Prince Edward Island
CANADA

Education and Early
Childhood Development
English Programs

Prince Edward Island Social Studies Curriculum

CURRICULUM

Social Studies

Geography 531A
World Geography

2011
Prince Edward Island
Department of Education and
Early Childhood Development
Holman Centre
250 Water Street, Suite 101
Summerside, Prince Edward Island
Canada, C1N 1B6
Tel: (902) 438-4130
Fax: (902) 438-4062
www.gov.pe.ca/eecd/

GEO531A

World Geography

Acknowledgments

The Prince Edward Island Department of Education and Early Childhood Development acknowledges the contributions of the following in the development of the GEO531A—World Geography curriculum guide.

Darcy Harris
Westisle Composite High School

Jack Headley
Bluefield High School

Tim Lea
Montague Regional High School

Bethany Doiron
Social Studies Specialist, PEI Department of Education and Early Childhood Development

To those who contributed expertise in the Appendix section:
Barrie Bennett, author of *Beyond Monet: The Artful Science of Instructional Integration,* who graciously and enthusiastically shared his work on complex organizers.

Contents

Introduction

Contexts for Learning and Teaching

Program Design and Outcomes

GEO531A Curriculum

Appendices

Introduction

Background

The undertaking of renewal in curriculum documents is a process that typically involves many people, along with much deliberation, discussion, research, and time. The renewal of GEO531A - World Geography was based upon the need for an updated approach to the study of global issues that would reflect current pedagogical theory and practice as well as developments and revisions in content knowledge and skills. The course is based upon the premises and principles that are set out in the *Foundation for the Atlantic Canada Social Studies Curriculum* (1999). The aim of GEO531A --World Geography is to introduce students to some of the basic methodologies involved in the study of geography. It is by applying many of these geographical inquiry methods that students continue their study into the physical and cultural patterns of the global world.

Aims of Social Studies

The vision for Prince Edward Island social studies curriculum is for it to enable and encourage students to examine issues, respond critically and creatively, and make informed decisions as individuals and as citizens of Canada and an increasingly interdependent world.

An effective social studies curriculum prepares students to achieve all essential graduation learnings. In particular, social studies, more than any other curriculum area, is vital to developing active citizenship at all levels of study: local, national, and global. Social studies embodies many more principles and areas of study than is often recognized. While most people traditionally think of geography and history as social studies, there are many other areas that are, by nature, part of the realm of social studies. Civics, philosophy, ethics, law, economics, religion, governance, environmental studies, and many more subjects may form a part of any study of a region or the world.

The GEO531A - World Geography course set out in this document encourages students to think critically and creatively about specific aspects of issues in our global world. Along the way, students will discover that their world is increasingly interconnected one with the rest of the globe. Students may also discover that the study of global issues may well have new meaning for them as they prepare to participate in the world as young, responsible adults.

Principles Underlying the Social Studies Curriculum

Empowering and effective social studies *is meaningful, significant, challenging, active, integrative, and issues based.*

- *Meaningful* social studies encourages students to learn through purposeful experiences designed around stimulating ideas, social issues, and themes, and discourages the memorization of disconnected pieces of information.
- *Significant* social studies is student centred and age appropriate. Superficial coverage of topics is replaced by emphasis on the truly significant events, concepts, and principles that students need to know and be able to apply in their lives.
- *Challenging* social studies requires that teachers model high expectations for their students and themselves, promote a thoughtful approach to inquiry, and demand well-reasoned arguments.
- *Active* social studies encourages students to assume increasing responsibility for managing their own learning. Exploration, investigation, critical and creative thinking, problem solving, discussion and debate, decision making, and reflection are essential elements of this principle. This active process of constructing meaning encourages lifelong learning.
- *Integrative* social studies crosses disciplinary borders to explore issues and events while using and reinforcing informational, technological, and application skills. This approach facilitates the study of the physical and cultural environment by making appropriate, meaningful, and evident connections to the human disciplines and to the concepts of time, space, continuity, and change.
- *Issues-based* social studies considers the ethical dimensions of issues and addresses controversial topics. It encourages consideration of opposing points of view, respect for well-supported positions, sensitivity to cultural similarities and differences, and a commitment to social responsibility and action.

Purpose of the GEO531A Curriculum Guide

The overall purpose of any social studies curriculum guide is to advance social studies education and to improve social studies teaching and learning, and, at the same time, to recognize and validate effective practices that already exist in many classrooms.

More specifically, the GEO531A - World Geography curriculum guide

- informs both educators and members of the general public about the philosophy and assumptions underlying the study of geography in Prince Edward Island senior high schools;
- provides specific curriculum outcomes with elaborations to which educators and others can refer when making decisions about learning experiences, instructional techniques, and assessment strategies for GEO531A - World Geography;
- promotes effective learning practices for students of GEO531A - World Geography.

Contexts for Learning and Teaching

The Social Studies Learning Environment

With the accelerating pace and scope of change, today's students cannot prepare for life by merely learning isolated facts. Problem solving, critical and creative thinking, and informed decision making are essential for success in the future. The social studies learning environment can contribute significantly to the development of these essential attributes.

The Effective Social Studies Classroom

An effective instructional environment incorporates principles and strategies that recognize and accommodate the varied learning styles, multiple intelligences, and diverse abilities that students bring to the classroom. Teaching approaches and strategies foster a wide variety of experiences to actively engage all students in the learning process. The nature and scope of social studies provide unique opportunities to do this.

To meet these challenges, the social studies program reflects a wide range of characteristics.

Respectful of diversity
Students come to the classroom from backgrounds that represent Canada's diversity in terms of social identity, socio-economic status, race, ethnicity, and gender. The social studies learning environment attempts to affirm the positive aspects of this diversity and foster an understanding and appreciation of the multiple perspectives that this diversity can lend to the classroom. Regardless of their backgrounds, students should be given equal access to educational opportunities and can be successful at them.

Inclusive and inviting
The social studies classroom should be a psychologically safe place in which to learn. It should be free from bias and unfair practices that may arise from perceptions related to ability, race, ethnicity, culture, gender, or socio-economic status. Students do come with different attitudes, levels of knowledge, and points of view, but rather than being obstacles, these differences should offer opportunities for students to rise above stereotypes and develop positive self-images. Students should be provided collaborative learning contexts in which they can become aware of and transcend their own stereotypical attitudes and behaviours.

Engaging and interactive
If classrooms are to be places where there is respect for diversity and where learning is engaging and interactive, then students will be expected to participate in inquiry and problem-solving situations. Students will be provided with direct and vicarious experiences in which they can purposefully apply social studies skills, strategies, and processes. Rather than assuming passive roles, students bring their critical faculties to knowledge to shape it into meaningful patterns.

Relevant and significant
Since the senior high learner naturally challenges what the adult world represents, it is necessary for the social studies curriculum to be convincing and relevant. Consequently, it must provide learning situations that arouse student interest while encouraging students to question what they already know—their assumptions and attitudes. In so doing, they will come to more deeply understand and appreciate their own heritage and culture.

Equity and Diversity

The provincial social studies curriculum is designed to meet the needs and interests of all students. Prince Edward Island's society, like that of all of Canada, reflects diversity in race, ethnicity, gender, ability, values, lifestyles, and languages. Schools should foster the understanding of such diversity. Social studies curriculum promotes a commitment to equity by valuing, appreciating, and accepting the diverse and multicultural nature of our society and by fostering awareness and critical analysis of individual and systemic discrimination. All students are entitled to be respected and valued and, in turn, are responsible for respecting and valuing all other people. They are entitled to a school setting characterized by mutual trust, acceptance, and respect, and to an educational system that affirms diverse gender, racial, ethnic, and cultural identity and promotes the development of a positive self-image. Educators should ensure that classroom practices and resources positively and accurately reflect diverse perspectives and reject prejudiced attitudes and discriminatory behaviours.

Social Studies for EAL Learners

The Prince Edward Island social studies curriculum is committed to the principle that learners of English as an additional language (EAL) should be full participants in all aspects of social studies education. English language proficiencies and cultural differences must not be barriers to full participation. All students should study a comprehensive social studies curriculum with high-quality instruction and coordinated assessment.

Students, and EAL learners in particular, need to be given opportunities, encouragement, and support for speaking, writing, reading, listening, interpreting, analysing, and expressing ideas and information in social studies classes. Such efforts have the potential to help EAL learners overcome barriers that will facilitate their particiaption as active citizens in Canadian society. The Prince Edward Island social studies curriculum provides, and is supported by, resource materials that include and reflect the reality of Canada's diversity while fostering respect of cultural differences as an essential and valued component.

Social Studies for EAL Learners

To this end,

- schools should provide EAL learners with support in their dominant language and English language while learning social studies;
- teachers, counsellors, and other professionals should consider the English-language proficiency level of EAL learners as well as their prior course work in social studies;
- the social studies proficiency level of EAL learners should be based solely on their prior academic record and not on other factors;
- social studies teaching, curriculum, and assessment strategies should be based on best practices and build on the prior knowledge and experiences of students and on their cultural heritage;
- the importance of social studies and the nature of the social studies program should be communicated with appropriate language support to both students and parents;
- educators should verify that barriers have been removed by monitoring enrolment and achievement data to determine whether EAL learners have gained access to, and are succeeding in, social studies courses.

Introduction to Inquiry-Based Learning and Geographic Thinking

Inquiry-Based Learning (IBL) allows students to explore, investigate, and construct new meaning from prior knowledge and from new information that is retrieved from other sources. It is not linear in nature, but promotes a continual looping back and forth throughout the process as students gather and process new information, redirect their inquiries, and continue through the process. Geographic inquiry follows the same principle of other inquiry processes by using geography-specific data that may include field study results, graphs, maps, text, and other primary, secondary, or tertiary sources. The geographic inquiry process requires students to practise and refine their critical thinking skills and to use geographical thinking concepts to find answers to their questions.

Asking students to think geographically will require teachers to teach geography differently. The traditional approach to the study of geography is generally based on factual recall of discrete pieces of information. Teaching geography through geographic thinking requires a different approach—problematizing geography. In other words, it is no longer a search for a specific set of answers to a particular set of questions but a search for plausible or possible answers to open-ended questions. Students will be required to use multiple sources (evidence) to collect and then analyse data in order to arrive at a conclusion that they can defend. They will also be required to consider multiple perspectives in their inquiries and realize that a variety of views may exist. Teaching students to think geographically also means adjusting assessment practices and shifting the focus of assessment from rote memoriation of geographic facts to asssessing a student's ability to use geographic evidence to back up a conclusion to an open-ended inquiry question.

Geographical thinking concepts are also referred to as portals to thinking about geography. Six portals have been identified to help students practise geographic thinking—1) Geographical Importance; 2) Evidence and Interpretation; 3) Patterns and Trends; 4) Interactions and Associations; 5) Sense of Place; and 6) Geographical Value Judgments. In order for students of GEO531A - World Geography to become fully engaged in the geographic inquiry process, they will need to approach geographic queries as problems and not simply fact-finding tasks. While it will be necessary to collect data to solve a problem, the collection process should not become the focus but a means to reaching a plausible conclusion regarding the inquiry.

Inquiry-Based Learning that incorporates geographic thinking provides a natural scaffolding to Project-Based Learning (PBL). Furthermore, a project based upon geographic-related issues may fulfil the active citizenship outcome in Unit 3 of the GEO531A course. There is little difference between a geographic inquiry question and a driving question that propels a project. For example, a student might ask, "How can we prepare for a natural disaster in our area?" which can lead to discovery of practices in other jurisdictions, public education initiatives, and planned action steps.

Portals to Geographic Thinking

Adapted from Babahani and Huynh, *Teaching about Geographical Thinking. (*2008) Vancouver: The Thinking Consortium (TC2).

The six portals to geographic thinking provide a pathway to making the study of geography more meaningful for students and teachers. The portals challenge students to think in new ways about geographic topics or information. The following brief introduction to each of the geographic portals will help teachers to form new ideas around teaching geographic content and engaging students in a real-life inquiries.

Geographic Importance
What makes a particular geographic location important or significant? Are there special geographic features such as fragile sand dune systems or cultural structures such as pyramids? Is the place important as an agricultural, economic, or cultural base? Does everyone share this view or are there differing views? How is the Amazon rain forest viewed by a multinational logging company? by a conservationist lobby group?

Evidence and Interpretation
Geographic evidence is gathered from primary—field notes, photos, first-hand descriptions, secondary—prepared charts, maps, graphs, articles based upon primary evidence, and tertiary—information that has been created from secondary sources such as maps drawn to interpret other maps. Interpretation of information (and the margin for error within that interpretation) is a key concept in this portal.

Patterns and Trends
Similar to change and continuity in historical studies, this portal addresses the changes that may (or may not have) occurred over time and/or across space. These are measured by rate, distribution, and pattern. The impact of change is integral to this portal.

Interactions and Associations
This portal examines "cause and effect" (although that is a simplified description.) Interactions, relationships, and associations present complex geographic questions. Factors may be contributing, causal, or counteracting. They may be external or internal. Effects may be direct and indirect and the impact of certain interactions or associations may be either positive and negative.

Sense of Place
Geographical perspective-taking is the focus of this portal. How do we get a sense of place for an region with which we are not familiar? What evidence can be gathered to help us develop a sense of place? What are the commonalities and differences between two or more regions?

Geographical Value Judgments
Value judgments refer to moral decisions about what should or should not take place. Criteria is an integral component of this concept and must include diverse perspectives. Judgments should be made on solid evidence and fact not personal emotion or opinion. Should Canada export drinking water?

Guided Inquiry

Guided inquiry draws upon the expertise of teachers and teacher-librarians in directing students to find a variety of sources to address an inquiry, solve a problem, or increase understanding of an issue. This type of ongoing mentoring of students requires careful planning and ongoing assessment. However, the rewards of a guided inquiry approach are many. Students are more engaged when they are grappling with a question of their own making, and they develop more competencies as they work through the process of finding relevant information, evaluating that information, and analysing their findings. Using the guided inquiry approach in GEO531A - World Geography can lead to richer learning, deeper thinking, and more creative approaches to solving geographic problems or addressing issues.

