

**ABBOTSFORD SCHOOL DISTRICT****ASIA Sumas Mountain****Start: 2008****Contact: Corrie Wedel, Teacher**

The *Ecology For Life* Odyssey Project leverages this schools' unique ecological location and its students' strong ecology mandate. The Biology Lab is outfitted with dissecting microscopes and kits that teach concepts on themes of Biology, Ecology and Environmental Studies. Older students act as science mentors to students in the younger grades. Guest presenters bring science themes into the classroom, while staff lead field trips and nature-based field studies outside the classroom. The school's technology program is expanded to include video editing & audio recording equipment to enable students to develop learning resources and presentations based on their scientific research.

**Yale/Abbotsford Secondary****Start: 2008****Contact: Dereck Dirom, Teacher**

The Odyssey *Gearbots* Project introduces students to the exciting field of Robotics by developing key skills in applied physics, math and technology skills in a fun, interactive setting. To learn more about the Abbotsford Secondary Gearbots Engineering Program, check out the comprehensive resources at <http://www.gearbots.org>. Gearbots has been transformed into Makerspace to integrate arts with STEM to encourage students to dream, invent and share their creations with pride.

**ALBERNI SCHOOL DISTRICT****Alberni District Secondary****Start: 2012****Contact: Ryan Dvorak, Project Based Learning Teacher**

"Project-Based Learning Enrichment" at Alberni District focuses on sustainable resources including: project-based learning at local woodlots & hatchery, tree farm biology, invasive species management, riparian restoration and forest technology. This innovative learning approach develops and enhances students' abilities to become critical and creative problem solvers, critical thinkers, and self-reliant, independent, collaborative learners. To engage these learners, local experts in forestry, fisheries, and First Nations collaborate with the teachers to help develop meaningful and relevant projects linked to the Grade nine curriculum, as well as develop connections to 'real world' applications of math and science.

**BULKLEY VALLEY SCHOOL DISTRICT****Smithers Secondary School****Start: 2012****Contact: Shirley White, Science Dept.**

Smithers Secondary focuses its "Engaging Science Curriculum" Project on new lab equipment for hands-on learning and field trips to explore specific curriculum areas; enriched by teacher collaboration to develop enhanced lesson plans and cross-grade science demos by senior students. Students are exposed to various science careers and interact with scientists, engineers and professionals from various fields.

**BURNABY SCHOOL DISTRICT****Alpha Secondary****Start: 2007****Contact: Jill Gorsic, Science Dept.**

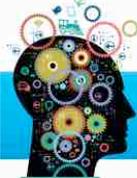
This Odyssey Program is designed to enrich students learning experience, support new science curriculum and improve the connection to elementary schools. The Grade 8 *Water Cycle Field Experience* explores the Capilano/Seymour Watershed and Annacis Island Treatment Plant. The Grade 9 *Use of Electricity* unit is supported with a tour of Burrard Thermal Plant and Buntzen Lake Plant. Tours of *green buildings* such as Vancouver Aquarium Education Building, West Vancouver Community Centre and SFU (geothermal) are focal points for discussion of renewable energy sources. The Grade 9 *Space Science* unit is supported with field trips to H.R. Macmillan Space Centre to access current discoveries and development of technologies to explore space. MOF support is also used to develop a *Careers in Science* Speaker Series, create community research projects with an environmental theme and improve catchment area relations.

**Burnaby Central Secondary****Start: 2007****Contact: Dieter Mehling, Science Dept. Head**

To stimulate interest in science, students are given more field trip opportunities to support and enhance the curriculum. A trip to Reed Point Marina exposes students to abiotic and biotic factors within an ecosystem, as well as demonstrates how natural populations are altered or kept in equilibrium. H.R. Macmillan Space Centre showcases technologies that provide advanced understanding of the universe and solar system. The IMAX Human Body Film experience and Science World exhibits demonstrate knowledge of the characteristics of living things. Teachers develop creative ways to implement flipped classroom concepts into their school to engage their students in hands-on learning while in class.

**Burnaby Mountain Secondary****Start: 2007****Contact: Frank Fullop, Science Dept.**

MOF support helps students explore and appreciate the biodiversity of local ecosystems. Comprehensive field trip kits contain supplies like binoculars, invertebrate viewing chambers, flora and fauna identification guides, waterproof clip boards, etc. These kits provide hands-on experiences for students and foster genuine interest in vibrant ecosystems such as the Reed Point Marina Education Centre. At Reed Point, students board the research vessel *OceanWatch* to learn about shorebirds, seabirds and harbour seals; and they also study small organisms from plankton nets by examining them back at the floating laboratory. These field trip kits are also used to study other local ecosystems, like Stoney Creek & SFU Forest.

**BURNABY SCHOOL DISTRICT (cont'd)****Byrne Creek Secondary****Start: 2007****Contact: Stephen Fuerderer, Science Dept. Head**

This Odyssey Program provides students with a variety of experiences otherwise not possible, such as Science World, H.R. Macmillan Space Centre, Lower Mainland Geology Tour and Aquavan's *Intertidal Marine In-School* Program. Foundation support also encourages more participation in the Physics Club, Physics Olympics and other science competitions like National Biology Competition and Science Fair. Equipment such as scientific data-collecting probes, computer tablets and In-focus projectors enable teachers to model scientific technology in the classroom.

**CAMPBELL RIVER SCHOOL DISTRICT****Carihi Secondary School****Start 2011****Contact: Jeff Lontayao/Bill Deagle**

The Bringing Learning To Life Project brings an inter-disciplinary, cross-curricular and cross-social approach of problem solving to fit the unique culture at Carihi Secondary. Teams of students work co-operatively to research and apply scientific principles to plan, design and construct prototypes to carry out specific tasks, ie conservation of mechanical energy. They also research sustainable energy resources such as wind turbines, tidal energy and solar-voltaic panels; and participate in Career Discovery visits to local industry.

