

## New initiatives

Funding from the Canadian Geological Foundation and the Geological Survey of Canada has been received to support two new EdGEO initiatives:

**Putting the Earth into Science** takes an interdisciplinary approach to expanding Earth science content in Canadian high schools. EdGEO is developing ten curriculum-based lesson plans to integrate Earth science topics into the core subjects of physics, chemistry, mathematics, and biology. The project will attract teachers of diverse science disciplines, and deliver a meaningful educational experience and important career information to high school students who are largely unaware of how Earth science impacts their daily lives.

**Bringing Earth Science to Life** delivers a comprehensive collection of relevant, classroom-ready resources in Earth science for junior and intermediate grade levels. EdGEO is working in partnership with volunteer workshop facilitators to select the best learning activities from previous EdGEO workshops. These learning activities will be made available for download on the EdGEO Web site. The resulting collection will avoid duplication of effort for future EdGEO workshops and leverage existing high-quality learning materials. This project will benefit educators and greatly assist volunteer EdGEO workshop organizers by providing materials that can be used directly or adapted for use in new workshops.



Established in the early 1970's by the Canadian Geoscience Council, now the Canadian Federation of Earth Sciences (CFES), EdGEO is coordinated by the Canadian Geoscience Education Network (CGEN), the education arm of CFES. CGEN is concerned with all levels of geoscience education in Canada and encourages activities designed to increase public awareness of geoscience.

Over the past four decades, the program has been entirely administered by volunteers from across the country.

The ability of EdGEO to advance its vital mission relies on the generous support of scientific associations, corporations, government grants, foundations and individuals.

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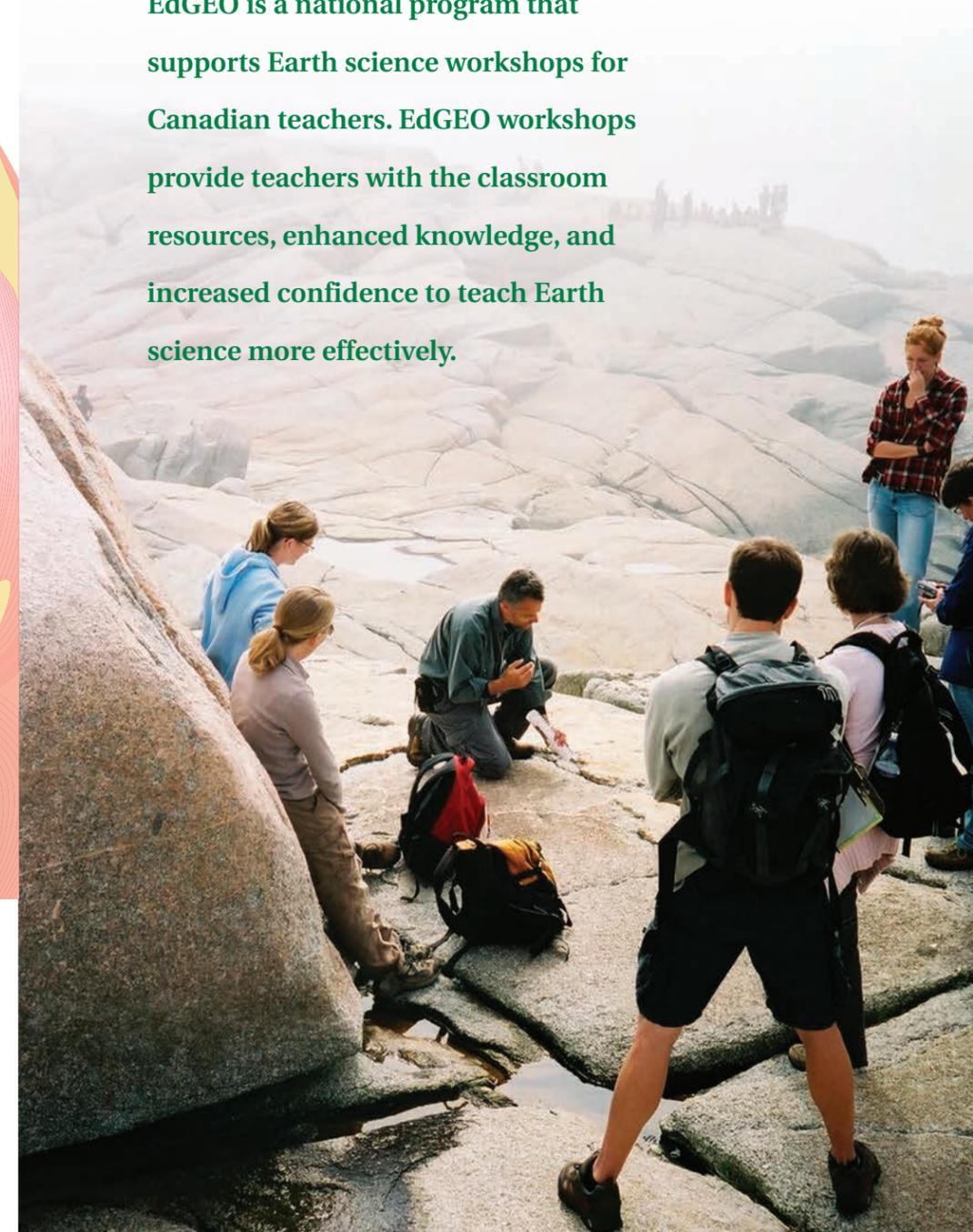
Canadian Earth Science Teacher Workshop Program