Habits of Mind for Inquiry

Students grow as independent inquirers and critical thinkers by developing and refining learned inquiry skills, and by practising positive dispositions that support their inquiry. Habits of mind for inquiry are the attitudes or dispositions that allow a person to set aside personal bias or self-limiting beliefs that may interfere with the ability to reach newer levels of understanding. To achieve deeper understanding in any inquiry, students need to practise being

1) open-minded (willing to consider evidence that may oppose their own views)
2) fair-minded (willing to consider others' viewpoints)
3) independent-minded (willing to stand up for firmly held beliefs)
4) critical thinkers (willing and able to question for clarity and validity.

Additional habits of mind that lead to a successful inquiry include persistence, adaptability, and the ability to collaborate. These habits of mind enable a student to deal with common obstacles that arise during an inquiry process. Persistence in pursuing information, despite challenges, will ensure a broad range of information on which to base new meaning. Adaptability allows a student to deal with possible changes related to focus questions, resources, or strategies. A willingness and ability to collaborate with others will enrich the inquiry process and lead to a broader and deeper understanding of new information for all involved.

Adapted from *Active Citizenship: Student Action Projects* (2004) and *Standards for the 21st-Century Learner*, (2007), AASL.

Resource-Based Learning

Effective social studies teaching and learning actively involves students, teachers, and library staff in the effective use of a wide range of print, non-print, and human resources. Resource-based learning fosters students' development by accommodating their diverse backgrounds, learning styles, needs, and abilities.

Resource-based learning supports students as they develop information literacy: more specifically, accessing, interpreting, evaluating, organizing, selecting, producing, and communicating information in and through a variety of media, technologies, and contexts. When students engage in their own research with appropriate guidance, they are more likely to take responsibility for their learning, and to retain information.

In a resource-based learning environment, students and teachers make decisions about appropriate sources of information and tools for learning, and how to access them. A resource-based approach raises the issues of selecting and evaluating information sources. Developing the critical skills needed for these tasks is essential to social studies.

The range of possible resources for studying global issues include the following:

- print—books, magazines, newspapers, documents, and other publications
- visuals—maps, illustrations, photographs, charts, and graphs
- artifacts—concrete objects and primary source documents
- individual and community—interviews, field work, community sites
- multimedia—films, audio and video tapes, television and radio, simulations
- information technology—computer software, databases, CD-ROMs, DVDs, GPS, live-streaming broadcasts, podcasts, and locational technologies
- communication technology—Internet sites, blogs, e-mail, and social media

Resource-based learning takes place in the social studies classroom through a variety of means. The prescribed text book, although a principal source of information for the student, is only one of many resources available. As a tertiary resource, it contains bias of its own and must be treated accordingly. Students in a world geography class will make use of many other sources of information, including magazines, news articles, Internet Web sites, government publications, and social science agencies. For a fully enriched learning experience, students should be encouraged to explore and engage in as many diverse sources of information as possible.

Literacy through Social Studies

Literacy has always been an important component of social studies education. In recent years, however, through the promotion of research in critical theory, the meaning of literacy has broadened to encompass all forms of communication. In today's social studies classrooms, learners are encouraged to examine, compose, and decode spoken, written, and visual texts to aid in their understanding of content and concepts, and to better prepare them for full and effective participation in their community. Additionally, the goals of literacy include not only language development, but also critical engagement with text, visuals, and auditory information. These goals have implications for the role of the social studies teacher.

The ability to read is critical for success in school. Therefore, it is vital that social studies teachers develop and use strategies that specifically promote students' abilities to read, comprehend, and compose text, no matter what form that text might take. Similarly, writing as a process should be stressed as a means that allows students to communicate effectively what they have learned and to raise the questions they need to ask.

Critical literacy in social studies curriculum addresses several goals. Through the implementation of various strategies, teachers will develop students' awareness of stereotyping, cultural bias, author's intent, hidden agendas, silent voices, and omissions. Students are encouraged to be aware that authors construct texts with specific purposes in mind. Further, critical literacy helps students comprehend texts at a deeper level by encouraging them to view content and ideas from a variety of perspectives, and to interpret the various levels of meaning in a given text, both explicit and implicit.

In this regard, the level and focus of questioning becomes very important. The depth of a student's response will often be determined by the depth of questioning and inquiry. Teachers need to pose high-level, open-ended questions that allow students to use their prior knowledge and experiences, providing opportunity for a sustained engagement before, during, and after reading or viewing text.

Strategies that promote literacy through social studies include helping students comprehend the meaning of words, symbols, pictures, diagrams, and maps in a variety of ways. It means engaging students in many learning opportunities which are designed to challenge and enhance their communication in a variety of modes, such as writing, debating, persuading, and explaining, and in a variety of media, such as the artistic and technological. In the social studies classroom, all literacy strands—reading, writing, speaking, listening, viewing, and representing—are significant.

In the context of social studies, literacy also addresses the promotion of citizenship. Literacy for active citizenship involves understanding different perspectives on key democratic struggles, learning how to investigate current issues, and participating creatively and critically

in community problem solving and decision making. Exercising civic rights and responsibilities is a practical expression of important social values and requires specific personal, interpersonal, and advocacy skills. Through this important focus, the social studies program will help students become more culturally sensitive and effective cross-cultural communicators in a world of increasing cultural and linguistic diversity. The GEO531A - World Geography curriculum requires students to develop and participate in an active citizenship plan of action as a integral part of learning.

Developing literacy in the world geography classroom involves all of the same strategies used in any other classroom. Some students may face specific challenges in comprehending meaning or decoding passages or texts. Teachers may wish to refer to specific cross-curricular reading strategies such as those in appendix C - "Reading Strategies."

Integration of Technology in Social Studies

Technology, including communication and information technology (CIT), plays a major role in social studies learning and teaching. Computers and related technologies are valuable classroom tools for acquiring, analysing, and presenting information. These technologies provide further opportunity for communication and collaboration and allow students to become more active participants in research and learning.

CIT and related technologies (digital video and digital cameras, scanners, CD-ROMs, word-processing software, graphics software, video-editing software, HTML editors, and the Internet — including the World Wide Web, databases, electronic discussions, e-mail, and audio and video conferencing) afford numerous possibilities for enhancing learning. Computers and other technologies are intended to enhance social studies learning. In that context, technological resources can provide a variety of opportunities.

- The Internet and CD-ROMs give teachers and students quick and easy access to extensive and current information. Informatation acquisition skills are key to efficient use of these resources. Questions of validity, accuracy, bias, and interpretation must still be applied to information available on the Internet and in CD-ROMs.

- Interactions and conversations via e-mail, video and audio conferencing, student-created Web sites, on-line discussion groups, and other social media provide connections between students and people from cultures around the world. This exposure to first-hand information will enable students to directly employ inquiry skills.

- Students present what they have learned in a wide variety of forms (e.g., graphs, maps, text, graphic organizers, Web sites, multimedia presentations) that fit their learning styles. These presentations can be shared with others, both in their classroom and beyond.

- Students are actively involved in their learning through controlling information gathering, processing, and presentation. For example, Geographic Information Systems (GIS) software enables students to collect data about a community or region, plot the data using Global Positioning Systems (GPS), and analyse and present their findings by creating maps that demonstrate their learning.

Technology can open up a means of exploring up-to-date statistics, current environmental or human issues, real-time events, and other on-line information while enabling communication with other jurisdictions in the country. Technology can also provide students with a means for communicating new learning and sharing of ideas and research with classmates and teachers through the use of various presentation tools. Diverse learning styles and abilities are found in every classroom and technology enables a myriad of approaches to the study of issues within a global context.

Education for Sustainable Development

Education for sustainable development (ESD) involves incorporating the key themes of sustainable development—poverty alleviation, human rights, health, environmental protection, climate change—into the curriculum. ESD is a complex and evolving concept that requires learners to analyse the key themes from a social, cultural, environmental, and economic perspective, and explore how these factors are interrelated and interdependent. GEO531A provides an ideal opportunity to integrate sustainable development themes into its curriculum as it addresses issues within diverse regions of the world.

With this in mind, it is important that all teachers, particularly social studies teachers, make an effort to incorporate ESD themes into their classrooms. Teachers of GEO531A will find several opportunities to incorporate discussions about sustainability in their study of world geography. An effective tool for ESD learners is the searchable on-line database, *Resources for Rethinking,* found at **http.//r4r.ca/en**. It provides access to materials that integrate ecological, social, and economic spheres through active, relevant, interdisciplinary learning.

Assessing and Evaluating Student Learning

Introduction

Assessment is the systematic process of gathering data on student learning. Evaluation is the process of analysing patterns in the data, forming judgments about possible responses to these patterns, and making decisions about future actions.

An integral part of the planned instructional cycle is the evaluation *of* learning *for* learning. *Evaluation of learning* focusses on the degree to which students have achieved the intended outcomes and the extent to which the learning environment was effective toward that end. *Evaluation for learning*, depending upon what it reveals, focusses on designing future learning situations to meet the needs of the learners.

The quality of assessment and evaluation has a profound, well-established link to student performance. Regular monitoring and feedback are essential to improving student learning. What is assessed and evaluated, how it is assessed and evaluated, and how the results are communicated send clear messages to students and others in the community about what is really valued—what is worth learning, how it should be learned, what elements of quality of performance are most important, and how well students are expected to perform. To determine how well students are learning, assessment strategies are designed to systematically gather information on the achievement of curriculum outcomes. In planning assessments, teachers should use a broad range of data sources, appropriately balanced, to give students multiple opportunities to demonstrate their knowledge, skills, and attitudes.

Guiding Principles of Assessment

In order to provide accurate, useful information about the achievement and instructional needs of students, certain guiding principles for the development, administration, and use of assessments must be followed.

Principles for Fair Student Assessment Practices for Education in Canada (1993) articulates five basic assessment principles:

- Assessment strategies should be appropriate for and compatible with the purpose and context of the assessment.
- Students should be provided with sufficient opportunity to demonstrate the knowledge, skills, attitudes, or behaviours being assessed.
- Procedures for judging or scoring student performance should be appropriate for the assessment strategy used, and be consistently applied and monitored.
- Procedures for summarizing and interpreting assessment results should yield accurate and informative representations of a student's performance in relation to the curriculum outcomes for the reporting period.
- Assessment reports should be clear, accurate, and of practical value to the audience for whom they are intended.

These principles highlight the need for assessment that ensures that

- the best interests of the student are paramount
- assessment informs teaching and promotes learning
- assessment is an integral and ongoing part of the learning process and is clearly related to the curriculum outcomes
- assessment is fair and equitable to all students and involves multiple sources of information.

While assessments may be used for different purposes and audiences, all assessments must give each student optimal opportunity to demonstrate what he or she knows and can do. Many sources of assessment data can be used to gather such information. Some examples include, but are not limited to, the following:

formal and informal observation
work samples
anecdotal records
conferences
teacher-made and other tests
portfolios
learning journals
questioning
essay writing
performance assessments
peer- and self-assessments
multimedia presentations
interviews
rubrics
simulations
checklists
questionnaires
oral presentations
roleplays
debates
rating scales
case studies
panel discussions
graphical representations

Observation
This technique provides a way of gathering information fairly quickly while a lesson is in progress. When the technique is used formally, the student(s) is/are made aware of the observation and the criteria being assessed. Used informally, observation could be a frequent, but brief, check on a given criterion. Observation may offer information about a student's level of participation or about his/her application of a given process. The results may be recorded in the form of checklists, rating scales, or brief written notes. It is important to plan so that specific criteria are identified, suitable recording forms are ready, and all students are observed in a reasonable period of time.

Performance
GEO531A - World Geography curriculum encourages learning through active participation. There is a balance between process and content. It is important that assessment provide feedback on skill development throughout the course. Many activities referenced in this guide provide opportunities for students to reflect on their skill development, and for teachers to assess student skill development throughout the course.

Journal
Although not assessed in a formal manner, journals provide opportunities for students to express thoughts and ideas, and to reflect on their transferrable skills. Recording feelings, perceptions of success, and responses to new concepts may help a student to identify his or her most effective learning style and skills. Knowing how to learn in an effective way is powerful information. Journal entries also give some indication of a student's developing attitudes; his or her understanding of concepts, processes, and skills; and ways in which these may be applied in the context of society. Self-assessment through a journal permits a student to consider strengths and weaknesses, attitudes, interests, and transferrable skills.

Interview
GEO531A curriculum promotes the understanding and application of many concepts. Interviewing a student allows the teacher to confirm that learning beyond factual recall has taken place. Discussion allows a student to display an ability to use information and clarify understanding. Interviews may be brief discussions between teacher and student, or they may be more extensive and include student, parent, and teacher. Such conferences allow a student to be proactive in displaying understanding. It is helpful for students to know which criteria will be used to assess formal interviews. The assessment technique provides an opportunity to students whose verbal presentation skills are stronger than their written skills.

Paper and Pencil
These techniques can be formative or summative. Several curriculum outcomes call for displaying ideas, plans, conclusions, and/or the results of research, and can be in written form for display or for direct teacher assessment. Whether it is a part of learning, or a final statement, students should know the expectations for the exercise and the rubric by which it will be assessed. Written assignments can be used to assess knowledge, understanding, and application of concepts. They are less effective for assessing skills, processes, and attitudes. The purpose of the assessment should determine what form of paper and pencil exercise is used.

Presentation
GEO531A curriculum includes outcomes that require students to analyse and interpret information, to identify relationships, to be able to work in teams, to critically reflect, and to communicate information. Many of these activities are best displayed and assessed through presentations, which can be given orally, in written/pictorial form, by project summary, or by using electronic systems such as video or computer software. Whatever the level of complexity or format used, it is important to consider the curriculum outcomes as a guide for assessing the presentation. The outcomes indicate the process, concepts, and context for which and about which a presentation is made.

Portfolio

Portfolios offer another option for assessing student progress in meeting curriculum outcomes over a more extended period of time. This form of assessment allows the student to be central in the process. Decisions about the portfolio and its contents can be made by the student. What is placed in the portfolio, the criteria for selection, how the portfolio is used, how and where it is stored, and how it is evaluated are some of the questions to consider when planning to collect and display work in this way. The portfolio should provide a long-term record of growth in learning and skills. This record of growth is important for individual reflection and self-assessment, but it is also important to share with others. For many students it is exciting to review a portfolio and see the record of development over time.