**CENTRAL OKANAGAN SCHOOL DISTRICT****Start: 2007****District Lead: Robert Dickeson, Vice Principal, Springvalley Middle School**

The Odyssey Program is designed to provide enrichment opportunities to "turn students on" to Science in the 6 middle schools within the District. Students explore science on field trips to Vernon Science Centre, White Lake Observatory & Silver Lake Forestry Camp. The Vancouver Aquarium Aquavan, Planetarium Starlab and Science World Outreach bring unique experiences into the classroom. Facilitators from the *Engaging Science* Program present workshops on Earth and Space Science, Physical Science, and Life Science. These workshops expose teachers to new training techniques that allow them to offer inspiring instruction to their own students moving forward.

**CARIBOO-CHILCOTIN SCHOOL DISTRICT****Lake City Secondary****Start: 2013****Contact: Nara Riplinger, Science Department**

Lake City Secondary students work directly with local biologists and researchers doing hands-on fieldwork in the Salmon Ecology & Environmental Sustainability project. This program is supported by classroom activities and professional development; along with career discovery connections to local industry. Students collaborate with the local community garden and conservation society; and participate in water analysis of streams to see the effects of ranching and logging. Students also visit local mines to investigate how mines try to maintain environmental standards.

**CHILLIWACK SCHOOL DISTRICT****AD Rundle Middle School****Start: 2008****Contact: Cory Reid, Teacher**

*Science For Everyone* at AD Rundle brings awareness of science and its opportunities to all students. Guest speakers, professional development, and fieldtrip opportunities are provided for students in every grade. New technology, equipment and portable labs enable all students to benefit from hands-on experiences and enhance the sense of discovery.

**SD #33 Education Centre****Start: 2008****Contact: Rob Macvicar, Teacher**

This Odyssey Program is based on sustainability with a focus on "*changing our world, not the earth*". It is linked to SHREP (Skowkale Hatchery Revitalization and Education Project), which 'reconnects' students with their environment so that they can use skills and resources to develop processes and equipment that help them solve problems in everyday life. Students experience how professionals such as technologists, technicians and engineers develop technologies through invention and innovation. Odyssey funds support the development of a diverse array of study modules like: Watershed Management, Intensive Farming - Hatchery Management, Ecosystem Needs Assessment, Environmental Remediation, and Public Education, as well as other issues of sustainability.

**COAST MOUNTAINS SCHOOL DISTRICT****Skeena Middle School****Start: 2010****Contact: Meredith Wolfe, Science Dept. Head**

The Skeena Future Science Initiative focuses on utilizing educational technology such as Smartboards and upgrading equipment, such as data loggers, to support a variety of hands-on lab activities. MOF funds are used to create science kits and a science club with hands-on science exploration. Career Discovery activities leverage local geological sites and local industry including forestry, hydroelectric, natural gas and mining.

**COMOX VALLEY SCHOOL DISTRICT****GP Vanier Secondary School****Start: 2010****Contact: Matt Bourget, Science Dept.**

"Thinking Scientifically" instills an interest in science through scientific inquiry and enriches the hands-on laboratory experience in the classroom. A series of lab activities in Sc8 - Sc10 develop expertise in structured, controlled experimentation. Senior students mentor & peer-tutor junior science classes in similar lab activities. Science club activities reinforce the scientific method and encourage students to compete in Science Fairs. Career Discovery activities focus on local industry such as hydroelectric, waste treatment plants, water chemistry and ecosystems.

**COQUITLAM SCHOOL DISTRICT****Coquitlam Customized Learning Center****Start: 2009****Contact: Margaret Asher, Teacher**

The *Experiential Science Project* uses Odyssey funds to develop hands-on, scientific process activities to make science more engaging, improve student performance and create a passion for science by building confidence. Odyssey initiatives include experiential learning events to build connections between science and the real world; community partnerships to support extended educational experiences; and virtual science fair activities using multimedia equipment.

**Dr. Charles Best Secondary****Start: 2007****Contact: Joe Coops, Science Dept.**

Math and Science Departments enhance their programs by providing engaging activities for Grade 8 & 9 students. Science students benefit from new equipment that encourages student-centered learning, field trips to explore real-world science and science club with guest speakers & hands-on activities. Best Math Camps increase the appreciation & interest in math, as well as provide a deeper understanding of math concepts through a variety of math sessions with guest speakers, math applications, contests, challenges, enrichment and field trips.

**Heritage Woods Secondary****Start: 2007****Contact: Erin Douglas, Teacher**

The main goal in this Odyssey School is to create a science program that is more interesting, motivating and appropriately challenging for all students. Funding is used to purchase computers, software, video cameras and technology beyond what is already available. Professional development activities focus on problem based learning and assessment; and are supplemented by workshops put on by experts to enhance and extend understanding of scientific principles.

**Riverside Secondary****Start: 2007****Contact: Jeremy Brown, Vice-Principal**

Foundation support helps students connect with new science curriculum by bringing "real" science to the students and help them experience science in the field. Opportunities for exploration include H.R. Macmillan Space Centre, ecology field studies at Reed Point Marine Education Center, Seymour Demonstration Forest, UBC Research Forest, Minnekada Wetlands, Salmon Enhancement programs and Grouse Mountain Ecology program.

**Terry Fox Secondary****Start: 2007****Contact: Pietro Grossi, Science Co-Op Teacher**

Students have the opportunity to explore science outside the classroom by participating in field trips to H.R. Macmillan Space Centre and other venues. New equipment and technology improves student access to interactive scientific websites and supports curriculum links. A diverse offering of career discovery and co-op opportunities connect students to real-world applications of science and encourage them to explore scientific careers.

