in case they have to reinstall their operating system and how install new software into a computer.



Program Activities

The Gitanmaax Band Council hosted a one-day Science Fair in the community of Gitanmaax for children between the grades of five and twelve. The Science Fair raised the profile of science and technology to school aged children, as the area of science was not a highly popular program in the local school district with the Gitanmaax First Nations students.

The main highlights included the following activities:

- Bridge Building Contest
- Volcano Building Contest
- Display Boards on various subjects –Static Electricity, Plant Growth, and Astronomy of Star

The Gitanmaax Nursery School provided a presentation on their experiment of hatching chicks from eggs with a timeline on how long this process takes and what steps were followed to make this project successful.

A panel of judges consisting of a council member, community members and teachers rated all of the Science displays. The children were provided with outlines that stated the dimensions for their entries. Ribbons were awarded to the displays by the judges.

Participant Learned Skills

The Science Fair was a big hit with the children as they had fun while learning about science and technology.

Participant Information

Total number of students:	
Total number of female students:	
Total number of male students:	
Total number of students with disabilities:	
Total number of students who attended the Fair:	

Total number of students aged:	14 & Under	15 – 19	20 - 24

Total number of students in elementary school:	
Total number of students in secondary school:	

Total amount spent on the Fair:	\$5,446.49
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The participants had fun with all of the science activities including learning about traditional medicines, listening to Elder’s stories, participating in river walks, and swimming. The whole program was well supported by the community, parents, and the local Elders. The participants found it important to learn about their culture and traditional medicine usage.



Program Activities

The Gitwinksihlkw Elementary School Science and Technology Fair main objective was to promote an interest in science and technology in the hopes of encouraging children to pursue sciences in school and as a potential career path. Science and Technology information was presented to participants through the use of Elders as guest speakers and local community members employed in a science-related field. These community members included a certified dental assistant, geographic information system technologist, and a Nisga'a fisheries technologist.

The Gitwinksihlkw elementary students explored Mining and created a working model of simple machinery while learning the various aspects of mining. In addition, with the aid of the local school district, the elementary school as a whole had a presentation on precontact use of sciences by:

- Construction of a model precontact village
- Various uses of cedar
- The making of a totem pole (physics used in raising a pole)
- Various uses of other materials used for precontact survival

Participant Learned Skills

The Primary students learned about the following:

- Classified different types of canoes according to purpose
- Construction of canoes - visiting a carving shed to see a canoe under construction and continued to learn about its further stages of construction
- Used cedar bark to make their own canoes
- Used paper to make their own canoes

The Intermediate students learned about the following:

- Researched longhouse construction and design
- Build model longhouses and arranged them in four villages
- Created a backdrop to demonstrate their learning about one aspect of building a longhouse

Individual students learned about the following:

- Chose a topic of interest with guidance to choose an element of traditional culture
- Interviewed Elders and other local experts about traditional hunting, fishing, and food preservation

- Used the Internet and text resources to research their topics
- Displayed and/or demonstrated their topic to community members
- Conducted experiments and set-up displays to demonstrate “hands on” science

Participant Information

Total number of students:	34
Total number of female students:	23
Total number of male students:	11
Total number of students with disabilities:	0
Total number of students who attended the Fair:	51

Total number of students aged:	14 & Under	15 – 19	20 – 24
	34	17	8

Total number of students in elementary school:	34
Total number of students in secondary school:	17

Total amount spent on the Fair:	\$5,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

This event contributed to the increased awareness of importance of science in the school and its surroundings. It was wonderful that the smallest community on the Nass River was the first to host a Science Fair.



Program Activities

The Hagwilget Village Council hosted a one-day Science and Technology Career Fair. The Fair included presentations by traditional chiefs on traditional territories, landmarks, culture, tradition and history. Contemporary chiefs were also invited to speak on current affairs and activities. Guest speakers included fishery technicians, doctor, pharmacy assistant, community health nurse, home care workers, computer technician, mental health counselor, and an education counselor.

Participants were introduced to modern technology and given a glimpse on the power and tenacity of their forefathers. There were career booths, pamphlets, and science and technology video presentations.

Participant Learned Skills

The participants acquired public speaking, organizing, coordinating, planning and community liaison skills. Other skills learned included researching, communicating, and writing. The participants learned the many options available to them through information on career paths and role models. The participants also learned about local role models currently working in a career and gained an understanding about their local community and resources.

Participant Information

Total number of students:	90
Total number of female students:	16
Total number of male students:	18
Total number of students with disabilities:	0
Total number of students who attended the Fair:	90

Total number of students aged:	14 & Under	15 – 19	20 – 24
	14	64	12

Total number of students in elementary school:	14
Total number of students in secondary school:	34

Total amount spent on the Fair:	\$5,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The Fair brought an understanding of the connections between their culture and tradition alongside contemporary career options. The participants came away with a new understanding of the importance of an education in order to pursue future employment.



Program Activities

The Haisla Community School promoted an interest in science and technology while using the natural resources available in the region. The school approach was to utilize the abilities of the teachers to not only create lessons that followed a theme, but also brought outside speakers, Elders and outdoor environmentalists located in the area.

All of the program activities were for the total population of the school in varying degrees with implementation according to their specific grade levels. The activities that took place were:

- Biology - Traditional Plant Identification
- Biology - Beachcombing
- Chemistry – Preparation of Healing Medicine
- New Technologies -Photography
- New Technologies – Microscope Study
- New Technologies – Technology and Native Art
- Biology – Guest Lecturer – Fisheries
- Forestry – Guest Lecturer – Forestry
- Biology/Chemistry – Elder/Traditional Herbalist

Participant Learned Skills

The participants were provided with a variety of science and technological experiences that proved to be successful and enjoyable.

The participants learned about important traditional plants, their Haisla terms, and plant usage. Along with the study of plants additional lessons were held on survival techniques, land usage, orienteering skills, weather, and forest habitation.

During the beachcombing activities the participants learned about cataloguing, labeling, and oral and written presentation skills on items they had found.

The preparation of healing medicine activities included the study of cultural significance of the medicine, its usages, the modern equivalent in usage today, and how it was discovered.

Participant Information

Total number of students:	50
Total number of female students:	25
Total number of male students:	25
Total number of students with disabilities:	0
Total number of students who attended the Fair:	50

Total number of students aged:	14 & Under	15 – 19	20 - 24
	50	0	0

Total number of students in elementary school:	50
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$6,100.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The participants experienced many successes and generated increased interest in science and technology fields. All activities were geared for the total school population in varying degrees and implemented appropriately to their specific grade levels.



Program Activities

The Hartley Bay School held a Science and Technology Career Fair that promoted an understanding and interest in careers in science and technology amongst their students.

The program activities included presentations from or covering:

- UBC Pediatricians
- Marine Biologists
- Forestry
- Tourism
- Health Coordinator

A local Science Fair was held with students also attending a District Science Fair. In addition, an overnight science school camp was a tremendous hit. Many of the program activities were held during a Provincial Education Week that included presentations on careers in science and technology and nutrition and literacy.

Participant Learned Skills

The participants learned the following skills:

- Participation and observing experiments
- Research techniques]
- Conclusions (what, where, when and why)
- Cooperation
- Teamwork
- Capitalizing on science and technology discoveries

Participant Information

Total number of students:	60
Total number of female students:	32
Total number of male students:	28
Total number of students with disabilities:	9
Total number of students who attended the Fair:	60

Total number of students aged:	14 & Under	15 – 19	20 - 24
	41	19	0
Total number of students in elementary school:			29
Total number of students in secondary school:			31

Total amount spent on the Fair:	\$5,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The Hartley Bay School was aware of the great need for professional or trained people among the First Nations population, particularly in the home community. The discrepancy between the actual numbers of professional people among the First Nations population was very noticeable. In the Prince Rupert area, with just over 50% of the population First Nations, it would be expected to have 50% of the teachers being First Nations, but there is barely 10%. In other professional fields, there was some representation, but nowhere near the expected 50%. With this in mind the school fully endorsed their Science and Technology Fair.



Program Activities

The Katzie First Nation Science and Technology Fair initiative was a two-day “One Stop Career Shop” workshop that included discussions on career exploration and education. A useful tool called “Playing Mind Games” was used as a warm up exercise for the participants. This exercise helped the participants to look at potential careers or occupations. Two workshops included facilitation by the Aboriginal Employment Services and the YWCA Career and Employment Services funded by HRDC.