Evaluation

Evaluation is a continuous, comprehensive, and systematic process. It brings interpretation, judgments, and decisions to the data collected during the assessment phase. Questions include the following: How valid and reliable is the data gathered? What does the data suggest about student achievement of course outcomes? Does student performance confirm the success of instructional practice or indicate the need to change it? Are students ready to move on to the next phase of the course, or is there need for remediation?

Teacher-developed assessments and the evaluations based on them have a variety of uses, including the following:

- providing feedback to improve student learning
- determining whether curriculum outcomes have been achieved
- certifying that students have achieved certain levels of performance
- setting goals for future student learning
- communicating with parents about their children's learning
- providing information to teachers on the effectiveness of their teaching, the program, and the learning environment
- meeting goals of guidance and administrative personnel

Evaluation is conducted within the context of the outcomes, which should be clearly understood by learners before teaching and evaluation take place. Students must understand what teachers expect of them and the basis on which they will be evaluated. The evaluation of a student's progress may be classified as pre-instructional, formative, or summative, depending on the purpose.

Pre-instructional evaluation is conducted before the introduction of unfamiliar subject matter, or when learners are experiencing difficulty. It gives an indication of *where students are* and is not a measure of what they are capable of doing. The purpose is to analyse

a student's progress to date in order to determine the type and depth of instruction needed. This type of assessment is mostly conducted informally and continuously.

Formative evaluation is conducted throughout instruction. Its primary purpose is to improve instruction and learning. It is an indication of *how things are going.* It identifies a student's strengths or weaknesses with respect to specific curriculum outcomes so necessary adaptations can be made.

Summative evaluation occurs at the end of a designated period of learning. It is used, along with data collected during the formative stage, to determine learner achievement. This assessment is used to report the degree to which curriculum outcomes have been achieved.

Planning, Assessing, Reporting and Weighting in GEO531A

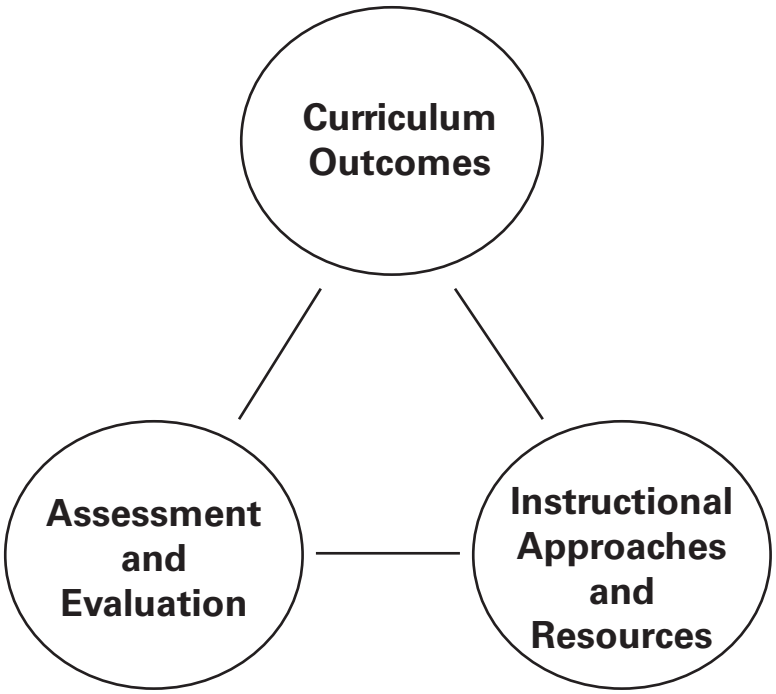
GEO531A - World Geography is comprised of three units. A suggested time allotment for each unit can be found on the Course Organization page and on the opening page for each unit in this document. These suggested time allotments may also act as a guide for assessment weighting purposes. While the World Geography course could be considered a content-dense study, teachers should plan carefully to ensure a balanced approach to developing assessment tools that measure both content and process (geographical thinking.) Assessing geographical thinking is more difficult than finding evidence of simple content (factual) recall. However, it is possible to assess thinking skills by developing the right questions and tools. It may be helpful for teachers to consult outside sources for assessment strategies or tools that are conducive to geographical thinking or other areas of critical thinking. If students are involved in project-based learning, specific assessments will measure their progress and inform teaching strategies throughout the course.

Reporting methods and weighting of assessments should be determined before the course is underway so that students are aware of expectations and responsibilities. Some schools or school boards may have specific policies related to final exams, major assignments, or other assessments. GEO531A is easily adaptable to a variety of assessment weightings. It is important to keep in mind that while content knowledge is important, the higher goal continues to be about learning how information creates meaning.

Assessing and Evaluating Student Learning in the Social Studies Classroom

There should be a congruence between what is taught, how it is taught, and what is emphasized in the evaluation process. Social studies educators should recognize that "...quality programming and instruction are neither content-based nor process-based, but a wise and judicious mixture of both" (Frost, 1989, 11).

The assessment of student learning must be aligned with the curriculum outcomes and the types of learning opportunities made available to students. A "backwards design" approach can help in determining the most effective way of measuring a student's level of learning. An essential question that often helps to focus on this goal is, "What evidence will I have that shows me that the student has achieved the outcome"? Once the "evidence" or criteria (assessment tool) as been established, teachers can plan effective instructional approaches and gather supporting resources that will help students to reach this goal.

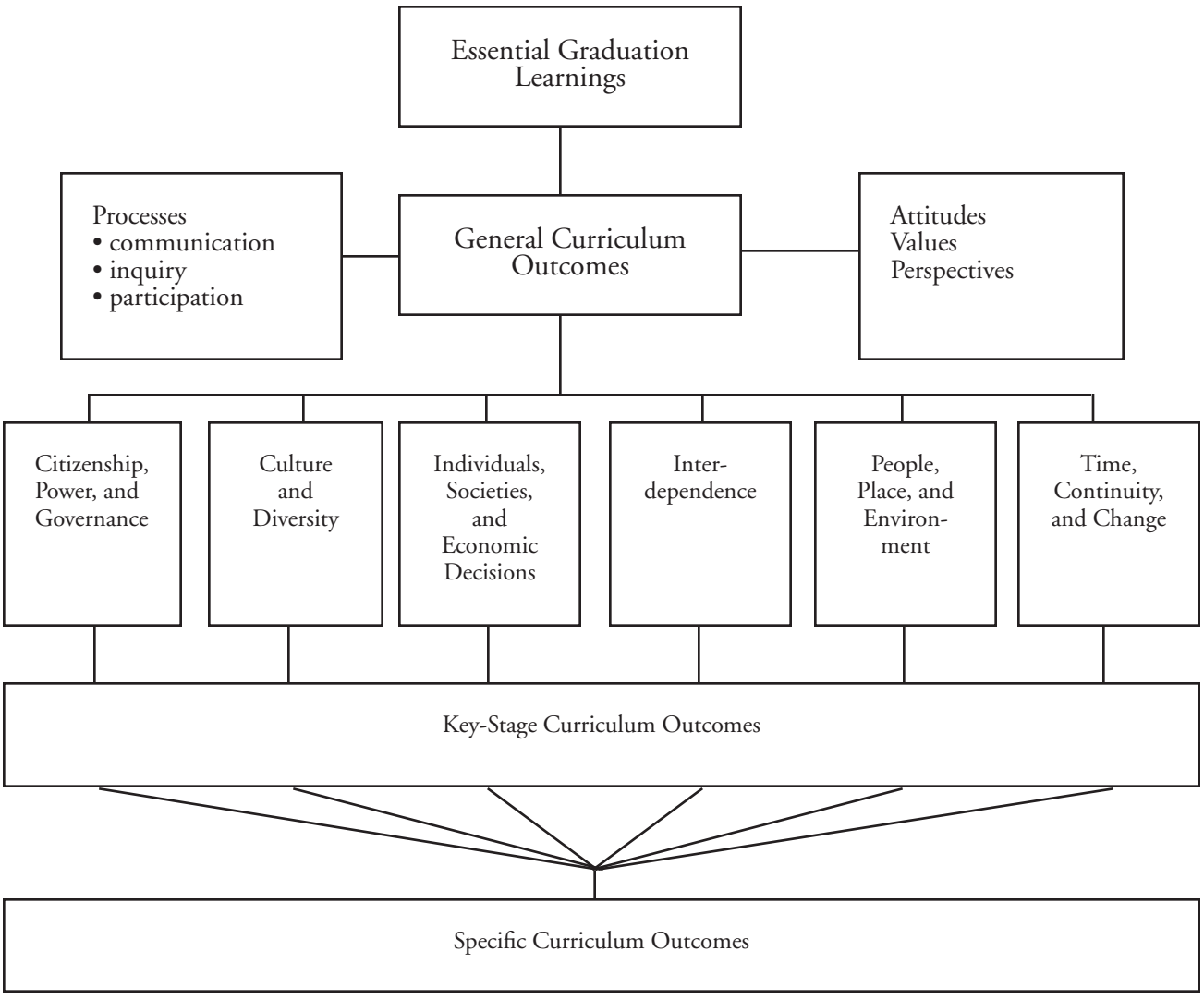


(Adapted from *The Evaluation of Students in the Classroom: A Handbook and Policy Guide*, Department of Education, Government of Newfoundland and Labrador, 1990)

Program Design and Outcomes

Overview

The GEO531A - World Geography curriculum is based on the Foundation for the Atlantic Canada Social Studies Curriculum (1999). Specific curriculum outcomes (SCOs) have been developed to be congruent with key-stage curriculum outcomes (KSCOs), general curriculum outcomes (GCOs), and essential graduation learnings (EGLs). In addition, the processes, attitudes, values, and perspectives of social studies are embedded in the SCOs. Teachers may refer to the Social Studies Foundation Document for more information.



General Curriculum Outcomes for Social Studies

General curriculum outcomes for social studies are organized around six conceptual strands. Below are the six conceptual strands and samples of specific curriculum outcomes (SCOs) from the GEO531A - World Geography curriculum.

Citizenship, Power, and Governance

Students will be expected to demonstrate an understanding of the rights and responsibilities of citizenship and the origins, functions, and sources of power, authority, and governance.

3.6 engage in an active citizenship initiative as part of a group or class

Culture and Diversity

Students will be expected to demonstrate an understanding of culture, diversity, and world view, recognizing the similarities and differences reflected in various personal, cultural, racial, and ethnic perspectives.

3.5 conduct a geographic inquiry into a selected region to learn more about its current challenges and opportunities

Individuals, Societies, and Economic Decisions

Students will be expected to demonstrate an ability to make responsible economic decisions as individuals and as members of society.

3.4 explain the difference between "developed" and "developing" nations

Interdependence

Students will be expected to demonstrate an understanding of the interdependent relationships among individuals, societies, and the environment locally, nationally, and globally, and the implications for a sustainable future.

2.4 explain the significance of water as a renewable resource
3.1 define "culture", "cultural regions", and "cultural diffusion"

People, Place, and Environment

Students will be expected to demonstrate an understanding of the interactions among people, place, and environment.

2.5 explain how climate and vegetation are related in major regions of the world
3.3 describe factors that influence human movement, settlement patterns, and development of a selected area

Time, Continuity, and Change

Students will be expected to demonstrate an understanding of the past and how it affects the present and the future.

2.7 trace the change over time of a natural resource including its value, distribution, and management

How to Use the Four-Column Curriculum Layout

The curriculum guide has been organized into four columns to relate learning experiences to the outcomes by

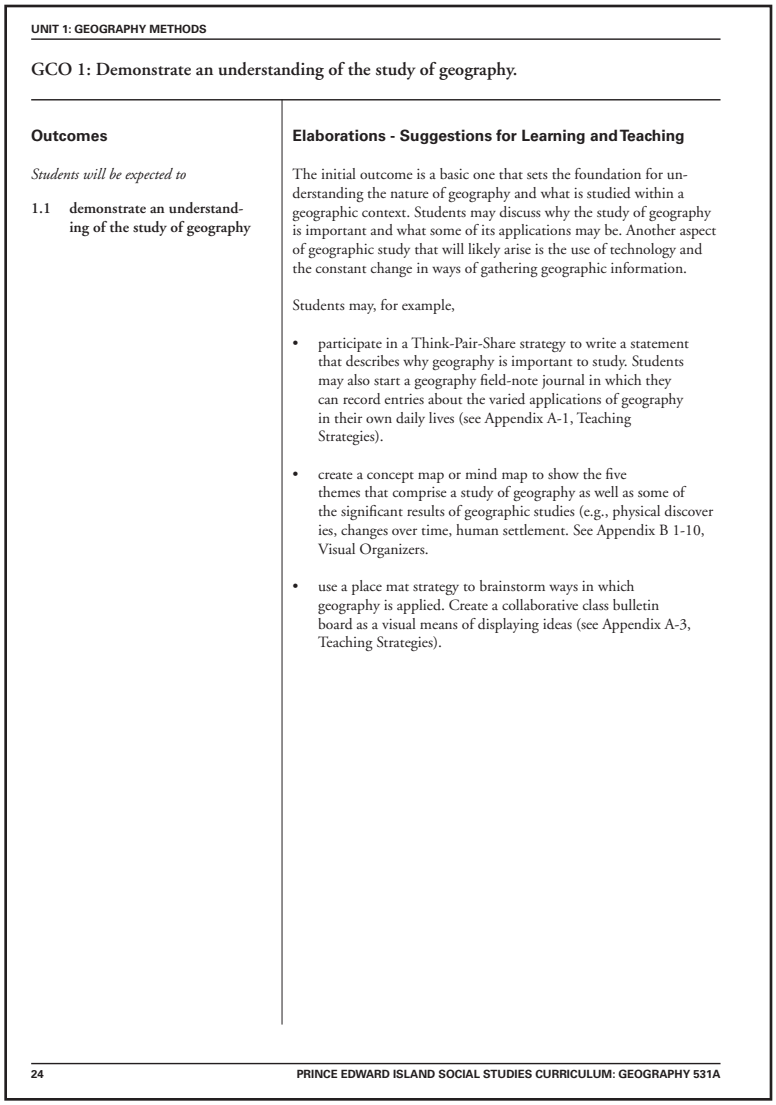
- providing a range of strategies for learning and teaching associated with a specific outcome or cluster of outcomes
- demonstrating the relationship between outcomes and suggested assessment and learning strategies
- providing suggested supplementary resources to enhance the learning experience or to access differentiated learning applications.