**COWICHAN VALLEY SCHOOL DISTRICT****Quamichan Middle School****Start: 2010****Contact: James Cutt / Chris Carlin, Science Dept.**

Quamichan's Odyssey project increases student interest, participation and achievement in science by supporting technologies such as Smart Boards, computer sensors and software to reinforce scientific concepts; as well as hands-on activities with Robotics, structures and rockets. Field trips include Science World, Dominion Observatory, Michael Smith Labs at UBC, Pacific Research Station and other marine ecosystems. Scientists in Schools program brings practicing scientists into the classroom, while Career Discovery focuses on biotechnology and visits to local universities and colleges.

**DELTA SCHOOL DISTRICT****Burnsview Secondary****Start: 2006****Contact: Corinna Schiebel, Science Dept.**

Odyssey funding gives Grade 8 students the opportunity to become more engaged in meaningful science activities through field trips to Science World and other facilities. This school introduced new science curriculum and expanded their Odyssey activities to include a student conference. The *Power Of One* Student Conference covers various topics in the fields of science, technology and math, as well as career development opportunities.

**Delview Secondary****Start: 2006****Contact: Van Chau, Science Dept. Head**

Linked directly to prescribed learning outcomes, a field trip to Science World – Body Worlds 3 provided the ideal opportunity to make real connections with new Science 8 curriculum. Supplies were also purchased to encourage more hands-on activities including lenses and mirrors for optics unit, specimens for dissections, and equipment to match the new science curriculum. This new equipment provides students with numerous opportunities to engage in dissections and they certainly appreciated being able to actually dissect organisms and organs they learned about in class.

**DELTA SCHOOL DISTRICT (cont'd)****North Delta Secondary****Start: 2006****Contact: Favian Yee, Science Dept. Head**

The *Science for All!* Project helps students develop a lifelong appreciation, awareness and understanding of science and scientists. The Magic of Science program uses scientific method to explain unexpected results of magic and explores concepts linked to curriculum. Students participate in special lab activities, field trips and mentor other students. Teachers create enrichment lessons on a variety of science topics; while using new equipment and technology to provide hands-on learning opportunities in the classroom.

**Sands Secondary****Start: 2006****Contact: Val Kenis, Science Department**

Odyssey funds are used to engage students in innovative learning through a variety of activities. Grade 8 students enjoy various field trip explorations, including Body Worlds at Science World, which is linked to prescribed learning outcomes in biology. New equipment and telescopes support student learning for Grade 8 Astronomy unit and an Astronomy Club enhances the learning opportunities.

**South Delta Secondary****Start: 2006****Contact: Joanne MacIntosh, Science Dept. Head**

New AutoCAD software revolutionizes the Technical Education Department, inspiring students to undertake a variety of STEM design projects. Lego Robotics technology and other new equipment for the science lab enhance hands-on learning for all students. Various field trips demonstrate applications of science in the real world - including Science World Body Worlds, H.R. Macmillan Space Centre and Vancouver Aquarium Wet Lab. Students particularly enjoy the hands-on component of the Wet Lab where they are able to touch marine life while studying the art of experimental design.

**FORT NELSON SCHOOL DISTRICT****Fort Nelson Secondary****Start: 2013****Contact: David Johnstone, Vice-Principal**

Fort Nelson Secondary's Inquiry into STEM Project engages their students in hands-on inquiry challenges, explores the engineering process & integrates technology into the classroom using robotics & probeware. Professional development supports STEM skill development and inquiry-based teaching styles. Career Discovery activities focus on oil & gas industries, health sciences & ecological stewardship. Students have the opportunity to visit fracking sites, gas plants, and a variety of locations to conduct hands on fieldwork (river, forest, marsh lands, etc).

**GREATER VICTORIA SCHOOL DISTRICT****Esquimalt High School****Start: 2007****Contact: Tim Bullard, Science Department**

Students connect the process of "doing science" with real-world experiences by participating in science-related field trips to enhance their science education. Field trip explorations include: the Institute of Ocean Sciences, University of Victoria, Sydney Marine Ecology Station, TRIUMF, Horne Lake Caves, BC Cancer Agency, H.R. Macmillan Space Centre and Science World. Mobile labs like AquaVan and Planetarium Starlab engage students in hands-on activities, making science more immediate and meaningful. Guest scientists from working science facilities help inspire students to pursue careers in science and technology. Independent research is also promoted by facilitating mentorship with university professors, graduate students and others. Students document their direct experiences in videos and PowerPoint presentations to promote interest in science within Esquimalt High School, as well as at feeder middle schools.

**Spectrum Community School****Start: 2007****Contact: Cathy Besse, Science Dept. Head**

Students are exposed to real and practical science explorations during field trips to *Island* locations such as the Institute of Ocean Sciences/Pacific Geo-Science Centre, Goldstream Park Nature House, Bamberton intertidal Zone, Pacific Forestry Research Centre, *Centre of the Universe* Observatory, Harland Land Fill, UVic, Camosun College and Royal British Columbia Museum. Guest speakers bring their experiences into the school to stimulate a lifelong passion for science and learning. A science club encourages students to participate in science fairs and career fairs that showcase science and technology. New equipment offers more exploration and inquiry type of activities, and improved technology enriches the learning experience in the classroom.

**Victoria High School****Start: 2007****Contact: David Young, Science Dept Head**

An innovative new marine biology program is centered on an active learning approach. A large chilled seawater aquarium (Seaquaria) includes a touch table and dissecting scopes with water trays. Students participate in field trips to the local beaches and Sydney Marine Ecology Station to observe marine organisms in the wild. AquaVan provides interactive marine demonstrations and guest speakers discuss their research: I.E. University of Victoria, Institute of Ocean Sciences, Fisheries and Oceans Canada and SeaChange Marine Conservation Society. Student participation and achievement is promoted using poster displays, PowerPoint presentations and web pages displaying research information on various marine organisms studied. More information on a diverse variety of marine life and resources at <http://www.vichighmarine.ca>

**KAMLOOPS - THOMPSON SCHOOL DISTRICT****Brocklehurst Middle School****Start: 2009****Contact: David Coleman, Teacher**

*Enhancing Technology in Science* is the focus of this Odyssey project that provides students with a broader range of laboratory equipment and new technology. Students are able to take virtual field trips on the Internet; gain exposure to PowerPoint software; and participate in hands-on learning activities involving electrical equipment, specimen dissections, microscopes and other equipment linked to new science curriculum. The knowledge and skills gained by students in the classroom is leveraged during Career Discovery visits to local industry to see science and technology in action.