The Career Fair included presenters from a wide variety of careers and various displays with resources on employer information, agencies, colleges and university calendars.

Participant Learned Skills

The participants learned about career exploration techniques and career planning skills. In addition, the participants were able to understand about various employers, agencies, colleges and universities from the information distributed at the Career Fair.

Participant Information

Total number of students:	27
Total number of female students:	18
Total number of male students:	9
Total number of students with disabilities:	1
Total number of students who attended the Fair:	27

Total number of students aged:	14 & Under	15 – 19	20 – 24
	12	7	8

Total number of students in elementary school:	10
--	----

Total number of students in secondary school:	8
---	---

Total amount spent on the Fair:	\$5,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The Science and Technology Fair provided guidance for the participants who were planning a career. Great relationships were formed with the surrounding municipalities for future career opportunities. This relationship helped build strong and self-confident First Nations people and thus healthier communities.



Program Activities

The Kispiox School Science and Technology Fair Initiative was our 3rd Science Fair. It included more students excited about doing their own experiments over a wide variety of science and technology disciplines.

This year the school divided the science themes amongst the grade levels and students provided science demonstrations. A number of kits and supplies were chosen from a Boreal Supply catalogue for each grade level and science theme ranging from Biology, Chemistry, Physics, Geology, Astronomy, and Botany. The science materials purchased allowed more comprehensive, in-depth and hands-on studies.

Each grade level included the following activities:

- Kindergarten Bubble demonstration
- Grade 1 Display of a habitat and ecology of an owl
- Grade 2 Tarantula habitat, anatomy, diet
- Grade 3 Smoking and the effects on the human body
- Grade 4-5 Principles of Flight
- Grade 6-7 Electricity and Electronics
- High School Motors

Participant Learned Skills

The most important lesson for most was that without patience and mistakes, no gains could be made in science. Many of the projects were frustrating for some participants because they did not turn out after the first try, or for some, like an electric car, did not turn out as projected. Participants learned that success was the reward for persistence and patience.

Most participants worked in pairs cultivating a need to cooperate, respect another's point, or willingness to try an idea that may not be theirs. The academics were secondary, for without the learning of self-discipline and self-control little if any academic learning was possible.

Participant Information

Total number of students:	124
Total number of female students:	56
Total number of male students:	68
Total number of students with disabilities:	0
Total number of students who attended the Fair:	103

Total number of students aged:	14 & Under	15 – 19	20 - 24
	88	15	0

Total number of students in elementary school:	119
Total number of students in secondary school:	25

Total amount spent on the Fair:	\$5,100.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The Kispiox School's Science Fair for 2003 was considered a success for two reasons. First, the materials purchased allowed more comprehensive, in-depth and hands-on studies. The second reason was because the high school students participated in the Science Fair. This year was great because each grade level had some special area of interest to demonstrate or tell about.



Program Activities

The Klahoose First Nation presented a Science and Technology Fair in Squirrel Cove, Cortes Island, BC. With the added help of parents, educators, Klahoose community members, Klahoose Learning Centre and the financial support of the First Nations Steering Committee the event included highlighting careers and opportunities for youth in a four-week session of activities and learning experiences. The activities were broken into the two following categories:

- Multimedia and Technology
- Traditional Practices

The program activities were as follows.

- Traditional mapping Strategy
- On Air Radio Tour
- British Columbia Royal Museum Tour
- Film Festival
- School Science Fair

The traditional mapping strategy included demonstrations and a one-day field trip on how to use digital equipment to locate and document culturally relevant areas in the Klahoose traditional territory. Each student was given a lesson on the following:

- How to read marine charts
- How a gas powered boat worked and its maintenance
- Instruction on how to navigate the local waters
- How to use a global positioning system aid, and
- How to use a digital camera.

The participants participated in a tour of a radio station. Each student had the opportunity to be an on-air announcer by sitting in a D.J. seat and operating the controls.

The Museum tour included the participants in hands-on demonstrations on how to make traditional paint out of salmon eggs.

The participants attended a Film Festival and viewed locally produced films that were made by youth. Films that were played included, "Our Legacy," "Chenwa" and award winning movie, "Klahoose Arts and Culture Today."

The School Science Fair was named “Careers in Science” and was attended by over 80 local community people. Many students worked hard on their projects for this event.

Participant Learned Skills

The participants were exposed to hands-on training in the traditional mapping strategy by using a G.P.S. digital camera and gas powered boats. These skills opened opportunities in other fields of work. Along with the technical training, the participants acquired practical experience using navigating techniques to locate areas of interest.

The participants learned in the “On Air Radio” tour about many occupations and career opportunities with tips from administration, advertising, technical support, and air programming.

The BC Royal Museum tour gave the participants knowledge on how exhibits were created and what kind of work was involved with preserving artifacts.

The Film Festival activities gave the participants learning skills in camera techniques, script writing, storyboard construction, casting, and directing a digital editing.

The Science Fair provided the participants with researching skills in different areas of science and how to compare which science field interests them.

Participant Information

Total number of students:	20
Total number of female students:	10
Total number of male students:	10
Total number of students with disabilities:	0
Total number of students who attended the Fair:	20

Total number of students aged:	14 & Under	15 – 19	20 - 24
	10	10	0

Total number of students in elementary school:	10
--	----

Total number of students in secondary school:	10
---	----

Total amount spent on the Fair:	\$6,500.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The program at Klahoose First Nation created opportunities for youth to develop skills in both environmental and technical sciences (traditional and contemporary) by providing first-hand experiences in a variety of settings. It opened youth to more choices when considering career direction and it allowed youth to experiment with new tools and skills in a relaxed, fun atmosphere. The element of creating a record of their experiences for future program participants allowed youth to integrate their learning.



Program Activities

The Ktunaxa/Kinbasket Tribal Council Science and Technology Fair initiative was a coordinated one-day science event called “KKTC/Science World – Science Event 2003” facilitated by Science World from Vancouver, BC. The program was designed for First Nations students, youth, parents and community members throughout the region, and held at the College of the Rockies, Cranbrook Campus on Saturday March 8, 2003.

The main objective was to provide First Nations youth in grades 2-12+ with an insight into science and technology and dispel the myths of the “Nutty Professor” or science in general, and inspire the youth of real options and opportunities open to them to further explore. Local First Nations role models in the science and technology fields led the youth into some realistic career opportunities.

The strategy used with Science World included the integration of local people resources into the program. Those included were:

- The Canadian Columbia River Inter-Tribal Fisheries Commission (fisheries technician and biologist)
- EnCana (engineers)
- Parks Canada (wildlife specialist)
- RCMP (forensic science)
- Forestry and Health Sectors
- Video Conference link with a Nation member who recently completed an internship with NASA

The program activities included the following:

- Super Science (grade 2-7) Rockets
- Opening the Door (grade 8-12+) Presentation by seven scientists
- Road Show (grade 2-12+) various science experiments
- Video Conference (grade 2-12+) Local Role Model and 30-minute lesson on Forestry

Participant Learned Skills

The event was a success in providing valuable skills for the participants and linking with many parents and community members in sharing and supporting the students in exploring their educational goals and achieving milestones.

This particular event provided evidence that there is interest in the fields of science and technology and provided many ideas for the future.

Participant Information

Total number of students:	65
Total number of female students:	28
Total number of male students:	37
Total number of students with disabilities:	0
Total number of students who attended the Fair:	65

Total number of students aged:	14 & Under	15 – 19	20 - 24
	33	32	

Total number of students in elementary school:	33
Total number of students in secondary school:	32

Total amount spent on the Fair:	\$5,448.50
Total contribution from DIAND:	\$5,000.00

Program Evaluation

Since the “KKTC/Science World – Science Event 2003,” a couple of excellent suggestions were brought forth in the program evaluations. One suggestion was to incorporate similar content, but divide it over a two-day period, with day one focused on the science content, and day two including some really good physical activities related to science.