Column 1: Outcomes

Column 1 contains specific curriculum outcomes for each unit, explaining what students are expected to know or be able to do within that particular task.

Column 2: Elaborations-Suggestions for Learning and Teaching

Column 2 contains an elaboration for each specific curriculum outcome within the unit. Elaborations are intended to clarify the intent of the outcome as well as the intended scope of the knowledge content and/or skill within the outcome, where applicable. Suggested strategies for each outcome are offered, although teachers may elect to design their own strategies for any particular outcome, or modify the strategies suggested within this column.



UNIT 1: GEOGRAPHY METHODS

GCO 1: Demonstrate an understanding of the study of geography.

Outcomes	Elaborations - Suggestions for Learning and Teaching
Students will be expected to 1.1 **demonstrate an understanding of the study of geography**	The initial outcome is a basic one that sets the foundation for understanding the nature of geography and what is studied within a geographic context. Students may discuss why the study of geography is important and what some of its applications may be. Another aspect of geographic study that will likely arise is the use of technology and the constant change in ways of gathering geographic information. Students may, for example, • participate in a Think-Pair-Share strategy to write a statement that describes why geography is important to study. Students may also start a geography field-note journal in which they can record entries about the varied applications of geography in their own daily lives (see Appendix A-1, Teaching Strategies). • create a concept map or mind map to show the five themes that comprise a study of geography as well as some of the significant results of geographic studies (e.g., physical discover ies, changes over time, human settlement. See Appendix B 1-10, Visual Organizers. • use a place mat strategy to brainstorm ways in which geography is applied. Create a collaborative class bulletin board as a visual means of displaying ideas (see Appendix A-3, Teaching Strategies).

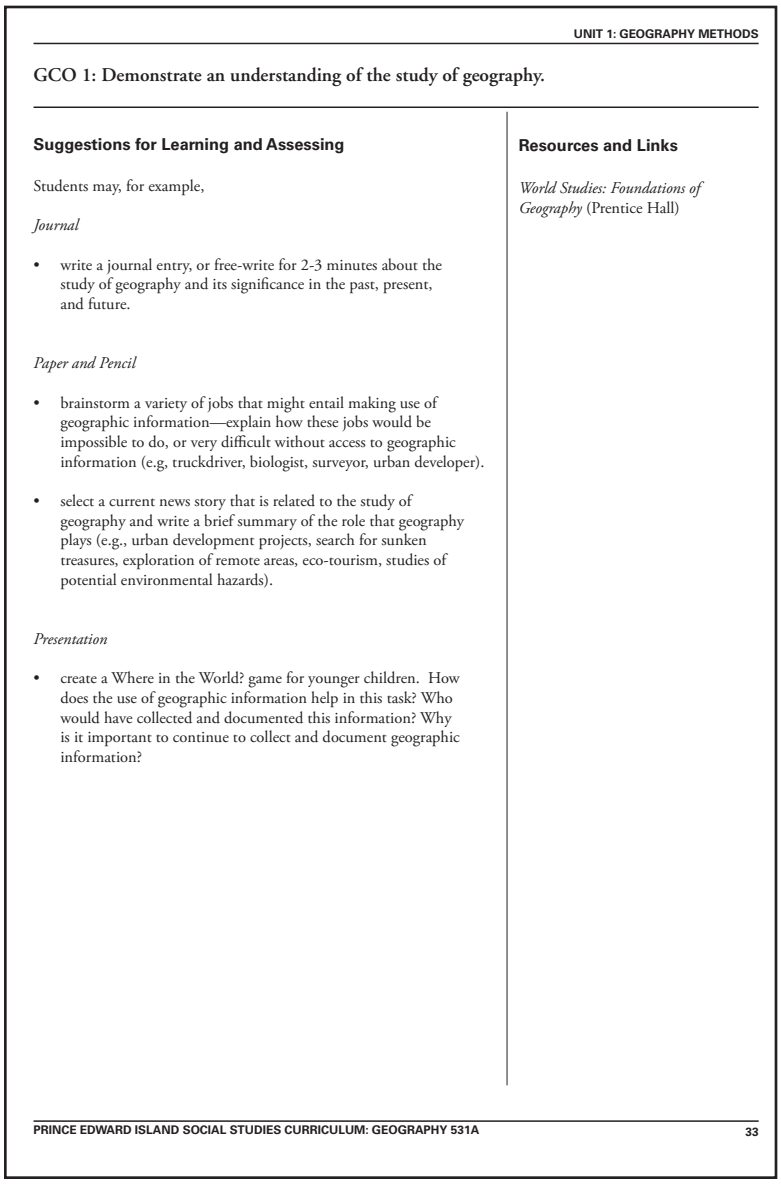
24 PRINCE EDWARD ISLAND SOCIAL STUDIES CURRICULUM: GEOGRAPHY 531A

Column 3: Suggestions for Learning and Assessment

Column 3 provides suggestions for ongoing assessment that forms an integral part of the learning experience. These suggestions may refer to teaching and learning tools (e.g., visual organizers) that have been provided in the appendix.

Column 4: Resources and Links

Column 4 provides a quick reference to page links in the authorized resource, *World Studies: Foundations of Geography,* or components of that series such as other regional editions, the Teacher's Resource or any other supplementary resources and Web links. Teachers may also wish to record their own notes and/or resources in this column.



UNIT 1: GEOGRAPHY METHODS

GCO 1: Demonstrate an understanding of the study of geography.

Suggestions for Learning and Assessing	Resources and Links
Students may, for example, *Journal* • write a journal entry, or free-write for 2-3 minutes about the study of geography and its significance in the past, present, and future. *Paper and Pencil* • brainstorm a variety of jobs that might entail making use of geographic information—explain how these jobs would be impossible to do, or very difficult without access to geographic information (e.g, truckdriver, biologist, surveyor, urban developer). • select a current news story that is related to the study of geography and write a brief summary of the role that geography plays (e.g., urban development projects, search for sunken treasures, exploration of remote areas, eco-tourism, studies of potential environmental hazards). *Presentation* • create a Where in the World? game for younger children. How does the use of geographic information help in this task? Who would have collected and documented this information? Why is it important to continue to collect and document geographic information?	*World Studies: Foundations of Geography* (Prentice Hall)

PRINCE EDWARD ISLAND SOCIAL STUDIES CURRICULUM: GEOGRAPHY 531A 33

GEO531A
Course Organization

GEO531A - World Geography provides an opportunity for students to investigate the study of geography, its methods and tools, and its significance in making sense of the world around them. Students will explore patterns that exist in the natural world linking land, oceans, natural resources, climates, and cultures. Using geographic inquiry methods, students will apply various skills and processes in examining the varied interrelationships between humans and their environments. Human and Earth interaction means that current issues will become an integral part of the World Geography course. Students will investigate various issues related to the study of geography as global events occur around them throughout the course.

GEO531A—World Geography is organized into three units: Geography Methods, Physical Patterns of the World, and Cultural Patterns of the World.

Unit 1: Geography Methods provides a basis for the rest of the course. Students are introduced to the basic elements of geography as they learn and practise methods involved in the study of geography.

Their investigations in this unit focus on the science of geography and how geography is interconnected with many other aspects of our lives. Students will investigate careers and occupations related to geography as well as tools and technologies that are critical to its study and applications.

Suggested time allotment for this unit is 25% of the total course time.

Students will be expected to:

1.1 demonstrate an understanding of the study of geography
1.2 demonstrate an understanding of the themes of geography
1.3 identify various occupations and professions related to the field of geography
1.4 use maps, atlases, and globes to collect and interpret data about world geography
1.5 explain the operation and applications of various locational technologies or systems
1.6 apply standard geographic inquiry methods to find answers to real-life queries

Unit 2: Physical Patterns of the World is a unit that emphasizes the significance of the "physicality" of Earth and how people are affected by patterns that exist, physical events that occur, and phenomena that may change these patterns. This unit will also focus on how people create an impact on Earth's physical environment in our endeavours to survive and/or gain wealth from Earth's resources. Students will learn how time plays a role in the management of natural resources, cycles, and sustainable development.

The suggested time allotment for this unit is 25% of the total course time.

Students will be expected to

2.1 explain internal and external physical forces that impact Earth
2.2 identify and locate major land masses and bodies of water
2.3 explain the impact of the Earth and Sun pattern on world geography
2.4 explain the significance of water as a renewable resource
2.5 explain how climate and vegetation are related in major regions of the world
2.6 describe factors that influence climate regions
2.7 trace the change over time of a natural resource including its value, distribution, and management

Unit 3: Cultural Patterns of the World connects the physical world with the human world. The interaction between humans and their environments is a principal theme within geography. This unit provides many opportunities for exploration into the human/physical environment aspect of geography in our world. It is also a natural fit with any extended study of a particular region.

The suggested time allotment for this unit is 50% of the total course time.

Students will be expected to:

3.1 define "culture", "cultural regions", and "cultural diffusion"
3.2 locate major cultural regions of the world and identify significant countries, states, or population centres within each region
3.3 describe factors that influence human movement, settlement patterns, and development of a selected area
3.4 explain the difference between "developed" and "developing" nations
3.5 conduct a geographic inquiry into a selected region to learn more about its current challenges and opportunities
3.6 engage in an active citizenship initiative as part of a group or class

Unit 1: Geography Methods

Unit 1: Geography Methods

Overview

In this unit, students are introduced to the discipline of geography and the key elements of geographic inquiry and methodology. The unit sets the stage for further study into physical and human geography of the world. Students will learn that there are multiple uses or applications of geographic information. If one were to use even an immediate area or community, it would be a simple task to produce a number of ways in which we apply geographic information (e.g., farming practices, bus routes, weather predictions, land use and development, waste disposal, EMS services). On a global level, the number and scope of applications grows significantly. How we gather the data for these applications is an important part of understanding the study of geography. The changes over time in technologies and available information is profound, yet the advances that early geographers made with rudimentary technology are astounding and much of our present-day knowledge is based upon these findings. What will this mean for future generations? Although students may have some geography experience prior to entering the course, teachers will need to assess students' current understandings and plan a unit of instruction based upon their needs and preferred learning styles.

The suggested time allotment for this unit is 25% of the total course time.

Outcomes

Unit 1: Geography Methods

Students will be expected to:

1.1 demonstrate an understanding of the study of geography
1.2 demonstrate an understanding of the themes of geography
1.3 identify various occupations and professions related to the field of geography
1.4 use maps, atlases, and globes to collect and interpret data about world geography
1.5 explain the operation and applications of various locational technologies or systems
1.6 apply standard geographic inquiry methods to find answers to real-life queries

GCO 1: Demonstrate an understanding of the study of geography.

Outcomes

Students will be expected to

1.1 demonstrate an understanding of the study of geography

Elaborations - Suggestions for Learning and Teaching

The initial outcome is one that sets the foundation for understanding the nature of geography and what is studied within a geographic context. Students may discuss why the study of geography is important and what some of its applications may be. Another aspect of geographic study that will likely arise is the use of technology and the constant change in ways of gathering geographic information.

Students may, for example,

- participate in a Think-Pair-Share strategy to write a statement that describes why geography is important to study. Students may also start a geography field-note journal in which they can record entries about the varied applications of geography in their own daily lives (see appendix A-1, Teaching Strategies).

- create a concept map or mind map to show the five themes that comprise a study of geography as well as some of the significant results of geographic studies (e.g., physical discoveries, changes over time, human settlement. See appendix B 1-10, Visual Organizers.

- use a place mat strategy to brainstorm ways in which geography is applied. Create a collaborative class bulletin board as a visual means of displaying ideas (see appendix A-3, Teaching Strategies).

GCO 1: Demonstrate an understanding of the study of geography.

Suggestions for Learning and Assessing

Students may, for example,

Journal

- write a journal entry, or free-write for 2-3 minutes about the study of geography and its significance in the past, present, and future.

Paper and Pencil

- brainstorm a variety of jobs that might entail making use of geographic information—explain how these jobs would be impossible to do, or very difficult without access to geographic information (e.g, truckdriver, biologist, surveyor, urban developer).

- select a current news story that is related to the study of geography and write a brief summary of the role that geography plays (e.g., urban development projects, search for sunken treasures, exploration of remote areas, eco-tourism, studies of potential environmental hazards).

Presentation

- create a Where in the World? game for younger children. How does the use of geographic information help in this task? Who would have collected and documented this information? Why is it important to continue to collect and document geographic information?

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

GCO 1: Demonstrate an understanding of the study of geography.

Outcomes

Students will be expected to

1.2 demonstrate an understanding of the themes of geography

Elaborations - Suggestions for Learning and Teaching

This outcome focusses upon the five universal themes of geography. Students will learn that these themes are a means of breaking down the vast area of study covered by geographers into smaller parts in order to understand them better. While these are generally accepted as universal themes, it is not unusual to find that language may differ slightly in some contexts. For example, these themes have recently been expanded in some jurisdictions to include a sixth theme—The Uses of Geography—and are referred to as the six "essential elements" of geography. For this course, geographic themes will be the preferred term.

1) Location–where we are in the world
2) Regions–areas that share something in common
3) Place–an area's physical and human features
4) Movement–how people, goods, and ideas move
5) Human–Environment Interaction—mutual effects of environment on people and people on environment

Students may, for example,

- brainstorm ideas to create a class concept web organizing the broad study of geography into manageable sections or themes. Students can discuss which areas might be included and provide a rationale for the organization that they have created. Compare class ideas to the five themes to see similarities or differences in organization (see appendix B 1-10, Visual Organizers).

- develop a Web site, digital slideshow, or other means of presentation showing how the five themes of geography are linked to a specific locale or region. Use the questions below as a guide.

- Where are we located in the world (latitude/longitude)?
- What features does our community/province/region share that may be different from other communities/provinces/regions?
- How would you describe our community/province/region (physical and human features)?
- How are influenced by other cultures and how does our culture others in the region/country/world?
- What impact do we have on the environment and how does our environment have an impact on us?

GCO 1: Demonstrate an understanding of the study of geography.