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Canadian Earth Science Teacher Workshop Program

EdGEO is a national program that supports Earth science workshops for Canadian teachers. EdGEO workshops provide teachers with the classroom resources, enhanced knowledge, and increased confidence to teach Earth science more effectively.



By providing educational opportunities for today's teachers and, through them,



their students, EdGEO seeks to cultivate a heightened awareness of our planet. The expected result is an improved capacity on the part of Canadians to understand the Earth and to make informed decisions, especially with regard to the use of mineral and energy resources, the maintenance and remediation of the environment, and response to geological hazards.



## EdGEO Teacher Workshops

Workshops are locally driven and focus on a wide range of Earth science topics, such as geological time, Earth resources, rocks and minerals, fossils, and landforms. Some workshops are field-based to demonstrate how field activities can be incorporated into Earth science teaching. Others emphasize hands-on activities that can be replicated in the classroom. Many strive to include both classroom and field components. Workshops attended by local teachers are tied to the provincial/territorial curriculum whereas national workshops emphasize topics common to curricula in multiple Canadian jurisdictions.

Earth scientists and teachers work collaboratively to develop and deliver EdGEO workshops to ensure that the field activities and resource materials can be effectively used in the classroom. Sessions are inquiry-based and interactive with practical hands-on activities to help teachers move from theory into practice. They range from two-hour sessions to several days, and can generally accommodate up to twenty-five teachers. Workshops have been presented at teachers' conferences, province-wide professional development days, industry events, and independently.

An important element of each workshop is the package of resource materials provided to each participating teacher for use in the classroom. The package typically includes learning activities, maps, hand lenses, streak plates, magnets, rock and mineral kits, fossil sets, text books, listings of relevant Web sites, and posters. Such resource materials help to ensure that teachers have the tools necessary to teach Earth sciences effectively.

## EdGEO Grants

EdGEO grant applicants are a varied group including societies, universities, provincial and federal government departments, foundations, charities, museums, as well as individuals and companies. Grants are made on the basis of online applications that provide a summary and detailed budget of the proposed workshop or field trip. EdGEO grants are intended to help cover the cost of resource packages, field trip transportation, and promotion. Salaries are not covered. Teachers are generally asked to pay a modest registration fee in addition to expenses such as hotel accommodations on field trips. Local organizing committees are urged to solicit funds from local geoscience organizations, service groups and businesses. EdGEO supplements such funds with grants of up to \$3,000. Applications are accepted throughout the year. Each is evaluated on its own merits by the national EdGEO executive committee against the established goals of the organization and the monies available. Applicants are notified within three weeks of submission.

## Where and How Many

Over the last eighteen years, a total of 179 workshops for teachers have been sponsored by EdGEO, averaging 10 workshops per year across Canada.

The numbers of teachers reached through EdGEO workshops is very encouraging – over the past decade, a total of 3,903 teachers attended workshops and received classroom resources, an average of 279 teachers per year. If each of these educators has an average class size of 25, in one year close to 7,000 students will benefit from the increased knowledge, enthusiasm and confidence of their teachers as well as the hands-on activities, fieldtrip ideas and resources they bring to the classroom. Over 10 years these 279 teachers will reach approximately 70,000 students.

While the majority of EdGEO workshops have been based in British Columbia, Alberta, Saskatchewan, Ontario and Nova Scotia, over the last 10 years workshops have also been held in Nunavut, New Brunswick, Québec, Manitoba, the Yukon and the North West Territories.

## Impact on Teachers

Participants consistently rate EdGEO workshops as excellent and outstanding. Teachers value the hands-on aspect of the workshops, the strong connection to the curriculum, the exceptional classroom resources provided, the field components, the collaborations forged between teachers and geoscientists, and the knowledge gained. Participants make reference to the talented experts who enthusiastically commit to sharing their expertise in Earth science. Very often the teachers comment that the EdGEO workshop is the best professional development they have ever attended.

Discussions with EdGEO teacher partners reveal that the benefits are many:

- Networking with scientists and other science educators both locally and Canada-wide
- Professional development
- Awareness of, and participation in, provincial and national geoscience initiatives
- Enhanced capacity for Earth science curriculum implementation through sharing and development of new activities and resources