Program Activities

The Kwakiutl District Council Science and Technology Fair provided a “Choices - It’s Up to You” Science and Technology Career Development Conference specifically designed to meet the needs of Aboriginal youth with respect to education, career planning, and goal setting. This event was hosted for over 150 students, brought in various speakers in the sciences, research and technology, together with more than 25 post secondary institutions, prospective employers and motivational speakers.

The goal was to facilitate an event whereby Aboriginal youth could gain access to comprehensive information on the broad range of career and education opportunities available to them. As part of the goal, a number of workshops and panel discussions were created that focused specifically on employment and career opportunities within the field of science and technology.

The following workshops and panel discussions highlighted the growing importance of science and technology careers in today’s society.

- Natural Resource Management
- Workshop on Environmental/Cultural Resource Management
- Forestry Panel
- The Future of FN Fisheries and Land Use
- First Nations Health Careers Workshop
- Health Panels
- Electronic Media

Participant Learned Skills

The youth acquired a broad range of careers and insight into the importance of science today. Moreover, combining panelists with traditional environmental knowledge, and others who focused primarily upon western education and research, offered the youth a comprehensive overview of the science and technology sector, and demonstrated the importance of education in building sustainable environments, prosperous economics, and healthy communities.

Participant Information

Total number of students:	162
Total number of female students:	91
Total number of male students:	71
Total number of students with disabilities:	0
Total number of students who attended the Fair:	162

Total number of students aged:	14 & Under	15 – 19	20 – 24
	0	145	17

Total number of students in elementary school:	0
Total number of students in secondary school:	140

Total amount spent on the Fair:	\$7,458.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The Kwakiutl District Council “Choices - It’s Up to You” Science and Technology Career Development Conference was a very successful event. The comments received from both facilitators and the students themselves demonstrated the overall success of this event for youth and the promotion of science and technology. A few of the comments were as follows:

Quotes from Facilitators:

‘The effectiveness of the conference was excellent! The youth seemed to get the ‘realness’ of careers that are out there.’

“Very effective. The students collected a considerable amount of information and were keen with questions.”

“I found the students to be interested in my workshop. The presenters were interesting to meet. I also established good contacts.”

Quotes from Youth:

“They showed me there’s a lot of possibilities for the future.”

“Showed me the plan of how to get into the programs I want and what I can get out of it.”

“The conference helped me to see that I need to put 100% into my future.”

“They told us the rewarding feelings of having a career.”

“They provided me with useful information to help me find what interests me.”

The conference had over a dozen Aboriginal scientists and technicians explaining and exploring with youth their techniques of utilizing traditional and modern methods. The new provincial graduation requirements place serious hurdles in front of grade 10 students, which may thin out our already alarmingly low numbers in senior sciences. This conference was an attempt to address the issues of declining participation and success rates in the sciences for Aboriginal students.



Program Activities

The Kwakiutl Band Science and Technology Fair initiative had a combination of fun activities that were planned to achieve the goals and objectives of the program. Taking into account that children and youth learn best by building upon their present knowledge base and reality, activities were selected that built upon Kwakiutl traditional knowledge and practices passed on from our ancestors.

The project incorporated the beliefs, values, and traditions practiced by the Kwakiutl. In particular, the project activities provided education and awareness to children, youth, and parents about the options available in the science disciplines. Specifically, the project activities set out to streamline both First Nations and contemporary perspectives in promoting science related activities. With this in mind, a series of “Science Extravaganza” activities were planned for both elementary and secondary school aged children and youth. These activities consisted of the following.

Elementary School

- Visiting scientists
- Field trips

Secondary School

- University Tour
- Career Fair/Field Trip

Community Event

- Guest Speakers
- Elementary Schools visiting Scientists

Participant Learned Skills

By enhancing science lessons for the children who attended Waggles and Fort Rupert Schools, it was seen as bringing learning to life. The participants learned about social responsibility, creating traditional blankets, and historical information about trapping lines and trapping methods. In addition, participants learned from the encouragement of visiting scientists to the school on choosing courses and science careers.

Participant Information

Total number of students:	120
Total number of female students:	60
Total number of male students:	40
Total number of students with disabilities:	1
Total number of students who attended the Fair:	36

Total number of students aged:	14 & Under	15 – 19	20 – 24
	120	36	0

Total number of students in elementary school:	120
Total number of students in secondary school:	36

Total amount spent on the Fair:	\$6,750.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

Upon completion of the project activities, a community event provided the family and community with an opportunity to celebrate and publicly acknowledge the completion of the “Science Extravaganza” event. The community event provided an opportunity for the participants to display their science work for parents and community members to see. Lastly, the community event provided another opportunity for the parents to be educated about supporting children in choosing science courses and careers.

The project was successful as it promoted science and technology as a career choice. The participants enjoyed their first-hand experiences with various science disciplines. They were well supported and encouraged by the visiting scientists.



Program Activities

The Lach Klan Elementary Junior Secondary School provided a Science and Technology Career Fair initiative for approximately 200 students. The Fair had student projects and hands-on projects that were interactive for all to enjoy. There were guest speakers who spoke on science career opportunities.

A Space Center visited the school and presented to five different groups. Included in their presentation was a portable planetarium. The presenter made sure to include First Nations content pointing out First Nations constellations. There were over 85 science projects entered in the Fair with community members as the judges. The Fair was open to the community. There was an award ceremony held in the school gym with participants receiving awards of medallions and a best overall trophy.

Six participants also traveled to Prince Rupert, BC to attend a careers and leadership conference. The participants from the school presented at this conference.

Participant Learned Skills

The science activities were a wonderful opportunity for all to participate in active learning stations that were set up in the school gym for four days. The participants learned from their science projects and their hard work paid off and all of the projects were wonderful. The Fair ignited the participants' interest in science and technology.

Participant Information

Total number of students:	156
Total number of female students:	68
Total number of male students:	88
Total number of students with disabilities:	10
Total number of students who completed the Fair:	129

Total number of students aged:	14 & Under	15 – 19	20 – 24
	103	21	18

Total number of students in elementary school:	61
Total number of students in secondary school:	42

Total amount spent on the Fair:	\$5,940.20
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The Lach Klan School was able to add some neat programs to their plan because opportunities arose and funding was granted to provide a Science and Technology Fair for participants. The participants were congratulated for all their hard work and all of their projects looked absolutely wonderful.



Program Activities

The Lhoosk'uz Dene Government often does not get the chance to send their students away on field trips due to an isolation factor. The majority of the Lhoosk'uz members have left the community to pursue higher quality education or for better job opportunities.

The Science and Technology Fair initiative addressed this issue by sending the participants on a trip to Vancouver, BC to provide them with an opportunity to experience and explore modern science and technologies. The participants visited the Macmillan Space Centre, Vancouver Aquarium, and Science World. In addition, a visit was made to a salmon hatchery and museums.

Participant Learned Skills

The program activities gave the participants an opportunity to see for themselves the importance of staying in school. The participants expanded their knowledge about science and technology. They learned about how their ancestors used astrology and geology in a traditional manner to navigate and identify their vast traditional territories.

Participant Information

Total number of students:	30
Total number of female students:	12
Total number of male students:	18
Total number of students with disabilities:	0
Total number of students who completed the Fair:	30

Total number of students aged:	14 & Under	15 – 19	20 - 24
	30	0	0

Total number of students in elementary school:	30
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$9,001.65
Total contribution from DIAND:	\$5,000.00

Program Evaluation

This first trip to Vancouver provided the participants with an opportunity to experience and explore modern science and technology. The trip reinforced the importance of staying-in-school and encouraged participants to make positive choices in their lives. In addition, the participants learned as a group to improve their relationships towards each other. For many of the participants this was a first visit to an urban area and the topic of transportation was discussed frequently. The participants learned about actual distance relationships in comparison to distances on a map.



Program Activities

The Lower Kootenay Band Science and Technology initiative sponsored participants on a trip to Science World in Vancouver, BC. Although the students were proud of their home, Creston, BC does not have a facility that can provide sufficient insight and background for possible careers in science due to its small town population and limited technology. Thus, the Band looked to Vancouver and Science World with its jam-packed unique experiments and activities that the participant enjoyed. For example, the participants were able to create a cyclone, crawl through a beaver lodge, dance on a giant keyboard, blow square bubbles, light up a plasma ball, experience a sensational OMNIMAX film on one of the world's largest dome screens featuring electrifying wrap-around digital sound.