Suggestions for Learning and Assessing

Students may, for example,

Journal

- write a brief journal entry which focusses on the organization of geography into themes. Include reasons for creating a system of organization for the study of geography and reasons for the significance of each theme

Paper and Pencil

- list the five themes of geography and along with an explanation of how these themes help in organizing information, write a one or two sentence description for each element. Alternatively, draw pictures or symbols that represent each of the themes.

Presentation

- describe their home province or region in terms of the five themes of geography. Students may use questions similar to those in the learning activity on the previous page. Teachers may choose to model this initially using a selected region.

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

GCO 1: Demonstrate an understanding of the study of geography.

Outcomes

Students will be expected to

1.3 identify various occupations and professions related to the field of geography

Elaborations - Suggestions for Learning and Teaching

Students may be surprised at the many and varied disciplines and professions that are related to the study of geography. It may be helpful to use the framework of geographic themes to explore the range of disciplines and then compile a list as a broader collection. Students may be interested in researching a specific area, or a person involved in a specific area of geography. A simple Internet search can yield many options for this topic. Students will gain a better understanding of the myriad of careers that involve geography skills and knowledge, and how geography permeates almost every domain. Note: *Occupations* involving geographic skills generally refer to jobs that require some geographic knowledge or skill, such as being able to read a map. *Professions* in the geography field, on the other hand, refer to work that requires special knowledge or skills, such as archaeology or urban planning.

Students may, for example,

- provide examples of disciplines related to geography and have students research other examples on their own. Examples may include, but are not limited to the following:

statistician	environmental manager
cartographer	park ranger
demographer	GIS specialist
archaeologist	outdoor guide
urban planner	hydrologist

- invite a geographer or other person who uses geography in his/ her line of work to speak to the class about the work and the course of studies that was required to qualify for this work.

- create a chart or other visual organizer, such as a concept map or mind map, to illustrate the various professions and other related jobs or studies that are connected to geography (see appendix B, “Visual Organizers”).

GCO 1: Demonstrate an understanding of the study of geography.

Suggestions for Learning and Assessing

Students may, for example,

Journal

- write a journal entry based upon careers or occupations in geography and predict how changing technologies may affect these occupations.

Presentation

- select a career of interest which is related to geography and explain how geographic information plays a role in the career.
- research a specific career or person related to an area of geography and present findings to the class.
- create a digital presentation on geography-related careers or occupations.
- use a ranking ladder to illustrate careers and occupations that involve geography and show the level of importance of geographic knowledge and practice (see appendix B-12, Visual Organizers).
- design a poster or brochure aimed at attracting people to a job fair of geography-related careers.
- create and present an occupational profile of a job related to geography. Compare some occupations and decide which job requires more technical knowledge.

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

GCO 1: Demonstrate an understanding of the study of geography.

Outcomes

Students will be expected to

1.4 use maps, atlases, and globes to collect and interpret data about world geography

Elaborations - Suggestions for Learning and Teaching

Maps are primary geographic tools because they allow us to visualize space. Students have worked with maps since their early years of education, expanding their knowledge and use of this primary tool as they developed cognitively. At the senior high level, students should be able to decode (read) various types of maps and determine which map is best suited for particular data collections or comparisons. Encoding maps (constructing) is a higher level skill but is necessary in organizing data and expressing conclusions derived from other sources. In other words, mapmaking is essential to communicating or "visualizing" information gathered by students during their geographic inquiries. It is type of visual literacy—a critical skill for all students to master. The use of atlases is also important as these often contain other forms of geographic data, such as charts, graphs, climographs, cartograms, and gazetteers, from which students will derive information during their inquiries. Globes allow us to visualize the world as it exists in space and time in a way that two-dimensional maps cannot. While it is expected that maps, globes, and atlases will be used throughout the course, the intent of this outcome is to have students understand the basic nature and scope of data that is provided by these geographic tools.

Students may, for example,

- identify standard map conventions (title, key or legend, compass rose, scale, and boundaries) as they examine various theme maps for selected world regions or countries.
- select several theme maps, such as for land use and natural resources, for a specific area to compare data and arrive at conclusions related to the data. For example, students may compare migration patterns from rural to urban areas with land use, water availability, or GNP rates to arrive at conclusions about quality of life in a particular region.
- construct maps (either by hand or via technology) to organize and present selected data such as population distribution, physical features, exports or other information. Students may create a set of three or four maps depicting various types of information or combine the data on one map with appropriate key symbols. Remind students to include all standard map conventions.
- access an on-line mapping site such as Atlas Canada or the National Geographic companion site to examine different types of maps and their applications to geographic inquiries.

GCO 1: Demonstrate an understanding of the study of geography.

Suggestions for Learning and Assessing

Students may, for example,

Observation

- select the appropriate map to find specific information about each of the following:
  - amount of rainfall in the Borneo forests (precipitation map)
  - size of cities in Indonesia (population distribution map)
  - main exports in Japan (economic map)
  - boundaries of countries in Europe (political map)

- given a specific situation or context, such as a hurricane, volcano eruption, or earthquake occurring in Location X, or threat of an environmental hazard such as an oil spill due to industry practices in Location Y, identify which map(s) or information charts would be most beneficial in analysing the problem.

Presentation

- using an atlas, select a region or a country and create a profile for the region detailing types of data gathered from the various maps, charts, graphs, and other forms of information available.

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

Pearson School Atlas
Atlas Skills, pp. 168, 169, 172, 174-175

Nystrom Desk Maps - Canada and the World Landcover

Web Links
www.atlas.nrcan.gc.ca

National Geographic Map Machine
www.geographic.glencoe.ca

http://www.edu.pe.ca/journeyon/pro_d_pages/gis explorer1.htm

Technology
Journey On
Lesson: Creating Maps Using ArcExplorer (AEJEE)
Lesson: Accessing Online Data Usng ArcExplorer (AEJEE)
Lesson: Labeling and Classifying Features (AEJEE)

GOOGLE EARTH

GCO 1: Demonstrate an understanding of the study of geography.

Outcomes

Students will be expected to

1.5 explain the operation and applications of various locational tools

Elaborations - Suggestions for Learning and Teaching

Locational tools (technologies and systems) have existed for as long as humans have been exploring the world. From sailors who used early celestial navigational systems to astronauts who use modern satellite technology, finding one's way or locating a specific global address remains a universal quest. While students may be familiar with some traditional tools such as maps and globes, they may not be as familiar with others (e.g., latitude/longitude, GPS (Global Positioning System) and other newer tools. They may also not know how these systems operate, or which technologies are best-suited to providing answers for specific geographic questions. Locational tools and technologies include (but are not limited to) aerial photographs, maps, satellite imagery, Global Positioning System (GPS), Geographic Information System (GIS), and Remote Sensing. Students will explore various technologies to learn how these technologies are used in specific circumstances, such as determining the amount of pollution in a harbour, land usage in a particular region, or locating survivors in a natural disaster.

Students may, for example,

- use a variety of geographic tools such as aerial photographs, satellite images, topographic maps, or other theme maps for specific regions or their own province. Students can compare tools to determine the types or levels of information available from each source. Given a specific geographic question (e.g., determining the source of pesticides involved in a fish kill on PEI), ask students to choose which tool would be of most value in this particular case and why.

- given a selected set of coordinates, identify selected locations on a topographical or other map by using the latitude and longitude grid system. Alternatively, given a set of selected place names from various regions throughout the world, have students use a map to identify the approximate grid coordinates.

- use a GPS hand-held unit to discover various data that it provides—location, speed, distance travelled, time to destination.

- participate in a GEOCACHING activity using a hand-held GPS unit.

GCO 1: Demonstrate an understanding of the study of geography.

Suggestions for Learning and Assessing

Students may, for example,

Performance

- participate in a rescue simulation that requires the use of various maps or other geographic information. (e.g., weather patterns/ forecasts, population density, transportation and access routes, language, dangers, available medical facilities).

  Alternatively, have groups brainstorm other scenarios and exchange with other groups to complete the exercise. Scenarios may include environmental disasters and social/humanitarian issues, or studies involving effects of industrialization of an area, or any other appropriate context that involves using a number of different kinds of information that are found primarily on thematic maps or other visuals.

Paper and Pencil

- write an editorial or magazine article based on changes in technology over time and the impact upon those who use geographic information. Does technology make things easier or more complicated than they used to be?

- create a GEOCACHE selecting at least 5 locations

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

Pearson School Atlas
Atlas Skills, pp. 170, 173

Nystrom Desk Maps - Canada and the World Landcover

Web Links
www.library.mun/ca/qeii/maps/peico.php
Map Library Coordinates of Provinces and Territories of Canada

www.gov.pe.ca/gis
GIS Data Layers (PEI)
Search:
PEI Public Land Atlas
PEI Road Atlas
GIS Products (PEI samples)

Technology
Journey On
Lesson: Introduction to GIS
Lesson: Using GIS in Your School Community

Lesson: Using a Global Positioning Unit

GCO 1: Demonstrate an understanding of the study of geography.

Outcomes

Students will be expected to

1.7 apply standard geographic inquiry methods to find answers to real-life queries

Elaborations - Suggestions for Learning and Teaching

In this outcome, students are tasked with thinking like geographers and following standard geographic methods to reach a conclusion about a real-life inquiry. Students will likely be familiar with other processes of research or inquiry and should be assured that the processes are very similar. Often referred to as the "five skills of geography", the inquiry method includes 1) asking geographic questions; 2) acquiring geographic information; 3) organizing geographic information; 4) analysing geographic information; and 5) answering geographic questions. Teachers may wish to introduce this outcome by having students brainstorm sample geographic questions related to their own community, province, or region. Why was North Cape selected as the best site for a wind farm on PEI? How does erosion affect the Island? Teachers can guide students through the geographic inquiry process to answer these questions. The same model can be applied to other geographic questions. Alternatively, brainstorm potential inquiry questions related to a broader geographic region.

Students may, for example

- discuss a local geographical issue or development (e.g., wind farms, the Confederation Bridge, water nitrates, resource depletion, sand dune preservation). Students can pose inquiry questions or hypotheses related to a specific issue and explain how the geographic method of inquiry could help to find an answer. Later, students can follow the same method to expand their inquiries to a global context.

  For example, What will be the long-term effects on the lobster fishery in the Strait due to the construction of the Confederation Bridge?

- participate in a place mat activity to generate ideas around geographical inquiries (e.g., I wonder why/how....?) related to local areas or global regions. Students can select their top questions/inquiries for further research (see appendix A-3, Teaching Strategies).

- as a class or in small groups, select a current world issue or problem (e.g., melting of polar icecaps, desertification in Haiti, increasing hurricane occurrence in the Caribbean/southern regions) and apply the geographic inquiry methods to conduct research into the problem.

GCO 1: Demonstrate an understanding of the study of geography.

Suggestions for Learning and Assessing

Students may, for example,

Paper and Pencil

- design a geography-related research question for a selected country or region and then formulate a research outline or plan that incorporates standard geographic inquiry methods:
  - asking geographic questions
  - acquiring geographic information
  - organizing geographic information
  - analysing geographic information
  - answering geographic questions

- given a sample question for possible geographic research, outline a plan for gathering data (where, what kinds); organizing data (categories, chronological, sequential, comparisons); analysing (what might the data reveal, why); and answering the question (how to present).

Presentation

- pose a new question or address an existing question or problem related to geography by applying geographic inquiry methodology. Present findings to the class or a partner.

- create a video presentation. Students may wish to use available software that can splice together images, music, and text.

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

Technology
Journey On
Lesson: Tourist Destination

Unit 2: Physical Patterns of the World

Unit 2: Physical Patterns of the World

Overview

Unit 2 focusses on the physical aspect of geography—the tangible and visible evidence that forms the environment around us and the rest of the world. It is the physical characteristics of a place that exerts the strongest influence on other areas of life within the domain of geography. In this unit, students will investigate the physical forces that have created certain landforms and bodies of water, climate regions, the impact of change over time on Earth's natural resources, and the interdependent relationships between humans and surrounding environments. It is important to note that some of the concepts found in this unit will already be familiar to students from previous studies in science and social studies. Therefore, it is beneficial to gauge how much students can recall or understand, and adjust the classroom pace accordingly. An important element in comprehending Unit 2 material is being able to visualize and understand the four layers of Earth: hydrosphere, lithosphere, atmosphere, and biosphere.

The suggested time allotment for this unit is 25% of the total course time.

Outcomes

Unit 2: Physical Patterns of the World

Students will be expected to:

2.1 explain internal and external physical forces that impact Earth
2.2 identify and locate major land masses and bodies of water
2.3 explain the impact of the Earth and Sun pattern on world geography
2.4 explain the significance of water as a renewable resource
2.5 explain how climate and vegetation are related in major regions of the world
2.6 describe factors that influence climate regions
2.7 trace the change over time of a natural resource including its value, distribution, and management

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Outcomes

Students will be expected to

2.1 explain internal and external physical forces that impact Earth

Elaborations - Suggestions for Learning and Teaching

This outcome lays a foundation for students as they investigate the multitude and magnitude of forces that have created and continue to create much of the earth's physical structure. Internal forces related to the movement of Earth include colliding and spreading of plates, folds and faults, earthquakes, and volcanic eruptions. External forces refer to the effects of wind and water on the earth's surface. Students will learn that these forces continue to exert a presence over life on Earth in terms of physical features, hazards, and catastrophes.

Students may, for example,

- discuss known events that occurred as a result of geological forces, such as the 2011 earthquake and tsunami in Japan; the 2011 floods in Australia; the 2010 eruption of an Icelandic volcano; the 2009 earthquake in Haiti. Brainstorm or research other types of events that occur as a result of internal or external forces (e.g., sinkholes, mudslides, ice storms, avalanches, impact events such as meteorites).

- discuss physical forces (internal and external) that contribute to the physical make-up within Earth's lithosphere using examples of landforms such as the San Andreas Fault, the Rocky Mountains, the Hawaiian Islands, the Grand Canyon, and others, including undersea examples. The discussion should include plate tectonics, weathering, and erosion.

- view a video that illustrates physical features of the earth and keep a logbook of terminology that is new or not easily understood.

- create a visual diagram to depict the earth's layers and define each in a journal:
  - core
  - mantle
  - crust

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Suggestions for Learning and Assessing

Students may, for example,

Paper and Pencil

- reformulate text to create to a poem (e.g., haiku, limerick, etc) to explain internal and external forces that shape the Earth (see appendix C, Reading Strategies).