**NorKam Secondary****Start: 2009****Contact: Eric Rustand, Science Dept. Head**

This *Technology Project* focuses on connecting technology and science learning. Each science class is equipped with a projector, computer and smartboard technology to create interactive learning opportunities by accessing webcasts from the NASA Digital Learning Network; linking to other classes for science experiments like the CIESE program; and broadcasting classroom experiment results through podcasts. Career Discovery visits include TRIUMPH at UBC, Bamfield Marine Research Centre and various mining and technology fair events. New technology like force plates and probeware expands student learning opportunities <https://www.youtube.com/watch?v=ZQFjhnE6dig&feature=youtu.be>

**KOOTENAY – COLUMBIA SCHOOL DISTRICT****JL Crowe Secondary School****Start 2012****Contact: Chris Plamondon, Science Dep.**

This “Technology Enhancement with Robotics” project includes cross-curricular connections, cross-grade knowledge extension, in-class demos, field trips, inter-school competitions and uses senior students to lead and mentor junior students. New robotics-based science curriculum provides an exciting platform for students to develop STEM skills and robotics projects encourage analysis, teamwork, leadership and collaborative problem solving – all critical skills for students moving forward in our transforming economy. Field trip explorations and career discovery enhance school connections to local industry and community.

**KOOTENAY LAKE SCHOOL DISTRICT****LV Rogers Secondary School****Start: 2010****Contact: Chris Dergousoff, Tech. Dept. Head**

LV Rogers’ Technology Design project uses a new CNC router to create exciting learning activities for students in math, physics, technology, trade & education courses. Along with AutoCad and Mastercam software, this new technology enables students to design, create technical drawings and manufacture components, while applying math theory and exploring physics concepts. Extra-curricular clubs also utilize this technology; while technology demonstrations and teaching opportunities share the learning experience with other schools in the District. This project leverages industry support from local companies such as Drop Designs and Spearhead Timberworks, who provide in kind contributions of materials, hands-on instruction and work experience for students.

**LANGLEY SCHOOL DISTRICT****Aldergrove Community****Start: 2007****Contact: Greg Anslow, Cindy Pederson, Science Dept.**

Students are exposed to the “wow” in science by participating in mobile labs such as Science World *On The Road* and The Portable Planetarium Starlab. A *Demo Of The Week* Program helps students make visual connections in science, increase their overall interest level and improve their understanding of scientific concepts. Additional resources like microscopes and lab supplies increase student participation, allow more hands-on activities and engage more students directly in lab activities. Teachers participate in professional development to gain exposure to various resources and technologies to enhance classroom teaching. Departmental collaboration meetings draw on the strengths of all members by sharing ideas and working together on curriculum activity development.

**Walnut Grove Secondary****Start: 2007****Contact: Aubrey Farenholtz, Physics Teacher**

The Technology Enhanced Classroom Program integrates computers and multimedia technologies into students’ daily learning activities to “inspire through technology”. Students develop their knowledge through interactions with a wide range of resources including computer simulations, video analysis, traditional hands-on experiences and interactions with their peers and teachers. Unique instructional resources called Study Guides cater to this student-centered, experiential approach to learning. This program utilizes various aspects of technology to help students explore, illustrate, simulate and evaluate their understanding of concepts.

**LONDON DISTRICT CATHOLIC SCHOOL BOARD****John Paul II Secondary****Start: 2005****Contact: Mike Santolupo, Design Teacher**

Odyssey funds support a unique program that provides students with the opportunity to learn how to design and build products using real-world software and engineering-related skills. The *Pre-Engineering Design and Innovation Studio* Program benefited from the purchase of new laptop computers, new digitizing tablets to run design software, manufacturing equipment and supplies for various student design projects. Students' experience is further enhanced through field trips to Western Engineering, Davenport Wind Tunnel, St. Clair College of Applied Arts and Technology, Western Audiology Research Center and NRC Integrated Manufacturing Technologies Institute. Odyssey funds also support professional development activities for the staff to continuously improve this innovative program.

**MAPLE RIDGE - PITT MEADOWS SCHOOL DISTRICT****Maple Ridge Secondary****Start: 2009****Contact: Beth Warner, Science Dept. Head**

The overall objective of this Odyssey project is to encourage students to become lifelong learners of science by improving their science literacy. The use of technology like smartboards, probeware and projectors in the classroom enhances the science curriculum and increases students' appreciation and excitement for science. Odyssey funds are used to create classroom activity kits to demonstrate concepts in earth sciences, electricity and structures (including Lego Robotics). Career Discovery opportunities focus on Genome BC, UBC Engineering, and various Geology and Astronomy venues.

**Samuel Robertson Technical Secondary****Start: 2009****Contact: Brent Crich, Science Dept. Head**

This Odyssey School believes that multisensory learning that spans across the disciplines greatly benefits students by enhancing their scientific curiosity and stimulating their pursuit of careers in science. The *Hands-on, Real-Life Science* project crosses the boundaries of the science classroom into the worlds of Technology and Information Technology. New lab equipment facilitates hands-on learning during units on water systems, ecosystems, chemistry, motion and engineering. A Robotics Club demonstrates the use of simple machines, motors and computer sensors; while acting as a springboard for teams to enter robotic skills competitions. An Electric Vehicle Club demonstrates the use of alternative energy sources. Outreach organizations like Science World, Vancouver Aquarium and HR MacMillan Planetarium bring science excitement into the classroom; while Career Discovery opportunities include AMEC Engineering, Moli Energy, ISE Robotics and Mountain View Conservation Centre.