Participant Learned Skills

The participants came away with a heightened awareness in science and the possibility of a career in the world of technology. A UBC student was seen as a role model and the participants enjoyed his discussion on the educational background. The participants learned about biology, national history and physics. In addition, the participants learned about animals, human endurance, and architecture.

Participant Information

Total number of students:	8
Total number of female students:	1
Total number of male students:	7
Total number of students with disabilities:	0
Total number of students who completed the Fair:	8

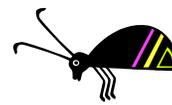
Total number of students aged:	14 & Under	15 – 19	20 – 24
	8	0	0

Total number of students in elementary school:	8
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$4,900.52
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The program activities were an opportunity for participants to experience the vast realm of science. The participants asked many questions about science and technology. From the questions and responses from the participants the program goals and objectives were accomplished.



Program Activities

The Lower Similkameen Indian Band provided a Career Fair Day to raise awareness of science and technology in the community and promoted interest in the various science fields. The program activities consisted of booths and displays, hands-on examples, and science demonstrations.

The participants enjoyed every booth and spent enough time at each one to leave with some knowledge of that specific presentation. Each booth was unique because they were almost all First Nations participants that promoted careers and businesses.

In addition, there was an external trip to Vancouver, BC where participants attended Science World and the UBC Museum of Anthropology. There were guided tours on Indigenous artifacts and displays.

Participant Learned Skills

The skills that the participants learned while participating in the Science and Technology Fair are as follows:

- Materials and tools used to create different types of art, oil, acrylic, watercolor, brushes, canvas, easels, acrylic paintings, ceramics, and traditional instruments;
- The history of silversmithing, tools and materials used and safety in working in the medium;
- The ONA Fisheries, environmental concerns and issues, natural resources and preservation;
- The various options available in education and the resources available for community use;
- How to reach goals if interested in pursuing any areas of science and technology, courses offered in related fields, and First Nations counselors available to access post-secondary education;
- Traditional medicines which can be used to treat various illnesses or health problems;

- Oral traditional languages and how technology can preserve the language and culture;
- Equipment used in producing videos using digital video cameras, computer and other related computer programs;
- Courses required to pursue mechanical engineering and the types of engineers and the functions they serve and do;
- Geographic Information Systems (GIS) - various scales maps of traditional territory, archaeological sites, pictographs, camps, land usage, natural resources, and map recording;
- Archaeology program available and how sites were discovered, the process following; surveying and fieldwork.
- Technology and Health – safety measures and health protection

Participant Information

Total number of students:	45
Total number of female students:	24
Total number of male students:	21
Total number of students with disabilities:	0
Total number of students who completed the Fair:	45

Total number of students aged:	14 & Under	15 – 19	20 - 24
	29	11	5

Total number of students in elementary school:	22
Total number of students in secondary school:	10

Total amount spent on the Fair:	\$8,500.00
Total contribution from DIAND	\$5,000.00

Program Evaluation

The participants received a registration kit that consisted of a canvas bag with a logo, science and technology related books, a notepad, pen, portfolio, crossword, wordsearch, magnetic wand/experiment worksheets, and a participant thermometer.

The science activities set-up went smoothly and the presentations were efficient. The booth presenters were prompt, well organized, and articulated their knowledge and experience in their fields of science and technology.

The participants attended every booth and spent enough time at each one to leave with some knowledge of that specific presentation. The hands-on and other examples that participants could actually handle seemed to grab their attention.



Program Activities

The Mamlikulla-Que'Qwa'Sot'em Band Science and Technology Fair initiative was designed to promote the world of science and technology. A field trip was made to Science World and the Vancouver Aquarium in Vancouver, BC. Science World provided hands-on science and technology exhibits, and a few of the participants were even called on stage to be part of the performance.

Participant Learned Skills

The participants showed a great interest and desire to learn more about the world around them. The Omnimax films portrayed a true story of the first Atlantic explorer. The Vancouver Aquarium offered many animals and the participants learned about how each survived in their natural habitats as well as the habitat they now live in.

Participant Information

Total number of students:	8
Total number of female students:	3
Total number of male students:	5
Total number of students with disabilities:	0
Total number of students who completed the Fair:	8

Total number of students aged:	14 & Under	15 – 19	20 - 24
	8	0	0

Total number of students in elementary school:	8
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$8,350.03
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The field trip provided the participants with a greater understanding of the world of science and technology. This was achieved by hands-on learning while visiting Science World and the Vancouver Aquarium. The field trip inspired the participants to create and explore a hands-on approach to the program activities. This method provided another avenue to instill interest in science and technology for their choice in career selection.



Program Activities

The Moricietown Elementary School Science and Technology initiative was a “Science in a Bag” event. This was prepared for Kindergarten to Grade three students. The teachers at the school selected a range of different experiments for the participants. All the materials were purchased, and a newsletter was distributed to parents informing them of the fair and the student’s experiments and projects.

The parents received a first set of bags during a meeting that encouraged more parental involvement. Parents took home a bag full with materials so that their children could complete science experiments or conduct research. Once the first experiment was completed the bag could be exchanged for another experiment kit. There were four different types of experiments to complete.

Participants at the grade three, five and six levels selected their own projects. A booklet creating a science presentation and instructions were provided. It also provided the teachers with the guidelines necessary to direct the participants. Topics ranged from magnetism to electricity. Those participants who did not have parents to accompany them to the computer lab were given class time to complete their display boards.

A Grade four and five curriculum unit was produced based on the activities of that grade for the science fair, focusing on traditional Witsuwit’en technology and plants. The curriculum developer and teacher worked together to devise a set of seven project themes. These included: transportation, food processing, containers, ropes and straps, medicines plants, fishing and hide tanning. Projects had two components that consisted of model building and research. Bags with materials were also provided for the participants. A biologist was invited to present slides and information about the habitats and environmental components of the Witsuwit’en territory. This presentation gave the participants a glimpse of the habitats and environments these plants were from.

The students created a big banner for the Science Fair that was held on March 14, 2003 at the Moricietown Elementary School. Most of the participants who completed their science projects came to the fair with their parents. Participants who had not done their oral presentations had the opportunity to complete this part of the project for extra marks. Prizes and awards were issued with many proud parents and community members.

Participant Learned Skills

The curriculum unit produced was based on the research and model building that the participants completed for their topic. The participants should have a better understanding of the following:

- The nature of plants used
- The environment from which plants came from
- Harvesting techniques
- The techniques used in make the technology
- The traditional role and uses for that technology
- Traditional names for plants and technology

The skill development of the participants included the following:

- Plants and animal identification
- How to do research using a herbarium, books, and dictionary
- Model building and medicine making
- Witsuwit'en language development
- Time-management
- Homework completion
- Word processing and project board presentation

Participant Information

Total number of students:	37
Total number of female students:	23
Total number of male students:	14
Total number of students with disabilities:	0
Total number of students who completed the Fair:	37

Total number of students aged:	14 & Under	15 – 19	20 - 24
	37	0	0

Total number of students in elementary school:	58
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$5,042.38
Total contribution from DIAND:	\$4,935.60

Program Evaluation

Many participants completed their experiments and displays for the fair presentations. The teacher support gave participants a chance to complete their presentations. Many of the projects were well done, the models in particular.

Family members who may not have been able to help with things such as research and computer work were able to contribute their knowledge to the creation of smaller models of snowshoes, hide tanning racks etc. Participants and parents were quite enthusiastic about these projects as it was often a learning process for both.

The luncheon and the Fair was a huge success. Proud parents and community members came to see the participants' projects. In some cases parental involvement went beyond what was required. In general, the projects were a great success and a source of pride and enthusiasm for both participants and parents.



Program Activities

The Musqueam Band Science and Technology Fair included a trip to the Bamfield Marine Station. The participants were exposed to first-hand experiences of science in the management of marine resources.

Participants prepared for the field trip with readings and research of the Fraser River ecosystems and restorations projects underway with Fraser River sturgeon. The participants also toured intertidal areas of open rocky shoreline to sandy beaches where they observed the diversity of plant and animal life in the distinct intertidal zones and resulting adaptations.

Laboratory observations and work with Marine station specimens and participant specimens also took place. All instruction was with a resident marine biologist.

