

The Canadian Communities Atlas

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The Canadian Communities Atlas, a component of the National Atlas of Canada, offers a unique national network of geographic information by providing schools the opportunity to create an Internet-based Atlas of their community. Supplemented by the National Atlas of Canada's Internet mapping resources and other Government of Canada geography-based resources, students can see both local and national perspectives of many physical, economic, human, and historical geographic themes. This project builds on the past successes of the National Atlas on SchoolNet and the Our Home CD-ROM project. Each school will maintain its own Community Atlas, thus providing an on-going educational project and Canadian educational resource for students, teachers and the general public.

Some of the CCAtlas' goals are to:

- Providing meaningful resources and activities that enhances students' knowledge of others, their environment, their community and country.
- Developing skills — communication, interpersonal, problem solving, technical, research, design.
- Providing a meaningful and educational use of the Internet with technology being used as a means to an end not as the end itself.
- Promoting pride in students' country, community and themselves.

This project is ideal for teachers looking for a practical and interesting opportunity, which combines geography and social studies curriculum with technology in an easy-to-use format. The project has been designed with guidance from an advisory group of kindergarten to grade 12 teachers representing every province and territory in Canada. The Canadian Communities Atlas can be adapted to the curriculum of any school, anywhere in Canada. Students will learn and develop their research, design and

technology skills while working on their own Community Atlas site. The project timelines are very flexible and can be adapted to any timetable and there is no cost to participate. As this is an on-going project, teachers can develop their Atlas site as time and resources allow. Community Atlases can grow, over time, to become a complete geographical compendium of a community.

What kind of Atlas - our definition



There are many definitions of what an Atlas is and what an Atlas contains. There are many different types of atlases used in many different ways. It was necessary for the Canadian Communities Atlas to be based on a definition that allows the broadest possible participation by Canadian schools. In defining the CCAAtlas, the skills and capabilities of teachers and students needed to be kept in mind to allow both of these groups to participate and contribute their Atlas to the overall project. Many teachers have no idea how to create a basic map let alone teach their students how to make a thematic map showing the population distribution or economic diversity of their community. Other teachers are as capable as many professionals in using a GIS to create complex thematic maps of their community. Other options were needed to allow Canada's diverse educational community to participate. The following definitions, from common Canadian dictionaries, and others were used:

- “Any volume of tables, charts or plates that systematically illustrate a subject.” - Houghton Mifflin Canadian Dictionary
- “A book of tables or illustrations showing systematically the development of a subject.” – Funk and Wagnalls

The CCAAtlas is defined as a collection of school-produced atlases containing maps, drawings, illustrations, charts and accompanying text that systematically develop the subjects and themes of the CCAAtlas geographical framework.

Teacher Advisory Group

The Teacher Advisory Group (TAG) of kindergarten to grade 12 teachers representing every province and territory in Canada was the CCAAtlas' fundamental resource in:

- defining the CCAtlas;
- determining its structure and geographical framework;
- creating its resources in the form of its Web site, project guides and Web page templates;
- connecting it to provincial curriculum student learning objectives
- providing ongoing advice and feedback;
- support to other participating teachers; and
- promoting the project within their respective provinces.

Education in Canada is a provincial jurisdiction and as a result of this the role of geography as a subject and what is taught varies from province to province. Geography, as a subject, exists in only two of Canada's 13 provinces and territories. In the others it is part of a broader subject called Social Studies. In order for the CCAtlas to be a project that worked in a classroom environment in each province and territory, it needed a structure that was flexible but one that remained true to a geographical context. The TAG allowed this to happen by creating an atlas structure that would permit content development in all classroom settings. A school's Community Atlas is designed using a fully functional Web site structure with a geographic framework of physical, economic and human realms; each of these contain a series of subject categories. Students explore their community's geographic characteristics using the following structure:

- physical geography – geology, tectonics, gradation, climate, soil, vegetation, oceanography, hydrology and environment;
- economic geography – forestry, farming, mining, fishing, other primary industries, secondary industry, tertiary industry, quaternary industry, employment and tourism
- human geography – demographics, First Nations, cultures and ethnic origins, settlement, vital statistics, language, education, social indicators, politics, recreation and local notables

Teachers select individual topics or a whole category, and students work on the content of their Atlas site as part of their regular schoolwork. Since the project adapts easily to any timetable, schools can develop their Atlas site as time and resources allow.