Presentation

- construct a cause and effect chart to explain major internal and external forces that create change on Earth.

Cause	Effect
wind erosion	wearing down of land forms
shifting of plates	gradual disappearance of landform

- locate general information about a natural phenomenon such as a land formation or an event that was the result of internal and external forces. Create a mini-presentation (oral or visual) to explain the phenomenon to others.

- create a digital slideshow, I-Movie, or Animoto presentation (if software is available) to demonstrate the internal and external forces that impact Earth along with the resulting movement and consequences. Select a music soundtrack to accompany the show.

- create a concept map that explains internal and external forces of the earth (see appendix B, "Visual Organizers").

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

Pearson School Atlas
World Thematic, pp. 78-79, 84, 96

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Outcomes

Students will be expected to

2.2 identify and locate major land masses and bodies of water

Elaborations - Suggestions for Learning and Teaching

This outcome provides additional opportunities for hands-on learning by having students familiarize themselves with representations of the earth, such as globes, world maps, and GOOGLE EARTH. While some students may be quite at ease with these tools, others may need some extra time or support in navigating their way around the world. The purpose of this outcome is to make students aware of the locations of some of the major landforms and bodies of water that exist throughout the world. While it is not necessary to memorize numerous discrete place names and characteristics, it is expected that students be able to locate easily and form a mental map of the world's major land masses and bodies of water, including continents and oceans. Students should be made aware that there is often debate over the exact number of continents because of differing criteria used to define a continent, an example being Europe vs. Eurasia. Teachers can help students to understand how continents are defined depending upon the model used and the context—geographical, cultural, or other factors, such as inclusion of the continental shelf or outlying islands.

Students may, for example,

- examine a relief globe or physical map to become familiar with many of Earth's physical landforms and bodies of water. Compare land masses and bodies of water looking for patterns and/or anomalies, and noting undersea landforms such as mountain ranges, valleys, and trenches.

- using a blank outline map, locate and label significant landforms and bodies of water related to a specific continent or land mass. (Students may wish to keep these maps in their portfolios throughout the course so that they can use them as benchmarks of their knowledge and skill.)

- collect current event stories related to the environment or geography, such as those about natural disasters. Locate the stories on a class wall map as a collaborative and ongoing project, or use an individual outline map that is kept in a student binder or portfolio. Discuss and record the internal or external forces that contributed to the event.

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Suggestions for Learning and Assessing

Students may, for example,

Paper and Pencil

- use a blank outline map of the world to locate major land masses and bodies of water.
- use an on-line mapping service to create a digital map of the world. Label major land masses and bodies of water.

Presentation

- create a group or class wall map of the world, labelling major land masses and bodies of water. Due to the larger size of a wall map, students may wish to add significant landforms in a specific land mass as points of interest or reference. Later studies could also bring about the addition of environmental events or other points of interest.
- create a realistic or stylized papier-maché globe (using a balloon or other form as a base) or map which could be used as a teaching tool for younger children, or as an artistic addition to a room décor.

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

Pearson School Atlas
pp. 80-81 and inside back cover

Nystrom World Desk Maps

Web Links
www.geography.glencoe.com
National Geographic Map Machine

Technology
Journey On
Lesson: Creating Maps Using ArcExplorer (AEJEE)

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Outcomes

Students will be expected to

2.3 explain the impact of the Earth and Sun relationship on world geography

Elaborations - Suggestions for Learning and Teaching

The intent of this outcome is for students to grasp the critical relationship between Earth and Sun and its significance to the study of geography. Students will already have some understanding of this relationship from previous science and social studies programs. This outcome sees them building upon their knowledge to explain the impact of the Earth-Sun relationship on climate, in particular. Students will be expected to explain differing lengths of day and night due to this relationship, the impact of the sun on Earth's temperatures at different times of the year (seasons), and how global warming and climate change are a result of this relationship. Ultimately, students will understand that the Earth-Sun relationship is central to all life and interaction on Earth's surface.

Students may, for example,

- examine a solar or planetary model and replicate the movement of the earth in relation to the sun. Discuss how movement impacts various places on Earth at different times of the year.
- view an animation of the Sun-Earth relationship and movement and write a brief description of the action. Include an explanation of the impact of this movement on Earth, its climates, and its people.
- role-play the relationship between Earth and Sun, adding a component related to the impact of change in movement on Earth's climate.
- write a journal entry on the influence of Sun on Earth and the role it plays in climate patterns—remember that "climate" refers to long-term weather patterns, not just day-to-day weather.
- create a diagram to show the relationship between Earth and Sun. Add a graphic organizer to explain the impact of this relationship in Earth's climate.
- research the greenhouse effect to find out how it affects the Earth-Sun relationship, and identify consequences for humans.

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Suggestions for Learning and Assessing

Students may, for example,

Presentation

- create a diagram of the Earth-Sun relationship with accompanying explanation to present to an audience.
- create a digital animation of the Earth-Sun relationship.
- create a 3-D model such as a mobile to explain the Earth-Sun relationship.
- create a storyboard for a movie based upon the Earth-Sun relationship and a changing environment such as global warming.
- locate information and present a mini-research paper on a particular aspect of the Earth-Sun relationship, such as climate change or the greenhouse effect.
- create a "Cities of the Future" architectural visual linked to the changing nature of the Earth-Sun relationship.

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

Web Links
http://esminfo.prenhall.com/science/geoanimations/animations/01_EarthSun_E2.html

www.fearofphysics.com/SunMoon/sunmoon.html

Supplementary Resources
An Inconvenient Truth (DVD) November, 2006.

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Outcomes

Students will be expected to

2.4 explain the significance of water as a renewable resource locally and globally

Elaborations - Suggestions for Learning and Teaching

Water is a fundamental necessity of life, without which we, and all other forms of life on Earth, could not exist. Students will recall from earlier science classes the basics of the water cycle and its significance to life. While this outcome is science-related, the context remains geography-based, and, therefore, the focus is on the relationship between Earth's bodies of water and the sustainability of life on the planet. Fresh water is the lifeblood of Earth in a physical, economic, social, and cultural sense. The future of Earth's bodies of water is at stake as globalization exerts more and more pressure on this renewable resource. This outcome leads students to a better understanding of the critical role that water plays in our lives here and around the world.

Students may, for example,

- create a simple circle graph to illustrate the ratio of Earth's bodies of salt water to Earth's bodies of fresh water.
- find news articles or essays related to water (e.g., water as a commodity, water as transportation, water pollution, water as a political issue, water demands in industry) and participate in a Think-Pair-Share activity to discuss how water plays a significant role in many aspects of life (see appendix A-1, Teaching Strategies).
- define "desalination" and write a brief summary statement related to the future of fresh water on Earth.
- create a visual organizer such as a mind or concept map to illustrate the many aspects of water and our reliance upon it.
- construct a chart such as the one below to compare the origins of Earth's bodies of salt water to the origins of bodies of fresh water.

EARTH'S WATER

Salt Water	Fresh Water
oceans	ground water
seas	lakes
bays	streams
gulfs	rivers

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Suggestions for Learning and Assessing

Students may, for example,

Paper and Pencil

- write a letter to the editor about the state of the earth's water and why we need to act responsibly in order to protect this finite resource.
- research stories about efforts to preserve water or to bring fresh water to arid regions or countries, then write a summary and concluding statement regarding the importance of water in these situations.
- draw a map (or create a digital map) showing the earth's bodies of water. Write an accompanying description of the vitality of water to life on Earth. Alternately, write a poem (e.g., limerick or haiku) to express a message about preserving Earth's water (see appendix C, "Reading Strategies").

Presentation

- create a concept map to illustrate the sources of Earth's water and its significance to life on Earth.
- create a presentation that compares the price of a lire of water to a litre of gas and write conclusions about the value of water. Presentations may include information on the quantities of water that are requried for daily routines such as showers and toilet flushing. How do these activities affect the demand for water?

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

Pearson School Atlas
World Thematic, pp. 85, 98

Supplementary Resources

Nicol, Jan et al. (2008). *Globalizing Connections: Canada and the Developing World,* Vancouver: The Critical Thinking Consortium (TC2), pp.68-75

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Outcomes

Students will be expected to

2.5 explain how climate and vegetation are related in major regions of the world

Elaborations - Suggestions for Learning and Teaching

This outcome and the subsequent outcome will help to broaden students' comprehension of the "big picture" of our world. Climate is a dominant factor in human action and interaction with others and the environment, while vegetation is a result of climatic and other physical factors. Students should be well aware of urgent calls for attention to climate and climate change. The greenhouse effect and "El Nino" are terms that students have likely heard in previous discussions about environment and climate. These are just two of the phenomena that are currently affecting our planet. By being able to identify major climate and vegetation regions of the world, students are better able to understand the subtle and not so subtle effects that such phenomena create.

Note: It is important for students to understand that regions or zones (climate, vegetation, cultural, and other) may differ slightly in organization, name, or boundaries. These zones are artificial constructs made by geographers to organize information and, therefore, variations in boundaries may exist.

Students may, for example,

- examine a world climate map to locate the general location of the five major climate regions: Tropical, Dry, Temperate Marine, temperate Continental, and Polar.
- brainstorm ideas about how climate zones may relate to various vegetation zones, and give reasons for this relation ship.
- freewrite for four or five sustained minutes to elicit prior knowledge of climate and vegetation across the world.
- compare a world climate region map to a world vegetation region map and note visible patterns that relate the two maps.
- create a computer-generated colour world theme map to show both climate regions and vegetation regions; alternatively use a world outline map and hand-draw climate regions, adding a layer to the map using an acetate sheet (overhead) on which vegetation regions are clearly marked.
- participate in a jigsaw activity to learn about the world's climate regions and vegetation zones (see appendix A-2, Teaching Strategies).

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Suggestions for Learning and Assessing

Students may, for example,

Performance

- form a team-teaching pair to "teach" the class about world climate and vegetation regions, or a specific region of the world.

Paper and Pencil

- trace a voyage between two areas on a globe or map and record the types of climate and vegetation they would encounter along the way.

Presentation

- using an outline map of the world and coloured pencils, create a climate zone map illustrating the five major climate regions: Tropical, Dry, Temperate Marine, Temperate Continental and Polar. Ensure that the map includes title, legend, boundaries, and scale.
- as part of a group project, locate general information about one specific climate region and vegetation region and then collaborate to form a "big picture" presentation on climate and vegetation throughout the world.
- create a brochure that explains the world's climate regions and how large bodies of water affect climate patterns.
- use GOOGLE EARTH to create a "fly-over tour" of various re gions illustrating differing climate and vegetation combinations

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

Pearson School Atlas
World Thematic, pp. 82-83, 84-87

Technology
Journey On
Lesson: Creating Maps Using ArcExplorer (AEJEE)

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Outcomes

Students will be expected to

2.6 describe factors that influence climate regions

Elaborations - Suggestions for Learning and Teaching

While climate is largely determined by the Earth-Sun relationship, there are many other factors that contribute to its state and change. While climate is generally stable over long periods of time, climate or changes in atmosphere in one area of the globe can create shifts in other areas of the world. The natural factors that influence climate are latitude and elevation, ocean currents and winds, and landforms. However, rarely are these the only variables in determining climate and weather patterns. When human actions create broad-sweeping changes over time, these actions and consequences become critical factors.

Students may, for example,

- compare a physical map of the Atlantic region to a climate map to determine its climate region and classification. In a graphic organizer such as a T-Chart, record on on side significant physical attributes, such as proximity to water, wind and ocean currents, landforms, and other natural features that may contribute to the climate in this area. On the other side of the T-Chart record other contributing factors that have come about as a result of human action (e.g., ozone thinning, carbon emissions, melting of icecaps). See appendix B-11, Visual Organizers.

- apply the process noted above to another region of the world recording factors contributing to the climate (and consequently, the vegetation) of this area. Conclude with a statement regarding which factors play a dominant role in climate for this region and how this may change in the future.

- illustrate how climate change occurs over time, both naturally and as a result of human action. Create a cause-and-effect organizer to help record ideas and patterns, ensuring that the "cause" samples used include a range of both natural and man-made processes. Write a concluding statement related to one sample showing how climate change may affect vegetation in that region.

- select a specific area or region to study climate and vegetation using maps and other sources of information (print, Web, video, other graphics). Share findings with other groups or the class, as well as predictions for future changes in climate and/or vegetation patterns.

- use a text reformulation startegy to write a brief poem, lyric, or other based upon factors that influence climate regions. (See appendix C, "Reading Strategies").

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Suggestions for Learning and Assessing

Student may, for example,

Paper and Pencil

- list a range of factors that influence climate and provide a brief explanation of how each factor exerts an influence.
- select a geographic region and create a profile (including a map) describing climate and vegetation for the areas as well as the various influencing factors.

Presentation

- for a specific geographic area or location create a tourism brochure (including a map) citing climate and vegetation with various influencing factors.
- create a mind map to illustrate how certain factors play a role in influencing climate (see appendix B, "Visual Organizers").
- select a case study that illustrates factors that influence climate regions (e.g., deforestation, global warming, clear-cutting) and create a presentation to share with the class.

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

Pearson School Atlas
World Thematic, pp. 82-84, 96-97

Nystrom Desk Maps - Canada and the World Landcover

Supplementary Resources

Nicol, Jan et al. (2008). *Globalizing Connections: Canada and the Developing World,* Vancouver: The Critical Thinking Consortium (TC2)

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Outcomes

Students will be expected to

2.7 trace the change over time of a natural resource including its value, distribution, and management

Elaborations - Suggestions for Learning and Teaching

The management of natural resources has been and is increasingly a world-wide issue. People in many parts of the world are no longer reliant upon the bounty of the land in their immediate surroundings in order to survive. Self-sufficiency is a thing of the past in the current market world, other than for those in Earth's most remote or poorest areas. The globalization of markets and trade and the increase in demand for raw goods have created both opportunities and devastation. This outcome speaks to the value of natural resources, the influence of market economies, and advancements in technologies that allow for mass production and harvesting. This outcome also provides a clear opportunity for discussion around sustainable development and practices.

Students may, for example,

- gather and chart data (historical or contemporary) of a selected natural resource (e.g., water, gold, oil, cod, plant or animal species) to illustrate fluctuations and patterns in the growth, distribution, and management of the resource. What conclusion(s) can be drawn about the resource and its sustainability?