Participant Learned Skills

Field trip participants learned about Marine Biology by participating in the activities of actual marine biologists. The field trip activities stressed the importance of conservation through an understanding of the ecology and the importance of organisms in the sea.

By exposing the participants to science in action they gained a better understanding of present development in marine resources management and conservation. The participants were motivated to pursue post-secondary studies in marine biology.

Through the readings and films viewed the participants became familiar with concepts and terminology such as shoreline and ocean zones, ecosystems, biodiversity and food chains.

The participants also learned about the following:

- Making successful marine organism collection
- Learning and studying organism behavior and physiology in the laboratory
- Collecting data through observation of sea life
- Dredging and collecting
- Reporting on specific areas of investigation –scientific process
- Boat safety
- Familiarization with marine biology terminology
- Understanding the concepts of zonation both on the shoreline and ocean
- Understanding the concept of biodiversity and the interdependence of species and the role in ensuring the health of marine life

- Familiarization with the range of employment in this vast area of marine science

Participant Information

Total number of students:	21
Total number of female students:	11
Total number of male students:	10
Total number of students with disabilities:	0
Total number of students who completed the Fair:	21

Total number of students aged:	14 & Under	15 – 19	20 - 24
	21	0	0

Total number of students in elementary school:	21
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$5,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The staff of the Bamfield Marine Station reported that this was the first First Nation student group to ever participate in their public education program and they were thrilled to offer their exciting program to the students. This program is highly recommended for middle-aged and older students to take advantage of the incredible hands-on opportunities to work alongside marine scientists, technicians, boat operators, First Nation fishers and coast guards.



Program Activities

The Nanoose First Nation Science and Technology Fair initiative was designed to promote general science and mathematical knowledge through hands-on observations, and to encourage students to continue science exploration and understanding as life-long learning goals.

A field trip was made to Science World in Vancouver, BC where participants visited and participated in hands-on science and technology exhibits. Most of the participants had never attended Science World so they were excited about touring the facility. The participants played with the hands-on science displays, live interactive science demonstrations, and viewed an Imax film on Antarctica.

In addition to the trip to Science World, Nanoose First Nation community members were invited to design their own cars, paint them, and then attended a race night event. The car race was designed to promote an awareness of basic scientific principals of weight, speed, and physics in a fun, hands-on manner.

Participant Learned Skills

The participants attending the Science World trip learned numerous science and mathematical facts through observation and experiential hands-on learning. As Science World offers such a wealth of information and opportunity, it was difficult to pinpoint the skills the participants learned. Perhaps the most important skill they gained was learning that science “by doing” was a fun way to learn facts.

The skills learned in the car race event were easier to pinpoint. It too, provided the participants with hands-on opportunities. Some of the skills participants learned include the following.

- Design: How to visualize a design and see a shape in a block of wood
- Measurement: Metric length by width, Mass/weight of before and after carving, and average weight of the cars
- Newton’s Laws of Motion: Law of Inertia, Law of Force (Mass x Acceleration), Law of Action and Reaction (cars that bump into each other do not travel in straight lines)
- Simple Machines: Wedge, inclined plane, wheel and axle
- Scientific Methods: Ask a question or make an observation (my car is heavier than yours so my car will go further), write a hypothesis, make a prediction, perform tests or experiments (places cars on ramp, let go, watch what happens), state conclusions

Participant Information

Total number of students:	43
Total number of female students:	20
Total number of male students:	23
Total number of students with disabilities:	1
Total number of students who completed the Fair:	43

Total number of students aged:	14 & Under	15 – 19	20 – 24
	32	8	3

Total number of students in elementary school:	28
Total number of students in secondary school:	15

Total amount spent on the Fair:	2,333.00
Total contribution from DIAND:	\$1,447.00

Program Evaluation

The trip to Science World provided the participants with opportunities to learn that science can be about everyday things that they already know and about unusual and very cool and weird things that they did not know. They learned that they already know quite a bit about science as science is all around us. All the program activities were a success in that they offered opportunities for learners of all ages to participate, work together, learn a little, and most of all, to have fun.



Program Activities

The Nathan Barton Elementary School Science Fair initiative was held in partnership with the Gingoix Cultural Society Media Center. The theme of the Science Fair was “Science in Everyday Life,” and the topic was the Nisga’a Oolichan Fishery. The emphasis was to encourage participants to look on science as exciting, real and informative while focusing on the immediate environment and the world around them.

The participants went to Fishery Bay, BC where they watched the unloading of the oolichans and participated in activities such as studying the oolichan, helping bring the oolichans from the fishing boats to the holding bins, and using equipment to record information in class.

Two matriarchs visited the school and provided a cultural perspective of the oolichan fishery. The Nisga’a teacher taught the participants the Nisga’a words. Two weeks later the oolichan grease was rendered. The oolichan process was filmed, photographed, and information was gathered for the whole community to come see and learn. The participants also prepared a mini-fair for other students at the school.

Participant Learned Skills

The participants learned about the oolichan, its life cycle, and its path. They also learned to create a display of the information gathered. They also learned how to discuss topics and prepare questions for interviews. Other skills learned were as follows.

Science:

- Observation skills
- Interview skills
- Unloading fish from punts and transferring to holding bins
- Traditional and modern oolichan fishing techniques

Technology:

- Operation and use of a digital camera, video camera, and spotting scope
- Film editing
- Organizing a slide show

Participant Information

Total number of students:	19
Total number of female students:	8
Total number of male students:	11
Total number of students with disabilities:	4
Total number of students who completed the Fair:	19

Total number of students aged:	14 & Under	15 – 19	20 - 24
	19	0	0

Total number of students in elementary school:	19
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$6,500.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The participants gained an understanding of the Oolichan fishery and a background on its traditional importance. The Oolichan grease was once the greatest trading commodity the Nisga'a had, and there are recorded histories of 1000 canoes traveling down the river to harvest this commodity.



Program Activities

The New Aiyansh Village Government Science and Technology Fair initiative was to sponsor six students and two adults to attend a “Blueprint for the Futures” (BFF) Career Fair held in Vancouver, BC on February 4, 2003. The participants had the chance to interact with career professionals and win some cool prizes by participating in six-40 minutes workshops that included the following:

- Gaining a Competitive Advantage in the Labor Market
- Aboriginal Entry Program in the Canadian Forces
- Opportunities in the Public Services
- Trades Booth Area: Visit 5 or more booths out of 100 possibilities
- Environmental Career Options in the Natural Gas Industry
- Town Hall Forum

The BBF supported the career development needs of Aboriginal youth by providing them with an interactive forum to explore and gather practical information on a wide range of career, education and training options.

The BBF provided approximately 100 exhibits and spoke with Aboriginal and non-Aboriginal professionals from government departments, businesses, and educational institutions. Several of the exhibitors offered information about educational scholarship programs and summer job opportunities.

Participant Learned Skills

The participants are more informed and better able to make appropriate choices about their future to ensure a successful transition from high school to further education, training and work by learning about the following.

- The importance of career planning and educational achievement
- A wider range of career options and labor market information
- The personal, educational and training requirements for entry into colleges and universities, and the workforce
- The range of learning opportunities available for youth to acquire work skills in preparation for post-secondary school or a job, including volunteer work, coop programs, and internships
- Post-secondary funding sources and summer job opportunities.

Participant Information

Total number of students:	40
Total number of female students:	17
Total number of male students:	23
Total number of students with disabilities:	0
Total number of students who completed the Fair:	40

Total number of students aged:	14 & Under	15 – 19	20 - 24
	19	15	6

Total number of students in elementary school:	19
Total number of students in secondary school:	15

Total amount spent on the Fair:	\$5,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The workshops were very informative and there was a large interest in the RCMP, Social Work, and Justice presentations. Various fields were identified where there is a real need for qualified individuals in the community.

The community benefited from this type of event to assist participants in steering them in the right direction to either enhance their educational background or pursue their career goals. It was recommended that this event be offered annually.



Program Activities

In joint cooperation with the Ehattasht and Nuchatlaht First Nations the Zeballo Elementary Secondary School Science and Technology Fair initiative had the privilege of honoring the talents and education of Canada’s Aboriginal people in the Science and Technology workplace. A Career Day was hosted with all the participants treated to a series of demonstrations, seminars and lectures from local and visiting speakers. The Career Day included six career stations offering 16 different perspectives during the day.