**NANAIMO-LADYSMITH SCHOOL DISTRICT****John Barsby Secondary****Start: 2008****Contact: Kevin Pistor, Science Dept. Head**

Barsby's Science Odyssey explores three main avenues to provide the greatest opportunity to reach very junior student by the end of Grade 10. This is accomplished by offering a variety of field trips, by getting students involved in fish habitat monitoring and through equipment purchases. Purchased kits are used to build different science-related devices to support curriculum and provide hands-on activities for students. The Odyssey Career Discovery Initiative provides a fourth avenue for student enrichment and exploration of real-world applications of science.

**Ladysmith Secondary Secondary****Start: 2008****Contact: Bob Boyko, Science Dept. Head**

Odyssey funds support the acquisition and implementation of technology to provide students with a long-term, engaging, sustainable technology infrastructure that is inclusive of all students and scientific disciplines. Hands-on lab supplies bring science to life for Ladysmith students. Career Discovery opportunities include Vancouver Island universities & various science-oriented organizations in the surrounding area.

**Woodlands Secondary****Start: 2008****Contact: James Cox, Tech/Physics Teacher**

Woodland's Odyssey Project leverages the school's unique location close to ocean and forest ecosystems to generate student interest by exploring science in the community. The main focus is field trip explorations and hands-on learning at facilities like Morrell Sanctuary and Pacific Biological Station. New classroom equipment, technology and professional development opportunities enhance students' learning experiences, along with guest speakers from science-based careers in the community.

**NECHAKO LAKES SCHOOL DISTRICT****Lake District Secondary****Start 2012****Contact: David Eggleton, Science Dep. Head**

Lake District Secondary focuses their "Science Enhancement Project" on creating diverse, cross-curricular learning opportunities with external connections to local experts, industry and community. Experiential field trips, career discovery explorations and guest speakers in classroom develop themes including ecology and water testing, ethno botany and chemical synthesis, First Nations ecology, power generation, energy conservation, forestry and marine biology.

**OKANAGAN - SKAHA SCHOOL DISTRICT****Summerland Secondary****Start: 2009****Contact: Raja Gupta, Teacher**

This Ecology focused project creates a comprehensive greenhouse program to introduce students to ecological and horticultural issues; and develops relevant career knowledge and skills to help build the Okanagan community and sustain the environment. The hands-on greenhouse experience is incorporated into classroom curriculum and is supported by a virtual guest speaker program to access horticulture and ecology expertise via the Internet. The Summerland Science Fair Club utilizes Odyssey funding for local field trips and research related activities. New technology like 3D printers and robotics enable students to design, create and build various projects, while developing engineering skills.

**PEACE RIVER NORTH SCHOOL DISTRICT****Dr. Kearney Middle School****Start: 2010****Contact: Dan Cimini, Science Dept.**

The "Smart Learning via Smart Board" Project creates a technology-based learning environment incorporating modern educational advances into the classrooms of an isolated Northern BC community. Both students and teaching staff learn how to use this interactive and engaging learning tool to enhance the classroom environment. Survey monkey is utilized for data collection, analysis and testing; and to measure improvements in student attitude, engagement and achievement. Career Discovery activities leverage local oil, gas, hydro and forestry industries as well as explore wind technology, geothermal and geo-surveying.

**PEACE RIVER SOUTH SCHOOL DISTRICT****Dawson Creek Secondary School****Start 2011****Contact: Chris Horton, Vice Principal**

The Water and Energy for the Community Project at this Odyssey school links cross-curricular learning with real-world connections to the water/energy industry in North Eastern BC. A project-based learning approach incorporates student interests and passions - with students developing questions to guide their learning and then engaging in scientific research to support their ideas. Student-led project work also includes water quality testing, surveys of energy usage/production, and investigations into climate change and global warming.

**PRINCE GEORGE SCHOOL DISTRICT****Kelly Road Secondary****Start: 2008****Contact: Mark Hunter, Teacher**

The *Spicing Up Science* mandate helps students be analytical and creative thinkers by using forensics materials to create interesting and captivating activities. Students increase their understanding of DNA and genomics; and learn to analyze and interpret data more effectively through the use of technology and graphs. New Pasco Xplorer GLX data loggers and equipment enable the teaching staff to design velocity and acceleration activities for students to gain hands-on experience using modern technology - as they gather data that can be easily graphed to demonstrate scientific relationships. Field trip explorations and career discovery activities connect students to real-world applications of science in the community.

**Mackenzie Secondary****Start: 2008****Contact: Elyse Schebesch, Science Dept. Head**

Mackenzie's Odyssey project improves the learning environment for students by integrating computer technology into the science labs. The application of this technology to the science curriculum enhances student learning and increases student engagement in science education. Passport Explorer equipment enables students to collect data using multiple instruments in the classroom, as well as in the field. Odyssey funding also exposes students to scientific research and career options, promotes greater environmental awareness and gets students excited about science through field trip explorations.

**Prince George Secondary****Start: 2008****Contact: Brian Pataky, Science Department**

Odyssey funding supports a *Science Into The Future* Project to update classrooms with new technology to join the electronic age. This is an enormous benefit to all science students and positively impacts daily teaching by giving teaching staff access to valuable Internet resources and audio/visual aids. Field trip explorations include Syncrude tar sands, Columbia Icefields, Drumheller and key scientific attractions in the Lower Mainland.

**PRINCE RUPERT SCHOOL DISTRICT****Charles Hays Secondary****Start 2013****Contact: Josh McDonald, Science Department**

The "Exploring Horticulture" Greenhouse project includes a cross-curricular focus, utilization of indigenous plants and materials, and integration of First Nations expertise. This project also incorporates a recycling theme with school-wide activities, develops community connections, uses guest speakers in the classroom & field trip explorations to visit local experts. Additional funding support & In-kind donations from local industry helps leverage the core program funding.