- complete a compare and contrast chart for two regions or countries that have similar natural resources. Include historic facts related to the value and distribution of the resource, as well as current practices in management and predictions. Determine what changes, if any, have taken place over time.

- discuss how plans for sustainable development of a particular resource could change the outcome of a resource or a region.

GCO 2: Analyse patterns related to interdependence among the world's physical features, natural resources, and climates.

Suggestions for Learning and Assessing

Students may, for example,

Paper and Pencil

- create a comparison chart to record significant facts about natural resources and their value, distribution, and managment over time in two or more regions or countries of the world. Include a prediction for these regions related to the use of natural resources, and a summary statement about how time has affected change in these resources.

Presentation

- select one natural resource as a basis for a profile which will include charts, graphs, maps, time lines, or other information pieces that tell the story of the resource and its use over time. Make a prediction for the future of the resource.

- locate information about a specific region to create a natural resource information brochure. Include the history of resource usage, current management issues, and future outlook or plans for the resources of this area. Conclude with a brief synopsis of how the region's resources have changed (or not) over time.

- use a case study to create a presentation on a specific natural resource and its usage over time. Conclude the study by describing how the resource has been valued, distributed, and managed over time. What does the future hold for the resource? How might sustainable development plans affect the resource?

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

Pearson School Atlas
World Thematic, pp. 85-97

Nystrom Desk Maps - Canada and the World Landcover

Supplementary Resources
Three Gorges: The Biggest Dam in the World (1998)
(Video by Discovery Channel, available at Media Centre)

Web Links
www.youtube.com
Manufactured Landscapes, a visual documentary that explores the impact of industries (e.g., extraction) on the environment, by Canadian photographer/videographer Edward Burtinsky. Several versions of this documentary may be accessed.

Unit 3: Cultural Patterns in the World

Unit 3: Cultural Patterns of the World

Overview

Unit 3 connects the physical world with the human world. Its focus is on the interactions and interconnections between humans and their physical environments. Students will explore the concepts of culture and cultural regions as they examine factors which influence human settlement patterns and opportunities and challenges that are related to these regions. Students will investigate the meaning of "perspective" as it relates to their own connection to place and to that of others in less developed regions. This unit also provides opportunities for students to explore issues related to cultural regions, and asks students to participate in an active citizenship project.

The suggested time allotment for this unit is 50% of the total course time.

Outcomes

Unit 3: Cultural Patterns of the World

Students will be expected to:

3.1 define "culture", "cultural regions", and "cultural diffusion"
3.2 locate major cultural regions of the world and identify significant countries, states, or population centres within each region
3.3 describe factors that influence human movement, settlement patterns, and development of a selected area
3.4 explain the difference between "developed" and "developing" nations
3.5 conduct a geographic inquiry into a selected region to learn more about its current challenges and opportunities
3.6 engage in an active citizenship intiative as part of a group or class

GCO 3: Analyse patterns of interdependence between humans and their environments.

Outcomes

Students will be expected to

3.1 define "culture", "cultural region," and "cultural diffusion"

Elaborations - Suggestions for Learning and Teaching

Culture is a broad term that encompasses many aspects of human interaction with others, and with the environment. Students will already be familiar with many of the elements of culture, such as language, religion, dress, food, arts, and more. While their previous experience may have touched on cultural regions, this outcome is intended to provide a better understanding of how cultures may be organized geographically within a global context. At the same time, while we may be organized geographically, there is no denying the impact of globalization. The movement of people, the transfer of information and goods, and the integration of all three into other cultures is sometimes referred to as "cultural diffusion." This spreading and blending of cultural practices and ideas around the world is not new, although it is happening at a faster pace than ever before in the history of humans.

Students may, for example,

- write in a journal or notebook personal definitions of "culture", "cultural region", and "cultural diffusion".
- use a KWL or RAN chart to brainstorm prior knowledge of cul ture and cultural regions. Write a definition based upon the notes. Jot questions or key words in the W space to record ideas for further exploration throughout the unit (see appendix B, "Visual Organizers").
- research several different definitions of "culture" and "cultural region" and use these as a basis for forming a new personal definition. Find other terms to describe cultural diffusion.
- participate in a Think-Pair-Share activity to brainstorm ideas around culture, cultural regions, and cultural diffusion within a region, such as a province, the Atlantic region, or Canada (see appendix A, "Teaching Strategies").

GCO 3: Analyse patterns of interdependence between humans and their environments.

Suggestions for Learning and Assessing

Students may, for example,

Performance

- use artistic expression (e.g., visual, music, drama, role-play) to communicate an understanding of one or all three terms: "culture", "cultural region", and "cultural diffusion".

Paper and Pencil

- in a journal or notebook, write definitions for "culture", "cultural region" and "cultural diffusion" (based upon ideas discussed in class and from other sources).

- define the terms "culture", "cultural region" and "cultural diffusion" by describing in poem format (e.g., haiku, limerick). (See appendix C-3, "Reading Strategies").

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

World Studies: Latin America (Prentice-Hall)

World Studies: Africa (Prentice-Hall)

World Studies: The United States and Canada (Prentice-Hall)

World Studies: Asia and the Pacific (Prentice-Hall)

World Studies: Europe and Russsia (Prentice-Hall)

Pearson School Atlas
World Thematic, pp. 102-104

Web Links

www.youtube.com
If the World Was a Village (of 100 People)

Shift Happens

GCO 3: Analyse patterns of interdependence between humans and their environments.

Outcomes

Students will be expected to

3.2 locate major cultural regions of the world and identify significant countries, states, or population centres within each

Elaborations - Suggestions for Learning and Teaching

Cultural regions of the world cannot be definitively marked by political borders or geographical features. Instead, these regions are identified by geographers and social scientists as a loosely delineated means of organizing and studying geographic areas that share many of the same traits. Students should be aware that while they may find lists of cultural regions, not unlike climate and vegetation regions, variations may exist—depending upon the source of information. Generally accepted cultural regions include Anglo-America, Latin America, Asia, Europe, Middle East and North Africa, Africa, and Oceania (Australia). Sometimes these regions are further delineated into smaller cultural regions, such as Southeast Asia or South of the Sahara, as examples. There are currently 195 recognized countries or states in the world, as well as many territories and colonies that are sometimes considered independent countries (e.g., Puerto Rico) but really are not. It is not realistic, nor necessary, for students to be able to identify every country. However, it would be reasonable to expect students to identify those countries or states that make up part of the cultural regions that are under study, as in case studies, class discussions, or research projects. An important step in identifying countries is being able to identity its home continent or cultural region (e.g, Middle East, South Asia). With practice, students should be able to identify a number of countries that form the basis of study in this course. Note: Teachers may wish to address the issue of "country vs. state vs. nation" in an introductory mini-lesson for this section.

Students may, for example

- participate in a place mat activity to brainstorm locations of possible cultural regions (based upon the definition created from the previous outcome). (See appendix A, "Teaching Strategies").
- based upon an accepted definition of cultural regions from the previous outcome, use a blank outline map of the world and coloured pencils to shade in potential cultural regions of the world. Using atlases and other resources, compare defined regions to those proposed by other sources. Adjust map if necessary to reflect generally accepted cultural regions. Add in some representative countries or States of the region.
- in pairs or small groups, create a multimedia presentation to describe a selected cultural region of the word. Include music clips, language examples, art, and costume representations, if possible, as well as usual representations (maps) with representative countries or states.
- create a visual (e.g., poster, pamphlet) depicting cultural regions of the world and summarize the common traits of the region (language, religion, art forms, economic systems, forms of government, food, architecture, social systems). Include representative countries or states in the visual.

GCO 3: Analyse patterns of interdependence between humans and their environments.

Suggestions for Learning and Assessing

Students may, for example,

Paper and Pencil

- use a blank outline map of the world and colour shading to indicate at least five of the world's major cultural regions. Label at least one state and population centre in each region.
- create a digital map of cultural regions around the world labeling significant countries, states, or population centres within the region.

Presentation

- create a jigsaw puzzle of world cultural regions using heavy paper stock or other material. Provide label names of countries or states and/or densely populated centres and ask peers to place appropriately on finished "map."

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

World Studies: Latin America (Prentice-Hall)

World Studies: Africa (Prentice-Hall)

World Studies: The United States and Canada (Prentice-Hall)

World Studies: Asia and the Pacific (Prentice-Hall)

World Studies: Europe and Russsia (Prentice-Hall)

Pearson School Atlas
World Human Patterns,
pp. 102-103 and inside back cover

Nystrom World Desk Maps

Web Links
http://geography.about.com/cs/countries/a/numbercountries.htm

GCO 3: Analyse patterns of interdependence between humans and their environments.

Outcomes

Students will be expected to

3.3 describe factors that influence human movement, settlement patterns, and development of a selected area

Elaborations - Suggestions for Learning and Teaching

Humans have been exploring and moving about the earth for a very long time. Physical factors have both enabled movement and hindered it, depending upon the region and climate. Geography has often dictated where people have chosen to settle and develop communities. Other factors, such as trade, exploration, a natural disaster, the search for refuge or work, play a role in migration out of one permanent settlement area and into another. This outcome expects students to analyse the factors that influence settlement, the movement of humans, and, ultimately, the globalization of culture.

Students may, for example,

- list geographical factors that influence settlement in a particular area (e.g., availability of fresh water, fertile land, and shelter; transportation routes; and climate). Examine maps of the local region or province to draw correlations between these factors and known settlement areas. Respond to the following questions:
  - Does this model apply elsewhere throughout the globe?
  - How do you know?
  - What factors determined settlement in another area of the world?

- use an on-line search engine or another resource to find a definition of "culture hearth" (or, cradle hearth)—areas of sophisticated ancient civilizations. Students may wish to speculate about the meaning before finding a standard definition. Use a blank world map to indicate some of the world's known cradle hearths (e.g., Mesopotamia, Indus Valley, Nile Valley, Middle America, the Yellow River Valley.) Compare physical maps to the areas of culture or, crude hearth to determine the physical factors that likely led to permanent settlement in these areas. Brainstorm ideas of how or why these culture hearths spread out to other parts of the world.

- participate in a Think-Pair-Share activity to gather reasons for human movement into and out of permanent settlement areas (see appendix A, "Teaching Strategies"). What factors influence movement? What is the result of movement? How does movement contribute to the diffusion of culture?

- research proposed theories of human settlement and migration. Use an on-line search engine or ask a teacher-librarian to help with the query. Formulate a response to the theory - Do you agree or disagree with the author? What are your reasons? Write your own theory.

GCO 3: Analyse patterns of interdependence between humans and their environments.

Suggestions for Learning and Assessing

Students may, for example,

Paper and Pencil

- create a visual organizer (including a map) to categorize factors influencing settlement in a selected region of the world and factors that may have contributed to movement into or out of the region now and in the past.

- create a mini-presentation using visual aids (including maps) to present to peers or another audience. Presentation should include a clear explanation of the factors that led to settlement, as well as any influences on movement in or out of the region.

Presentation

- using a Canadian region (such as the Atlantic region) and another cultural area of the world compare factors that contributed to settlement, and current factors leading to human movement into or out of the regions.

- create a cultural profile for a selected region or regions. Include locator maps and quick facts related to culture.

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

World Studies: Latin America (Prentice-Hall)

World Studies: Africa (Prentice-Hall)

World Studies: The United States and Canada (Prentice-Hall)

World Studies: Asia and the Pacific (Prentice-Hall)

World Studies: Europe and Russsia (Prentice-Hall)

Pearson School Atlas
World Thematic, various sections

Supplementary Resources

Diamond, J., (1997). *Guns, Germs, and Steel,* New York: W.W. Norton (Documentary video by National Geographic Society, 2005)

Nicol, Jan et al. (2008). *Globalizing Connections: Canada and the Developing World,* Vancouver: The Critical Thinking Consortium (TC2)

GCO 3: Analyse patterns of interdependence between humans and their environments.

Outcomes

Students will be expected to

3.4 explain the difference between "developed" and "developing" nations

Elaborations - Suggestions for Learning and Teaching

Terminology related to developing nations has evolved over the past few decades. What once was referred to as a "third world" country is now called a "developing" country or nation. Within the range of development, there are other distinguishing levels or terms such as "least developed," " less developed," and "more developed." Various social indices, such as the Human Development Index (HDI), measure quality of life in three categories: longevity, knowledge, and standard of living. The index, developed by the United Nations Development Programme (UNDP) in 1990, helps students to understand the vast disparities that exist between Canada and other nations or regions. Students will also learn that although a country's GDP may be very low in comparison to Canada, its quality of life may actually be quite high due to other factors such as access to education and health care.

Students may, for example,

- using a map of human development indices, compare Canada with selected other regions or countries. Create a visual organizer to show comparisons in terms of criteria such as longevity, GDP, levels of education, or health status.

- given a selected region or list of countries, create a comparison chart to illustrate similarities and differences in basic human development indices between Canada and other nations Respond to the following questions:
  - Where are the greatest gaps in development between Canada and (other country/region)?
  - Where are there similarities?
  - What does this mean for the people of (other country/region)?

- select a group of countries or regions for comparison purposes. Using human development index criteria, rank the countries/regions in order from closest to Canada in HDI measurement and furthest from Canada (see appendix B, "Visual Organizers").

GCO 3: Analyse patterns of interdependence between humans and their environments.

Suggestions for Learning and Assessing

Students may, for example,

Paper and Pencil

- given a list of selected countries or regions, use an HDI map to categorize each country/region as either developed or developing and create a system to further categorize each according to level of development (e.g., least, less, more).

- study the HDI factors for several developing countries to compile a list of similarities and differences. Conduct a similar study of developed countries and compare both lists. Write a concluding statement about your findings.

Presentation

- select one or more countries or regions for a comparison study of factors that influence development. Present to the class.

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

World Studies: Latin America (Prentice-Hall)

World Studies: Africa (Prentice-Hall)

World Studies: The United States and Canada (Prentice-Hall)

World Studies: Asia and the Pacific (Prentice-Hall)

World Studies: Europe and Russsia (Prentice-Hall)

Pearson School Atlas
World Thematic, pp. 98-107

Supplementary Resources

"A Developing World" map by Canadian Geographic (CG) and the Canadian International Development Agency (CIDA) [hardcopy is supplied in the GCI module and an on-line version is available]
www.canadiangeographic.ca/worldmap

GCO 3: Analyse patterns of interdependence between humans and their environments.