Participant Learned Skills

There was a great deal of time invested in providing a context for acknowledging and observing the fields of study some Aboriginal people are involved with today.

The following comments were taken form the evaluation forms of the participants at the career fair.

“One thing I learnt about is that I should never quit trying.”

“Something interesting I learned about is that I should make a plan of my future.”

“I learned that dropping out of school is never the answer.”

“My favorite thing about this career week was that I learned about all kinds of interesting jobs.”

Participant Information

Total number of students:	86
Total number of female students:	35
Total number of male students:	51
Total number of students with disabilities:	0
Total number of students who completed the Fair:	86

Total number of students aged:	14 & Under	15 – 19	20 – 24

Total number of students in elementary school:	
Total number of students in secondary school:	

Total amount spent on the Fair:	\$7,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The goal of the program was to build on the foundation that Aboriginal people are not only rich in culture and tradition, but are leaders and role models in the workforce. The rationale for the program was to dismantle stereotyping of Aboriginal people, enhance the areas of science and technology as career choices, and to support and extend the school curriculum by empowering Aboriginal people to share their career and culture. This was accomplished by providing a broad array of Aboriginal presenters and university students.



Program Activities

The Pacheedaht First Nation Science and Technology Fair initiative was geared for the participants to participate in the following site visits:

- Television and Radio Station Tour
- BCIT Visit
- Science World and Planetarium
- Vancouver Art Gallery
- Tour of An Alternative Energy and Recycling Center
- Participation in First Nations Youth Conference at Squamish Nation

Overall, the program activities interested all of the participants. They were amazed and focused on each of the visits to the various locations. The tour of BCIT had a strong impact on a few participants close to graduation.

Participant Learned Skills

The television and radio station tour provided the participants with an opportunity to learn about how media stations operate, what types of skills are essential and what training is required. This enabled the youth to pursue opportunities to communicate in a cultural appropriate medium consistent with oral traditions.

The BCIT tour taught the participants the types of training opportunities available to them and they became familiar with the institution. This familiarity with both the institute and the programs encouraged them to further research career options based on technology.

The Science World and Planetarium visit provided the youth with very interesting and stimulating science based experiences.

Other skills acquired through participation in the program activities were as follows:

- Communications
- Public Speaking
- Film Industry skills such as video making, producing, editing, prompting, journalism, sound dynamics
- Aviation Dynamics
- Forestry – compass, tagging, mapping, environmental issues, recycling, impact of pollution, gravity, magnetic forces, geology
- Group dynamics and interaction with small and large groups

Participant Information

Total number of students:	22
Total number of female students:	18
Total number of male students:	4
Total number of students with disabilities:	0
Total number of students who completed the Fair:	22

Total number of students aged:	14 & Under	15 – 19	20 - 24
	15	7	0

Total number of students in elementary school:	10
Total number of students in secondary school:	12

Total amount spent on the Fair:	\$6,150.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

Overall the participants were interested in all of the program activities. They were focused on each of the visits to the various locations. The participants have limited opportunities at home to experience the types of modern science and technology they participated in. This was a successful program.



Program Activities

The Saulteau First Nation Science and Technology Fair initiative allowed participants to explore a different issue related to the environment and traditional uses of their traditional territory. The planned activities included the following:

- Visit from Elders who describe the area and traditional uses of the plants and animals
- A visit from a Herbalist who presented a workshop on traditional medicinal plants and explained the purpose and importance of them
- A local cultural teacher explained the history and spirituality of traditional life

The participants also learned about computers and various programs available, as well as software programs currently being used by mainstream society such as: Introduction to Computers, Internet training, Word & Excel or (Beginners, Intermediate and Advanced),

Participant Learned Skills

The participants learned about computers and the various programs available. A certified computer technician taught all computer programs. The participants learned about the following:

- Introduction to Computers
- Internet Training
- Microsoft Word (for beginners, intermediate and advanced levels)
- Microsoft Excel (Spreadsheets for beginners and advanced)
- Networking
- Microsoft Access (advanced only) and
- Power Point (beginners and advanced levels)

Participant Information

Total number of students:	30
Total number of female students:	27
Total number of male students:	3
Total number of students with disabilities:	0

Total number of students who completed the Fair:	30
--	----

Total number of students aged:	14 & Under	15 – 19	20 – 24
	1	2	27

Total number of students in elementary school:	0
Total number of students in secondary school:	12

Total amount spent on the Fair:	\$5,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The Muskoti Learning Centre provided computer training that proved to be valuable and well worth the effort of all those who participated. The participants gained computer knowledge and experience in the various software programs available.



Program Activities

The Senisyusten School Science and Technology Fair had an Open House to introduce other area schools to their ongoing science and environmental programs. A total of ten schools and 283 students attended the event.

The event highlighted environmental First Nations studies, and also included a number of displays in the study of physical science. They had an opportunity to test their knowledge in science workshops and games.

Upon arrival, each guest was given a green passport to complete through each activity and a bag to carry activity items. Each guest teacher was given a teacher's bag with a passport, a teacher's activity booklet for future classroom projects, and a small gift.

Participant Learned Skills

All of the participants learned about science from a First Nations perspective through a variety of hands-on activities and presentations. During the science fair, participants visited 25 booths and learned about endangered animals, how to build and launch a small rocket, and what Okanagan ice cream tastes like.

In addition, other skills learned included the following:

- Okanagan Language and Place Name History
- Jet Propulsions and making film canister rockets and balloon jets
- Importance of organic farming, making their own wild juice concoctions from a variety of vegetables
- How to build a cottonwood canoe

Participant Information

Total number of students:	283
Total number of female students:	164
Total number of male students:	119
Total number of students with disabilities:	2
Total number of students who completed the Fair:	283

Total number of students aged:	14 & Under	15 – 19	20 - 24
	283	0	0

Total number of students in elementary school:	283
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$5,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

This district-wide event was very well attended. As hosts, the Sensisyusten First Nation School students were gracious, proud and confident. The teaching staff promoted the concept of Science and Technology past, present and future during the science activities. This event was so successful that the school has been frequently contacted to host the event again next year.



Program Activities

The Secwepemc Natural Resources Society Science and Technology Fair initiative involved a two-day Youth Career workshop for Aboriginal youth. The workshops were held in Kamloops and Williams Lake, BC. The workshops encouraged youth to pursue a career in the natural resources and/or forestry sector.

The planned activities included the following.

- Exploring work and educational opportunities in Natural Resources and Forestry
- Identifying personal strengths, skills and interests
- Linking strengths, skills and interests to educational choices in science (specifically Natural Resources and Forestry)
- Professional Panel of local Aboriginal guest speakers in the Natural Resources and Forestry Industries
- Setting goals to achieve a career in Natural Resources and Forestry

Participant Learned Skills

The skills that were learned by the participants were as follows.

- How to explore work and educational opportunities in the Natural Resources and Forestry sectors
- Identified their own personal strengths, skills and interests
- Recognized their linkages to the Natural Resources and Forestry sector
- Acquired relevant information from the Aboriginal guest speakers specific to the career area
- Learned how to set goals to plan a career

Participant Information

Total number of students:	27
Total number of female students:	7
Total number of male students:	20
Total number of students with disabilities:	0
Total number of students who completed the Fair:	27

Total number of students aged:	14 & Under	15 – 19	20 - 24
	0	23	4

Total number of students in elementary school:	0
Total number of students in secondary school:	27

Total amount spent on the Fair:	\$6,384.15
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The participants commented that they enjoyed the workshops and felt they received a wealth of information on Natural Resources and Forestry as an educational and/or career option.

These workshops were beneficial in that they helped steer participants in the right direction in making plans and taking courses in the Natural Resources and Forestry sectors.



Program Activities

The Skeetchestn Indian Band Science and Technology Fair initiative was in partnership with the surrounding communities and local elementary school. The purpose was to provide an opportunity for youth to select a science project and display it for families and community members.

At the school level many of the units of study were completed in science and focused on topics important to the Aboriginal community. It was intended to make the subject area of science a curricular area of focus. There were a number of school-wide challenges and experiments for students and a visit from the Star Lab Planetarium in Vancouver, BC.