Teachers are bombarded from all directions by organizations that offer projects that offer the very best resources and activities to students' academic requirements. The primary and most fundamental questions that needed to be answered for teachers was why the CCAtlas? Why participate? What's in it for students? and what makes it better than the next project. The CCAtlas TAG had an easy time answering these questions by putting together a package that has the following features:

- Students learn "real-world" skills
- No cost to participate, receive project materials and attend workshops;

- Easily adaptable;
- Set your own time-lines;
- Canada-wide network; and
- Funding and resources through partnerships.

In addition to the above, the TAG decided not to focus on specific elements of every provinces curriculum but on the required learning objectives that the curriculum, from every province and territory, requires. The result of this makes the Canadian Communities Atlas (CCAtlas) project an excellent multi-disciplinary activity for accomplishing many learning objectives and outcomes. In addition the types of academic courses where the CCAtlas is an appropriate learning vehicle are also diverse: Geography, Social Studies, Geomatics, Canadian, Northern and Community Studies, Information Technology, Computer Studies, Environmental Studies, History, Economics, Languages, Biology and Math (Statistics). The CCAtlas offers the opportunity for cross-curricular activity within a single project. The reality of today's working world requires that students make connections and develop skills allowing them to cross subject boundaries and understand why that is important. Additionally and of equal importance, it allows students who have different academic and technical capabilities to work on their own unique sections of their combined Atlas projects at their own level.

Learning outcomes and course/teaching objectives vary widely from jurisdiction to jurisdiction in Canada as a result of education being a provincial responsibility. The knowledge, skills and attitudes that students must attain are ultimately in the hands of the individual teacher. Learning outcomes are common across Canada and reflect the following general requirements:

- Communication Skills
- Research Skills
- Personal Development
- Interpersonal Abilities
- Technological Competence
- Problem Solving
- Aesthetic Expression and Language Development
- Citizenship and Work Ethic

Teacher Resources

Participating schools are offered a number of free resources to assist them in developing and creating their Atlas project. A series of guides were developed and written by the Advisory Group to provide all the practical information that they felt teachers would need to participate. The guides were first created as printed documents that were sent to

all teachers that registered. They were later converted to Web-based documents that that could be view on-line and downloaded to be used off-line. This made the practical activity of updating them much easier and eliminated the cost of printing and mailing.

The Atlas Content Guide contains suggestions for content development of every Atlas subject for both elementary and secondary levels, information on quality control, language, defining a school's community, hardware, software and Internet costs, and ideas on locating and collecting data.

The Technical Guide addresses the technical requirements of creating an Internet-based project. This includes general information on scanning, image file types and optimizing file sizes, using the projects Web-page templates and transferring files to a WWW-accessible server. This guide was intended to allow the technical components to be within the reach of any teacher, regardless of technical experience.

The Content Registration Guide provides instructions on how to use the CCAAtlas Project Registry by adding and updating project, school and teacher information (using an assigned password). The Registry is fully searchable using the CCAAtlas project search interface and search result interactive mapping interface.

The web page templates are HTML documents that form the shell and structure of an atlas site. They were designed, created and tested by students and teachers to be easy to use and adapt for their individual needs. Using templates makes it much simpler for a school to create their atlas site as well as giving all school Atlas sites a basic common look and feel. There are no restrictions on the design and content of an atlas page other than good judgment and content accuracy. Schools simply insert their contents into these templates, following the instructions in the Technical Guide.

Technical assistance is another resource that the Advisory Group felt was necessary to offer participating teachers as they have varying degrees of experience with the Internet-based projects. While the guides were intended to be as complete as possible they may not have everything for all participants. Teachers have always been encouraged to seek additional support from the project team and Advisory Group members.