**QUESNEL SCHOOL DISTRICT****Quesnel Junior Secondary****Start 2011****Contact: Diane Dougan, Science Dept. Head**

Odyssey funding provides the opportunity to upgrade science resources, technology and equipment in the classroom: support diverse field trip explorations; and to encourage hands-on science club activities. Students develop leadership skills by linking back to elementary schools to expose younger students to hands-on science. Career discovery trips include local industry and UNBC to connect students to potential careers in their community.

**RICHMOND SCHOOL DISTRICT****A. R. MacNeill Secondary****Start: 2006****Contact: Tuzar Irani, Science/Math Teacher**

Odyssey support builds on the success of MacNeill's *Science Academy* that encourages students to explore connections between science and life. MOF funding supports Science Academy Days and makes this event more cost-friendly for students. Students participate in the North Vancouver Outdoor School where they are immersed in sessions involving forest ecology, stream ecology, framing and team building. New equipment and technology supports salmonid study activities; promotes fish ecology; and enhances the greenhouse and horticulture program at this school.

**R. A. McMath Secondary****Start: 2006****Contact: Allisa Ritchie, Science Department**

Students enhance their study of the respiratory, circulatory, skeletal and digestive system by participating the Science World *Body Worlds Exhibition*. Teachers learn new techniques during *Engaging Science* workshops; and new equipment and supplies allow teachers to present exciting, hands-on science lessons in the classroom. Teachers learn science demo techniques when Science World Outreach Staff bring their Roadshow to McMath and students from feeder schools also participate in this fun and engaging event. Grade 7 students from feeder schools benefit from the new science component of the McMath school orientation that includes tours of the science labs and classes, as well as discussions with Grade 12 students who have chosen science careers.

**R.C. Palmer Secondary****Start: 2006****Contact: John Shim, Science Dept. Head**

Odyssey support plays a pivotal role in bringing science excitement to Palmer Secondary by spurring collaboration between teachers and encouraging students to explore new possibilities in unique events like Science Olympics, Science Jeopardy and Science Magic Shows. Field trips to Science World and Amusement Park Physics at Playland provide students with the opportunity to explore body science, as well as understand kinematics and dynamics. Students actively participate in the Palmer Science Fair/Open House and the school is very well represented at both the Greater Vancouver Regional Science Fair and District Science Expo. Other positive outcomes include a science fair resource handbook, an established science fair process, a mentoring/leadership network of the Quantum Continuum Club, and updates to basic classroom technology to enhance learning and boost morale.

**Steveston-London Secondary****Start: 2006****Contact: Scott Clements, Science Dept.**

The original *Environmental Sustainability Program* empowered students with knowledge and skills to become environmental stewards at school and throughout their community by supporting: student leadership projects, science expo presentations, cross curricular sustainability units, LEEDS tours and GREEN ambassadors. This Odyssey program evolved through the addition of Lego Robotics technology and other equipment into a Junior Engineering Club and new engineering courses for senior students. Students develop STEM skills through a variety of innovative engineering activities in the classroom and are inspired to pursue careers in STEM while exploring organizations like Westport Innovations, General Fusion and BCIT Mechatronics. An engaging "Girls in Engineering" day provides hands-on engineering experiences and guest speakers from industry to discuss career paths and opportunities. Odyssey Impact Video: <https://www.youtube.com/watch?v=FM-hHfqtOgg>

**SOUTH EAST KOOTENAY SCHOOL DISTRICT****Laurie Middle School****Start 2011****Contact: Catherine Fillis, Math & Science Teacher**

The Inquiring Minds Will Know Project uses Odyssey funds to upgrade equipment, technology and resources in the classroom to allow students to perform inquiry-based student-led projects. Strategically placed mentorship from the scientific community helps develop scientific inquiry in astronomy, chemistry and astrophysics. Various field trips into the community, extra-curricular clubs and career explorations to local industry help support student learning and connect them to the opportunities in their community.

**SURREY SCHOOL DISTRICT****Frank Hurt Secondary****Start: 2007****Contact: Nancy Di Cuollo, Co-Dept. Head**

The *Action-Centered Experiences Science Program* or ACE enhances student learning in science through the use of up-to-date technology and equipment, coupled with out-of-classroom experiences. A broader range of laboratory equipment facilitates teaching and provides students with greater hands-on experiences. Students benefit from field trips to locations such as Science World, Vancouver Aquarium, RCMP Crime Lab, GVRD Watershed and local Biomedical Laboratories.

**SURREY SCHOOL DISTRICT (cont'd)****Kwantlen Park Secondary****Start: 2007****Contact: David Wong, Science Dept. Head**

Foundation support focuses on student-driven projects where students are responsible for equipment set-up and maintenance. The Salt Water Lab Project instills interest in marine biodiversity and ecosystems; and the Terrarium Green House Project teaches students about plant diversity, optimal growing conditions, hybridization, Mendelian genetics and hydroponics. Students' learning experience is further enhanced during field trips to H.R. Macmillan Space Center, Science World, Bamfield, Vancouver Aquarium, Cache Creek Fossil Beds and Britannia Mining Museum.

**L.A. Matheson Secondary****Start: 2006****Contact: Kulwant Basi, Science Dept. Head**

This Odyssey Project focuses on both short and long term goals to maximize the number of participating students and positive impacts in the school. Short-term enrichment opportunities include field trips to Science World, HR Space Center, Vancouver Aquarium Wet Lab, BC Museum of Mining and Stave Lake Dam - Power House Museum. Longer-term impacts include new equipment purchases to enhance in-class instruction and the formation of a science club.