The participants had to explain the how's and why's on each project or experiment. The projects were judged by a panel of experts from outside the community and of academic standing so as to be fair to everyone. Prizes were awarded for the different age groups of the participants.

Participant Learned Skills

The participants were excited about their science projects and learned about how important academic programming is, and how it enabled them to carry forth into a career in the science and technology sectors. The participants learned about communication skills, working with others, and increasing their knowledge in the science and technology fields.

Participant Information

Total number of students:	39
Total number of female students:	20
Total number of male students:	19
Total number of students with disabilities:	2
Total number of students who completed the Fair:	39

Total number of students aged:	14 & Under	15 – 19	20 - 24
	39	0	0

Total number of students in elementary school:	39
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$8,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The participants had a great time displaying their science projects and explaining their displays to other students and community members. The participants also used their communication skills, and by doing so helped build their self-esteem and self-confidence. The event was a huge success and enjoyed by the other schools, students and community members.



Program Activities

The Squamish Nation Science and Technology Fair initiative was a hosted 6-day science camp gathering. Two certified archeologists who are familiar with the territory shared their knowledge and expertise with the participants during the four days.

The participants became familiar with the field of archaeology and why it was important and other careers that pertain to archaeology. A walk was arranged to visit two archaeological sites of old long houses. The participants were also taken to Porteau Cove, BC to see a traditional fishing and gathering site. There was discussion about the types of tools and fishing gear that would have been used in the area. Other archaeological sites were also visited as part of the program activities.

While in the forest the participants learned about a global positioning system (GPS) that gives the latitude and longitude of a present location in case you're lost or to provide an exact location of a site, which you can store or download into its memory for future reference.

An Elder who has extensive knowledge about the local medicinal plants and trees, as well as traditional hunting and fishing provided a presentation. Included in the presentation were traditional berries, plants and foods that grew in the area.

The participants also participated in a field trip to Science World in Vancouver, BC where they visited many of the science exhibits, and watched an Omnimax film called "Amazing Journeys."

Participant Learned Skills

The participants learned about careers in science and technology. They were provided with an opportunity to learn about the components of archaeology, forestry management, First Nations traditional science and technology, and various aspects of current technology.

Participant Information

Total number of students:	10
Total number of female students:	4
Total number of male students:	6
Total number of students with disabilities:	1
Total number of students who completed the Fair:	10

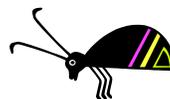
Total number of students aged:	14 & Under	15 – 19	20 – 24
	0	7	3

Total number of students in elementary school:	0
Total number of students in secondary school:	10

Total amount spent on the Fair:	\$6,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The Squamish Nation science event was a huge success. It was a perfect time to show the youth some of the careers in science and technology that was available to them. These youth were provided the opportunity to learn about components of archaeology, forestry management, First Nations traditional science and technology, and various aspects of current technology.



Program Activities

The T'lisalagi'lakw School Science and Technology Fair initiative focused on digital cameras and computer editing equipment. The youth participants received instruction and hands-on opportunities to work with the most current technology related to video production.

Program activities included the following:

- Instruction on a digital camera
- Review of digital technology and its applications
- Basic instruction on the production and direction of documentaries
- Instruction with multimedia applications on computer
- Instruction on the transfer technology from digital camera to computer
- Basic instruction of computer editing of both audio and video

The youth participated in a project and hosted two community events that allowed them to present their new knowledge, discuss their reflections on the project, and premier their completed video projects.

Participant Learned Skills

The skills acquired by the youth participants were as follows.

- Creative and positive fun environment where youth participants learned about video production technology
- Building and maintaining links for those that had left the education system
- Expanded career opportunities for the youth participants

Participant Information

Total number of students:	15
Total number of female students:	7
Total number of male students:	8
Total number of students with disabilities:	0
Total number of students who completed the Fair:	15

Total number of students aged:	14 & Under	15 – 19	20 - 24
	7	8	0

Total number of students in elementary school:	15
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$5,000.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

Each participant completed their own short video and made storyboards, then taped according to their chosen topics. The longer-term goal was the establishment of a permanent film/video program for youth in the community that will work in partnership with a newly-formed performing arts program for youth.



Tsilhqot'in National Government Williams Lake, BC



Program Activities

The Tsilhqot'in National Government (TSN) Science and Technology Fair provided participants with fun, hands-on science activities that encouraged students to pursue sciences in school and as potential career paths.

A two-day Fair was held at the Alexis Creek School with the Tles'qox, Ti'etingox-tin, Xeni Gwet'in, Tsi Del Del, and Yunesit'en ?esgul (Stone) schools participating in the event.

There were twelve presenters who conducted hands-on science and technology activities with the participants. The workshop topics consisted of the following:

- Fisheries
- Forestry
- Chemistry
- Traditional Medicines
- Information Technology
- Wildlife Biology
- Agriculture
- Health and Astronomy

Local colleges and employment agencies provided information booths. Other agencies such as the Diabetes program, Cancer Society, Traditional Medicine Coordinator also had booths. These booths augmented the presentations and helped to show participants that there were no limits in careers in science and technology. The participants planned contacts, started networking, and researched their potential career paths.

Participant Learned Skills

The participants made the following comments about what they learned.

- I learned about bacteria, stars, electricity, science, bees and Native culture
- I learned about water mammals
- I learned about queen bees
- I learned about soil, water and clay
- I learned how to balance a penny'
- I learned about Beetle Juice (a star)
- I learned how to look at plants in a microscope
- I learned that science is really fun
- I liked meeting new people from Chilcotin Reserves
- I learned about molecules, the North Star, Medicine, Plants and making a web page on the computer

- I learned that corn starch with water can make liquid a hard substance
- I learned about traditional medicine
- I learned about the shape of stars
- I learned how to make a circuit
- I learned how light works

Participant Information

Total number of students:	159
Total number of female students:	83
Total number of male students:	76
Total number of students with disabilities:	0
Total number of students who completed the Fair:	159

Total number of students aged:	14 & Under	15 – 19	20 - 24
	116	43	0

Total number of students in elementary school	116
Total number of students in secondary school	43

Total amount spent on the Fair:	\$9,731.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

The Fair allowed participants at different levels to go to presenters at the same time, keeping the younger groups together. It was great to see participants interact together from the different schools. The host Alexis Creek Community School was a great choice, being a central area and having a large venue to fit all the participants.

There was a great set of presenters who did a professional and exciting job. All the participants enjoyed the Fair and are already asking if there will be a Fair next year.



Program Activities

The T'Sou-ke Nation Science and Technology Fair focused on the need for education of the youth in areas relevant to future watershed management, and for the need for increased cooperation with both community and government organizations. To address these goals, the T'Sou-ke Education department sponsored a Classroom Monitoring Program and a Stream Team Program. These programs provided information and skills while using an active learning environment and hands-on training. The Stream Team Program was also designed to provide a high school Student Mentoring Program for elementary aged children.

The Watershed Celebration focused student attention on the interdependency of the watershed, salmon habitat, First Nations history, and the local community. The celebration provided the students with practical knowledge and hands-on experiences.

The major fair activities consisted of the following.

- A live salmon exhibit
- An active lesson using a workable replica of the Sooke watershed, which demonstrated non-point source pollution
- CRD Water Wisdom
- Aboriginal carving, traditional fishing and canoe making
- Salish Sea Songs with Holly Arntzen
- Invertebrate Investigations
- Estuary artistry
- Awareness of the watershed environment
- Lunch of clam chowder and bannok

Participant Learned Skills

The major science and mathematical skills learned were:

- Cause and Effect
- Deductive Reasoning
- Measurement and Estimation
- Technological Awareness
- Classification
- Sorting
- Species Identification
- Spatial relations as applied to traditional First Nations activities
- Orienteering and compass work

Participant Information

Total number of students:	173
Total number of female students:	81
Total number of male students:	92
Total number of students with disabilities:	0
Total number of students who completed the Fair:	173

Total number of students aged:	14 & Under	15 – 19	20 - 24
	173	0	0

Total number of students in elementary school:	173
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$4,700.00
Total contribution from DIAND:	\$4,700.00

Program Evaluation

The participants' thoughts after program activities are as follows.

"I liked the station where we searched for invertebrates".