Canadian Communities Gallery

The Canadian Communities Gallery (CCGallery) is the project registry and is the component of the CCAAtlas that links all of the schools' Atlas sites to one another. Its main functions are to:

1. contain descriptions/metadata of every school's on-line Atlas;
2. contain links to subject compatible national level resources from the National Atlas of Canada and other Government of Canada geography-based resources; and
3. provide search capabilities to users.

The descriptions/metadata of a school's on-line Atlas sections will typically be entered into the database by a teacher who is leading or supervising all or part of a school's Atlas. The teacher will obtain access by the use of a unique user-id and password. Both of these must be requested once a school's initial Atlas is on-line. The search capabilities can be used by anyone who has access to the Internet. The search interface offers users options for selecting subject areas, language and geographical location selection as well as keywords.

The search results are returned in two steps. The first is an interactive mapping interface that offers users the ability to see the spatial distribution of the search results and the number of results in every location. From the mapping interface a location can be selected and the more detailed project information/metadata will be presented. This allows users to evaluate the individual projects prior to linking to and accessing them. The CCGallery is expanding to include other project collections belonging to other partner organizations. The evolution of the CCGallery now makes it more of an access vehicle for multiple collections of complementary Web-based resources. This adds value by providing for more routes of discover and a greater breadth of content for users.

The Canadian Communities Gallery — A Resource Network



Partnerships

The CCAtlas has a number of government and private sector project partners that offer many things to help make a school's Community Atlas a success. Instead of competing with other organizations for teachers' time, these strategic relationships offer teachers

greater value, resources and opportunities. The Canadian Council for Geographic Education offers a national geography and social studies teachers network. ESRI Canada's Schools and Libraries program can provide Geographical Information System (GIS) software and data. Industry Canada endorses the Canadian Communities Atlas as a "GrassRoots project" allowing teachers to apply for several levels of funding. Statistics Canada has many free data sources, teacher activities and lesson plans linked right into the project.

The CCAtlas partnership with Statistics Canada (SC) is a good example of these relationships have benefited both organizations:

- Content Guide free SC data and teaching activity links
- Over 50 SC CCGallery national resource entries
- Conference display and presentation sharing
- Joint activity with SC regional education officers
- Joint workshops
- Joint promotion

The Canadian Communities Atlas at Moncton High School, Moncton, New Brunswick, Canada

By: Mr. Kim Evans, Head of Humanities, Moncton High School

A few years ago, I was assigned a grade 10 local studies course. Many of the students were older than grade level and attended erratically. Few had experienced consistent scholastic success. In an effort to motivate, I developed a unit from the Canadian Communities Atlas Project. The students and I negotiated a contract for a school demographic survey suitable for our Canadian Communities Atlas. "Pay" was in marks and the response was phenomenal! Groups brainstormed survey questions; class consensus determined which to include. Individuals word-processed the survey. Pairs presented the project to staff and to their peers. The class tabulated results, created graphs using spreadsheets, and wrote a report. Throughout, I facilitated, mentored and advised but mostly stood in awe of what happened. Attendance and time on task improved. Groups worked cooperatively. Students made oral presentations. Desktop publishing skills were developed. Everyone wrote and edited. However, the project's greatest value was demonstrated while waiting for the results to be posted. Students inquired almost daily, "Is it on line yet?" The Web proved to be the electronic equivalent of the refrigerator door and they were anxious to show off their work! . See the results at <http://www.monctonlife.com/education/ccatlas/humgeog/survey/msrpt.htm>.

In addition to developing research, technological, communication, and interpersonal skills, this Canadian Communities Atlas unit increased local knowledge, motivated, and

rekindled these students' belief in their own abilities. Subsequent experience has proven these benefits transferable and the Canadian Communities Atlas Project to be an excellent example of effective student centered, project based learning.

The Canadian Communities Atlas is an exciting project that brings together community and national geography with technology and a whole new realm of visibility for Canadian schools.