**North Surrey Secondary****Start: 2007****Contact: Glen Fatkin, Science Dept.**

Foundation support is used to develop a Digital Probe Indoor/Outdoor Science Lab. With the use of digital sensors attached to computers or with portable hand-held units, students are able to fully explore and be fascinated by the world around them. Students are more engaged in the scientific process as they collect real-time data using the various probes available. Other Odyssey activities include field trips and field studies to connect science to applications in the real world.

**Princess Margaret Secondary****Start: 2007****Contact: Ann Choe, Co-Dept. Head**

The Odyssey Program at Princess Margaret Secondary focuses on engaging students and encouraging excitement in the scientific field. The goal is to create a renewed interest and joy of science – to help students see science in a new light that has a vision of possibility and intrigue. Odyssey funds support field trip transportation costs to encourage broader-based participation of students from this inner city school. Unique opportunities for extra-curricular discovery trips include facilities like the Bamfield Marine Science Center. Odyssey funds are also used to purchase laboratory kits to stimulate hands-on teaching and allow students to explore new avenues in science.

**Queen Elizabeth Secondary****Start: 2006****Contact: Simon Kissinger, Science Dept. Head**

This school's original Odyssey Program included Science Focus days with topics in Biology, Physics, Chemistry, Astronomy, Earth Science, and Ecology. Field trip explorations included Science World – Body Worlds 3, HR Macmillan Center and Mountain View Conservation and Breeding Center where students learned about some of the world's most endangered species. This Odyssey program evolved to include a mobile school collaboration garden that connects students to horticulture and community gardening; and a school weather station that is part of an international network.

**Tamanawis Secondary****Start: 2007****Contact: Michelle Hendy, Science Department**

*The Anomaly* Science Club is enhanced by purchasing exciting science demonstrations and by funding science related field trips. Grade 7 students are introduced to science at the secondary level by participating in the *Discover Tamanawis* Science Program including topics like crime scene investigation techniques and other science related activities. Field trip explorations and Career Discovery includes Bamfield Marine Biology Research Station, Grouse Mountain Ecological Station and science related outdoor education at YMCA Camp Elphinstone.

**THAMES VALLEY DISTRICT SCHOOL BOARD****Clarke Road Secondary****Start: 2006****Contact: Ted Murphy, Science Dept. Head**

Odyssey funding supports a science club for all students that focuses on astronomy, environment, physics, biology, chemistry, botany and earth/space sciences. Students participate in real hands-on, inquiry-based science with activities that include rearing Monarch butterflies, viewing the night sky, making UV bracelets, making light bulbs, planting space tomatoes, making crystals and even trying to save the environment. Student participation is promoted in science fairs, Science Olympics and other competitions like the Sanofi-Aventis Biotech Challenge. Student enrichment opportunities include large-scale field trips to the Ontario Science Centre and Toronto Zoo. Staff participate in the Science Teachers Association of Ontario Conference (STAO), bringing back many ideas to improve student learning in the classroom.

**H. B. Beal Secondary****Start: 2006****Contact: Bela Nagy, Science Dept. Head**

Beal's goal is to enrich the learning experience for Junior Students by providing stimulating science activities that promote interest in science and the pursuit of careers in science. Odyssey support allowed students to participate in a very worthwhile field trip to the Ontario Science Centre and funded equipment purchases like an electrostatic generator, electroscopes, circuit boards, rocket building materials and a marine display tank. A science club provide hands-on activities in biology, chemistry and physics with an emphasis on inquiry-based science. By participating in STAO conferences, science staff learns new strategies to stimulate student interest and enhance student learning.

**THAMES VALLEY DISTRICT SCHOOL BOARD (cont'd)****Montcalm Secondary****Start: 2006****Contact: Lloyd Rumble, Science Dept. Head**

The goal of this Odyssey Program is to provide opportunities for students to step inside a research laboratory in their own community and test-drive current scientific research techniques, as well as provide exposure to the range of disciplines within science, engineering and technology. Science data collection devices - like water quality and environmental science probe ware - allow students to experiment in the field, then collect and analyse their own data back in the classroom. Field trips to the Ontario Science Centre, ROM, Toronto Zoo and Conservation Authority Watershed complement the students' growing research skills while exposing them to the exciting disciplines of science and technology. Staff members participate in various professional development opportunities to develop inquiry-based learning strategies to enhance technology.

**VANCOUVER ISLAND NORTH SCHOOL DISTRICT****North Island Secondary****Start: 2013****Contact: Rena Sweeney, Vice-Principal**

SEANIC – Science Education Adventures in North Island Communities Project connects students with local resource, conservation & tourism industries; and includes a strong focus on engaging students with guest speakers & local experts. This program is supported through diverse field explorations; new classroom equipment for hands-on activities; professional development & career discovery field trips to expose students to relevant science careers in the North Island community.

**VANCOUVER SCHOOL DISTRICT****Britannia Secondary****Start: 2006****Contact: Sam Scorda, Science Dept. Head**

New equipment and technology augments the introduction of new curriculum. New microscopes help create positive learning experiences in the lab by providing enough equipment to allow students to participate in hands-on activities that make science interesting. With new technology, students are more engaged in the study of cells, tissues and organ systems; and are excited to see cellular organisms for themselves rather than in a textbook.

**Eric Hamber Secondary****Start: 2005****Contact: Rob Arkiletian, Science Dept.**

The Texplorer Club activities are designed to enhance critical thinking skills and provide hands-on activities that coordinate with various aspects of junior science curriculum. With exposure to demonstrations, Science Fun days & Technology competitions; students are more aware of science & technology. Specific topics encourage students to examine the interconnectedness of science & technology at an advanced level. Some activities include: Robotics competition, Electrathon Challenge Race, Techno Olympics, CSI Forensics, Plant Cloning and Electromagnets.