"I learned that the invertebrate is a creature that has no backbone."

"My favorite station was the watershed model".

"I learned that we should not pollute the mountain then the water will flow down to the ocean".

"Invertebrate investigations because we got to look for bugs in their environment. I learned about little creatures that I didn't know about".

"I liked the canoe carving because it was cool and fascinating".

"I learned that carving a canoe with just hand tools could take a few years".

"I liked the station coloring and fish station because we had two tours - one about canoes and the other about fish."

Several of the participants and teachers were very eager to share their experiences. Everyone had smiles and spoke enthusiastically about the activity

stations and what they had learned. It was truly a day that enriched the student learning and will be remembered fondly by all.



Program Activities

The West Moberly First Nation Science and Technology Fair consisted of a Mad Science of Vancouver initiative. Sharing Mad Science with surrounding communities was the key to the program. The Fair was based around the Mad Science Assembly presentations and was provided to each of the six schools. The assemblies were opened to all students of all ages and included an extended invitation to parents and school district representatives.

The Mad Science team provided six assembly presentations as follows:

- Fire & Ice
- Smoke Rings
- Up, Up & Away
- Spin Pop Boom
- The Cryogenic Laboratory
- Be Tobacco Free and Bang

Volunteers were included in presentations with wacky water experiments, electricity generation, smoke ring demonstrations, and much more. This was a very visual and stimulating experience and Mad Science ensured a complete dose of scientific enjoyment.

The Fire and Ice presentations involved experiments using dry ice, a lawn leaf blower, and hovercraft. The scientific process of experimenting including “observations” were discussed, as well as states of matter, changing of matter, and air pressure. Seeing is believing could also be translated into seeing as learning, especially when the comical antics of Mad Science are applied to scientific demonstrations.

Smoke Rings was an assembly presentation concentrated on electricity and the course of electrical currents. There was also a demonstration of acids and bases and how they can change one another, electrical conductors, centrifugal force and “smoking” vortexes. Once again the participants were involved in the experiments and each walked away with a participation goody.

Participant Learned Skills

The wonderful aspect of the assembly shows and in-class experiments was that they were perceived as “play” and “fun” and as such the students were more inclined to participate and open their minds to listening to the principles behind the experiments.

Observation was discussed and became an element whenever a question was asked. For example, the participants learned that fire sucks up oxygen, which allows for big objects to fit through small spaces.

In acids and bases, the participants learned about their properties, how to test using strips, and how to categorize materials. They learned that there are twelve categories, each of which has a color and number. The most valuable lesson learned was that science is fun and has many different applications in our lives.

Participant Information

Total number of students:	685
Total number of female students:	343
Total number of male students:	342
Total number of students with disabilities:	0
Total number of students who completed the Fair:	685

Total number of students aged:	14 & Under	15 – 19	20 - 24
	685	0	0

Total number of students in elementary school:	685
Total number of students in secondary school:	0

Total amount spent on the Fair:	\$6,900.00
Total contribution from DIAND:	\$5,000.00

Program Evaluation

This was a wonderful opportunity for the West Moberly Lake area as this was science fair year and the presentations were either a wrap-up or a kick-off to the science fairs.

The reply to this initiative was fantastic, as this was a first type of presentation for some of the schools. The participants were delighted, the parents were excited for their children, and the teachers were both pleased and appreciative.

As for West Moberly, thanks were extended for the support in being able to provide this opportunity to the surrounding communities. The fun and learning value associated with these programs was valuable for parents, teachers, students, and the community alike.

The West Moberly Lake Nation looks forward to new opportunities and experiences as they work towards promoting the importance of science in school and further into a career.



Program Activities

The Whispering Pines/Clinton Indian Band Science and Technology Fair initiative provided a field trip to Vancouver, BC to visit the Science World and Planetarium.

Given the limited youth appropriate science and technology opportunities on reserve and in Kamloops, BC, the Education department felt that learning and exposure would be maximized through such an outing.

The interactive visit to Science World introduced a plethora of concepts and science possibilities to the youth that included the following.

- Ichthyology
- Dendrology
- Entomology
- Biology
- Ecology
- Chemistry
- Physics

Participant Learned Skills

A few of the skills the participants learned were as follows.

- Astronomy learned about the solar systems
- Gravity learned through experiments such as physics
- Biology human anatomy (person jigsaw puzzle)
- Entomology types of live insects, different adaptations
- Ichthyology different fish species

The most valuable component to learning on this trip was the recognition that science and technology learning can be fun.

Participant Information

Total number of students:	22
Total number of female students:	8
Total number of male students:	14
Total number of students with disabilities:	0

Total number of students who completed the Fair:	22
--	----

Total number of students aged:	14 & Under	15 – 19	20 - 24
	15	6	1

Total number of students in elementary school:	15
--	----

Total number of students in secondary school:	6
---	---

Total amount spent on the Fair:	\$6,509.00
---------------------------------	------------

Total contribution from DIAND:	\$5,000.00
--------------------------------	------------

Program Evaluation

Science World had a significant range of science and technology themes that would not be captured easily in other facilities. Furthermore, by extrapolating the learning situation to outside of the regular learning environment, normal everyday distractions were minimized, thereby allowing youth greater attention to the science and technology activities.



Program Activities

The Yekooche First Nation Science and Technology Fair focused on the life cycle and uses of different species of trees that surrounding community and region. This fair targeted all grades in the school, from Kindergarten to Grade 8.

The participants, teachers and chaperones traveled to Prince George, BC for two days. They visited Ruff's Greenhouse and Tree Nursery where seedlings were grown for reforestation. They saw all stages of seedlings, how they were packed, how the greenhouses were heated through hot air fans, and the cold storages. The older participants visited the Canfor Pulp Mill to observe the paper making process. One of the classes in the school is now making their own paper.

All the participants visited an Exploration Centre which featured large displays of forestry related materials.

Back in the community a week of forestry related curriculum was provided for participants. All students participated in a one-day Forestry workshop delivered by a Forester. The teachers used forestry-related curriculum, which included the following.

- Tree School Primary Lesson 1: An Introduction to the Forest
- Tree School Primary Lesson 2: Planning and Working the Forest
- Tree School Primary Lesson 3: Harvesting
- Beetle Infestation: Grade 7
- Land Use Decision: Grade 7-8
- Forest Dilemmas: Grade 6-8
- Dealing with the Forest: Grade 7
- Wood Products Scavenger Hunt: Grade 7-8
- Stumped Seedlings Game: Intermediate
- Two's Company, Three's a Crowd: Grade 7-8
- Tree Identification and Biographies: Grade 5-6

The Art instructor worked with all classes to make crepe paper horns to fill with leaves they had made from construction paper and attached to branches. An Elder from Saik'uz in Vanderhoof, BC came to Yekooche to speak about the traditional uses of plants and trees.

The school purchased the Northern BC Living Forest Resource Kit and materials from Wild BC to have as a school resource so they can continue to work with the participants on forestry related topics.

Participant Learned Skills

The participants learned about the following:

- How insects invade trees and affect a forest over time
- Social and ecological considerations where humans use of land and trees conflict with each other and ecosystems needs
- The importance of land-use management and planning
- How to work in teams to solve typical forest management problems
- How to in analyzing and decision-making to managing forestlands
- How forest resources are managed using Best Management Practices
- How to solve forest problems, reinforced terms, silviculture knowledge
- By-products of wood and products in our own environment made by wood by-products
- Needles, leaves, cones, bark and life span of trees

Participant Information

Total number of students:	16
Total number of female students:	10
Total number of male students:	6
Total number of students with disabilities:	0
Total number of students who completed the Fair:	16

Total number of students aged:	14 & Under	15 – 19	20 - 24
	16	0	1

Total number of students in elementary school:	27
Total number of students in secondary school:	33

Total amount spent on the Fair:	\$5,984.37
Total contribution from DIAND	\$4,876.00

Program Evaluation

In this remote community the opportunities to provide science education were quite limited. This program truly benefited the participants, but especially included the Elders' teachings on traditional knowledge of trees. This helped participants to understand the environment they live in. The Fair generated excitement for participants in their future education goals, and prepared them for eventually managing traditional lands.

Appendix 1

Participant Summary Table

Appendix 2

Allocation Table