**Gladstone Secondary****Start: 2006****Contact: Fergus McCallion, Science Dept.**

Teachers enhance Junior curricula and spark interest in Science and Technology using a multifaceted approach that includes field trips, guest speakers and the creation of an extracurricular Science Club. Odyssey funded activities include visits from OWL Rehabilitation Society, Vancouver Aquarium AquaVan, Planetarium Portable SkyLab and Chemistry Magic Show. Participants in the Science Club meet weekly to develop their science skills while performing hands-on activities with Biology, Chemistry and Physics themes.

**John Oliver Secondary****Start: 2006****Contact: Joanne Martin, Science Dept. Head**

Students learn that science goes beyond what happens in the classroom by participating in outreach programs and extracurricular science initiatives. The Vancouver Aquarium's AquaVan provides students with first hand experience with marine animals that are new and exciting. In the Destination Imagination Program, students work in teams to create solutions to engineering challenges. Another initiative is the First Lego League (FLL) where teams create machines programmed to perform specific tasks in a competition setting. These extracurricular activities support the idea that science is used to create – building on students' knowledge of science and their creative skills.

**King George Secondary****Start: 2005****Contact: Victoria Hughes, Science Dept. Head**

Through partnerships with scientists, science groups, engineers and urban groups, this program extends the school's *Livable City* theme to help students become agents of scientific development, environmental change and urban sustainability. The program bridges the gap between theory covered in the classroom and real world experience. Students participated in the design, implementation and monitoring stages of the Solar Heat Accelerator Project that includes solar panels, a display unit and a classroom demonstration model. Other activities included Engineers Without Borders, an Environmental Youth Alliance photo project examining environmental issues and an Environmental Café to increase youth awareness and create action plans. This Odyssey program evolved into a Science Stars Program that empowers students to take ownership of their learning, to explore career connections in industry and to create science challenges that leverage the culture of environmental sustainability and science innovation at King George.

**VANCOUVER SCHOOL DISTRICT (cont'd)****Prince of Wales Secondary****Start: 2006****Contact: Deenu Haji, Science Dept. Head**

This school holds an annual Science Week to raise the awareness of science and science careers with all its students. Guest speakers from a variety of organizations make presentations showcasing various aspects of science with topics like: Chemistry Magic, Energy Show, Climate Change, Infectious Diseases, Ballard Fuel Cell and various UBC "Let's Talk Science" Programs. The Science Olympics event provides students with the opportunity to experience science in a fun and imaginative way while improving their knowledge and application of science process skills. MOF funding also support new technology and equipment in the classroom to create more hands-on learning opportunities.

**Sir Charles Tupper Secondary****Start: 2004****Contact: Robert Florio, Science Dept. Head**

Sir Charles Tupper created a Technology Club which was outfitted with computers, printers and video camera to create an area where students can undertake various science projects. The Technology Club workshops relate to developing technology with a focus on problem solving, hands-on activities, and active participation in a diverse range of subjects including: Electric Cars, Catapults, Newspaper Domes, Magic (strange Chemistry and math), Grossology (Owls pellets), Goo (weird polymers), CO2 cars and Veggie Car Challenge.

**Templeton Secondary****Start: 2005****Contact: Mike Hegneveld, Science Dept. Head**

The Templeton Technology Club expanded into a program that benefits a wider range of students after its first year, when it was an after-school program with Science World conducting demonstrations and experiments with junior students. Odyssey funding was used to purchase new lab equipment to enhance existing curricular programs. A team of students was sent to the nation-wide Envirothon Competition in Winnipeg and they were inspired to start a sustained initiative to promote conservation and environmental awareness. Representatives from OWL Rehabilitation Society shared a lively presentation about wild birds in B.C. and the importance of bird conservation. The Bug Lab Invertebrate Museum provided entomology sessions to give Biology 11 students the opportunity to actually see and touch animals they have been studying. Core focus on creating a culture of science at Templeton has now evolved into a special STEM program supported by SAP.

**University Hill Secondary****Start: 2005****Contact: Jonathan Wilkie, Science Dept. Head**

Students are given the opportunity to explore Science and Technology during class time as well as participate in various extra-curricular activities. Senior students mentor junior students during activities that include Biology Dissection Mini, Science Fair Mini, Science and Technology Club, Physics Olympiad, and the Science Web Site that will also be incorporated as a teaching tool. Field trip explorations include: UBC Research Facilities, Vancouver Aquarium, Science World, Planetarium, Maritime Museum, Physics at Playland and Grouse Mountain.

**Vancouver Technical Secondary****Start: 2004****Contact: Leanne Brown, Science Dept. Head**

Students in the Vancouver Technical Odyssey Club met regularly to explore various topics including: rocketry, Tsunami wave action, fractals and chaos theory, DNA and forensic science, and CO2 powered racecars. Large posters and student bulletins advertised upcoming sessions to increase participation. The Club expanded its activities by targeting projects outside the school such as: UBC Junior Physics and Engineering Competition, National Biology Competition and various Science Fairs. All science teachers are involved, with additional expertise provided by Shops and Art Departments. Field trips explorations included an exploration visit to the Vancouver Island caves, biology trip to Bamfield Marine Station and a geology trip to Drumheller that included a botany component. New equipment and technology enhances classroom learning and the annual Science Fair sustains a culture of science exploration at Van Tech.

**VERNON SCHOOL DISTRICT****W L Seaton Secondary****Start 2011****Contact: Paul Britton, Science Dept. Head**

Seaton Secondary students view the challenge of forest practices from the perspective of environmental sustainability, economic and global factors in this Forestry and Sustainability Project. New technology and equipment has transformed a wood lot into an outdoor research lab where students examine the effects of logging and reforestation on abiotic and biotic factors; collect data around climatology, species type and growth; and examine abiotic factors such as soil type and hydrology. Student work is linked to studies done at UBCO, Okanagan College and TRU; and partnerships with local industry connect students to future careers in forestry and agriculture.