Outcomes

Students will be expected to

3.5 conduct a geographic inquiry into a selected region to learn more about it and its challenges and opportunities

Elaborations - Suggestions for Learning and Teaching

This outcomes allows students to participate in a more in-depth study of one selected region to identify both opportunities and challenges that the region may be facing. Opportunity may occur with the discovery of a new resource or the introduction of newer technologies that permit more efficient harvesting of a resource. However, there are many challenges that arise despite opportunities. For example, a natural resource such as a fish stock may disappear, or a sudden out-migration of people to another area may create gaps in the workforce needed for a particular industry. Natural disasters, war, and outbreaks of disease may decimate a particular region, and a slow recovery could potentially span generations. Ideally, for this outcome groups of students would be tasked with analysing one selected region, thereby contributing to a collective class study project of regions around the world. This outcome can also create a springboard for the culminating outcome which calls for an active citizenship plan related to a development issue.

Students may, for example,

- using one cultural or geographic region, create a visual organizer such as a T-Chart to collect and organize data related to current and/or future opportunities and challenges within the region. Opportunities and challenges may be of an economic, social, political, or cultural nature, or a combination of these. List as many as possible to understand the interconnectedness and complexities of the region (see appendix B, "Visual Organizers").

Region X

Opportunities	Challenges
strong work force	political instability
abundant fish	invasive species of bacteria attacking fish stocks
minerals	hazardous terrain to access requires expensive technology
eco-tourism	weak infra-structure to support increase in population

- write a summary statement related to how globalization is creating opportunities and/or challenges for the selected region.

GCO 3: Analyse patterns of interdependence between humans and their environments.

Suggestions for Learning and Assessing

Students may, for example,

Paper and Pencil

- imagine that they are part of a team of geographic experts whose task it is to study a particular region with its realated challenges and opportunities, and to write a summary report that explains their findings. A final task will include selecting what the team feels to be the most outstanding challenge and opportunity for the region.

Presentation

- conduct a quick study (review) of opportunities and challenges that are part of the Atlantic Canadian landscape—expand this model to another selected region of the world. Create a graphic or other model to illustrate both opportunities and challenges for the region and conclude the study with a prediction for the future of the region.

- create a concept map to illustrate the opportunities and challenges in a selected region. The concept map should depict possible consequences of certain "opportunities" (e.g., heavy equipment/environmental damage). See appendix B 1-10, Visual Organizers.

- select one opportunity and one challenge for a selected region and create a mini-presentation (multimedia or other) to share with the class. Include any issues that might arise out of these opportunities and challenges.

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

World Studies: Latin America (Prentice-Hall)

World Studies: Africa (Prentice-Hall)

World Studies: The United States and Canada (Prentice-Hall)

World Studies: Asia and the Pacific (Prentice-Hall)

World Studies: Europe and Russsia (Prentice-Hall)

Web Links
http://www.mcmaster.ca/cll/inquiry/good.inquiry.question.htm

GCO 3: Analyse patterns of interdependence between humans and their environments.

Outcomes

Students will be expected to

3.6 engage in an active citizenship initiative as part of a group or class

Active citizenship is a way of developing abilities and dispositions that are needed to effectively engage democratic citizenship, and are also of broader use. Projects teach students to carefully analyse complex problems, formulate thoughtful strategies, question assumptions, and only then to act responsibly on their beliefs.

Case, R., Falk, C., Smith, N., & Werner, W. (2004) *Active Citizenship: Student Action Projects,* Vancouver: The Critical Thinking Consortium (TC2), p. 87.

Elaborations - Suggestions for Learning and Teaching

Active citizenship will not be a new concept for students. They will likely have been involved in classroom, school, church, or community projects either locally or globally. Students may have participated in a fund-raising event for a local cause, or they may have designed posters to raise awareness about an issue in another country. Active citizenship does not require special skills or materials. However, it does require empathy and understanding of an issue. The overall goal of active citizenship is for students to realize that their voices and actions can lead to change in many situations. Being informed and focussed on an issue is the starting point for active citizenship.

This outcome will be addressed most effectively by introducing the concept of active citizenship to students early in the course, and discussing current issues as the course progresses. As students learn more about various regions and countries around the world, they will become more aware of challenges and difficulties faced by people living in those areas. Students are asked to focus on the process of planning and implementing action more than on the final results of an action. This way, students will develop critical- and creative-thinking skills and organizational tools that will apply to many situations.

Students may focus their active citizenship project on either an environmental issue such as climate change, or a social justice issue such as earthquake relief for victims in China. It is important that students become aware that change can be initiated at many levels and in many ways to address an issue. Teachers should guide students through the process of selecting an issue that is of interest to them and determining what is needed to plan for action in a particular case. An effective way to begin is to lead a class discussion on types of active citizenship that illustrate both direct and indirect action, such as in the samples below.

Direct Action	Indirect Action
Students themselves try to directly change some state of affairs. *(Active Citizenship: Student Action Projects)*	Seeks to influence or support others who are in a position to effect the desired change. *(Active Citizenship: Student Action Projects)*
Local--Participating in a community clean-up effort	Local—Lobbying government officials to change legislation regarding preservation of local green areas
Global--Raising funds to buy life-saving mosquito nets for a community in Kenya	Global—Co-ordinating and carrying out a public awareness campaign in your school about HIV AIDS in Guyana

GCO 3: Analyse patterns of interdependence between humans and their environments.

Suggestions for Learning and Assessing

Assessment for the active citizenship outcome will focus on both the process that students follow and the final product that results from their action plan. Assessment and evaluation of this project should be discussed with students early in the planning stages so they are aware of their responsibilities and deadlines along the way. If the project is going to involve working in groups or pairs, then teachers must determine how to assign credit for work and ensure that students are aware of the assessment scheme. Several considerations must be taken into account, such as the following:

- How will students be assigned to groups?
- How will students be assigned to roles and responsibilities?
- Will the project be passed in or presented in class?
- What options will be available for format of final product?
- How much class time will be available to work on this project?
- What are the checkpoints or milestones along the way?
- What tools will be used to assess/evaluate project progress and product?

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

World Studies: Latin America (Prentice-Hall)

World Studies: Africa (Prentice-Hall)

World Studies: The United States and Canada (Prentice-Hall)

World Studies: Asia and the Pacific (Prentice-Hall)

World Studies: Europe and Russsia (Prentice-Hall)

Supplementary Resources

Case, R., Falk, C., Smith, N., & Werner, W. (2004) *Active Citizenship: Student Action Projects,* Vancouver: The Critical Thinking Consortium (TC2)

GCO 3: Analyse patterns of interdependence between humans and their environments.

Outcomes

Students will be expected to

3.6 engage in an active citizenship initiative as part of a group or class

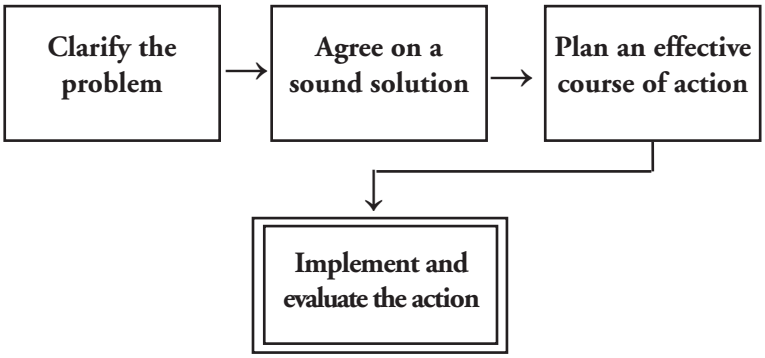
Critical thinking involves thinking through problematic situations about what to believe or how to act where the thinker makes reasoned judgments that embody the qualities of a competent thinker.

Case, R., Falk, C., Smith, N., & Werner, W. (2004) *Active Citizenship: Student Action Projects,* Vancouver: The Critical Thinking Consortium (TC2), p. 90.

Elaborations - Suggestions for Learning and Teaching

Planning is essential in managing an active citizenship project. It involves much more than simply identifying a problem or an issue that is of interest to students. Students need time to explore different options and to decide on a strategy that will respond to the issue in a positive way. They will also need to identify the tasks that will be required to ensure progress with their action plan.

A sample set of steps may be as follows



Adapted from *Active Citizenship: Student Action Projects,* TC2

Students should also review the basic rules for collaborative work and consensus reaching before they set to work in groups on the project. This may be done by creating a list of group rules or norms that may include some or all of the following:

- demonstrating respect for others' points of view
- listening attentively to others
- taking turns during discussion
- being an active contributor to the discussions
- thinking creatively to find alternate solutions if needed
- agreeing to compromise if it helps the group reach its goals

Adapted from *Active Citizenship: Student Action Projects.* TC2

GCO 3: Analyse patterns of interdependence between humans and their environments.

Suggestions for Learning and Assessing

Rubrics and other instruments will help to make assessment easier and more effective as the project progresses. Assessment rubrics may be teacher-made, student-made, or modified from existing rubrics. Rubrics may be created or adapted to focus on self-assessment, peer-assessment, or teacher-assessment of group work, planning, tasks, and final products. Teachers are encouraged to custom create rubrics with their students, when possible, so that they clearly understand their responsibilities and gain the most benefit from the assessment.

In schools where exams are mandatory in all subject areas, teachers may create effective exam questions based upon the active citizenship project, its purpose, and problem-solving processes. For example, students may be asked to write a reflective essay response about their participation in and their contribution to the active citizenship project.

Resources and Links

World Studies: Foundations of Geography (Prentice Hall)

World Studies: Latin America (Prentice-Hall)

World Studies: Africa (Prentice-Hall)

World Studies: The United States and Canada (Prentice-Hall)

World Studies: Asia and the Pacific (Prentice-Hall)

World Studies: Europe and Russsia (Prentice-Hall)

Blackline Masters
#13 - Assessing clarity of the problem, p. 50.
#19 - Assessing soundness of the solution, p. 56.
#22 - Assessing effectiveness of planning, p. 59.
#24 - Assessing implementation of project, p. 61.
#26 - Assessing individual contributions, p. 65
#27 - Assessing student assessments, p. 67.

Supplementary Resources

Case, R., Falk, C., Smith, N., & Werner, W. (2004) *Active Citizenship: Student Action Projects,* Vancouver: The Critical Thinking Consortium (TC2).

Kielburger, M., Kielburger, C., & Shankaran, D. (2004). *Take More Action*, Toronto. Thompson Nelson.

Appendices

Appendix A

Teaching Strategies

A-1 Think-Pair-Share
A-2 Jigsaw
A-3 Place mat

Think-Pair-Share

Purpose

This strategy allows time for students to think and discuss ideas before having to share publicly. It is important for teachers to allow enough "think" time for students to come up with thoughts and ideas that are relevant and insightful. This strategy works well for inquiry type questions that require critical- and creative-thinking as well as questions regarding controversial subjects that may have may have many varied responses.

Method

Teacher poses a question such as "What jobs or careers are geography-related?" and asks students to pair up for a few minutes in order to brainstorm ideas and discuss briefly. Pairs will then be asked to share with the rest of the class to compare ideas and add to the class collection of ideas.

Variations

Think-Pair-Square

Students pair up to discuss ideas but then instead of sharing with the entire class, each pair links up with another pair to create a "square" for sharing.

Sketch-Pair-Write-Pair-Share

This variation may be used to ask students to explore concepts that require a more visual means of expressing ideas, such as describing a sequence of events such as land formation or as a planning tool for a concept or mind map.

Jigsaw

Purpose

This strategy provides an efficient way to cover several concept areas in a certain amount of time by making each student responsible for becoming an "expert" in one particular area and then accountable by sharing with his or her "home" group so that the entire group can collect the "expertise" and form a collective understanding of new material.

Method

Students are divided into groups, usually four to five per group, depending upon the number of concepts to be presented. Explain to students that each will become an "expert" in one particular area and then must return to his or her home group to "teach" the concept or new information to his or her group mates. The home group is then responsible for organizing the collected information into a cohesive piece of information to be shared. Time allowed depends on the complexity of the information and the make-up of the class.

In the case of learning new material about major cultural regions of the world, for example. Students will divide into groups aligned to the selected cultural regions.

Example - Major Cultural Regions

Class of 30 students = 6 "home" groups of 5 students: ABCDE
5 "expert" groups of 6 students (in this case, teachers may wish to break up larger groups into 2 smaller groups of 3 each studying the same material)

AAA group x 2 = United States and Canada
BBB group x 2 = Latin America / Southeast Asia
CCC group x 2 = Europe / Russia
DDD group x 2 = North Africa / East Asia
EEE group x 2 = Australia / South Asia

Place mat

Purpose

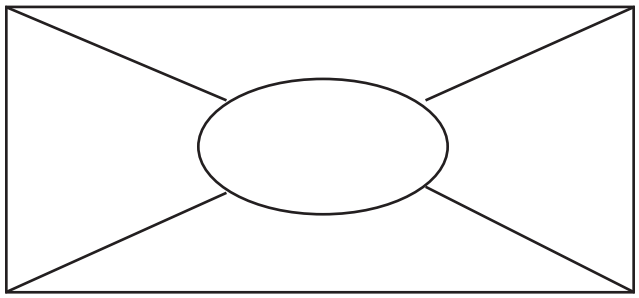
This teaching strategy encourages small group discussion while maintaining individual accountability. Similar to a Think-Pair-Share strategy in the sharing of ideas, the place mat strategy goes a step beyond in having students write down ideas and then critically analyse these in order to select the most appropriate ones to form the group's response. Groups can then share their responses with other groups within the classroom.

Method

Students are divided into groups of four at a table and provided with a "place mat" organizer (see below). Given a particular task such as selecting criteria used to determine cultural regions, each student in the group of four jots his or her ideas within the 1/4 space allotted. When time is up (at the discretion of the teacher), students discuss the group's collective ideas and select the best ones to be recorded in the centre circle of the place mat. Structured comparisons with other groups may ensue, or a whole-class discussion.

Student A

Student D



Student B

Student C

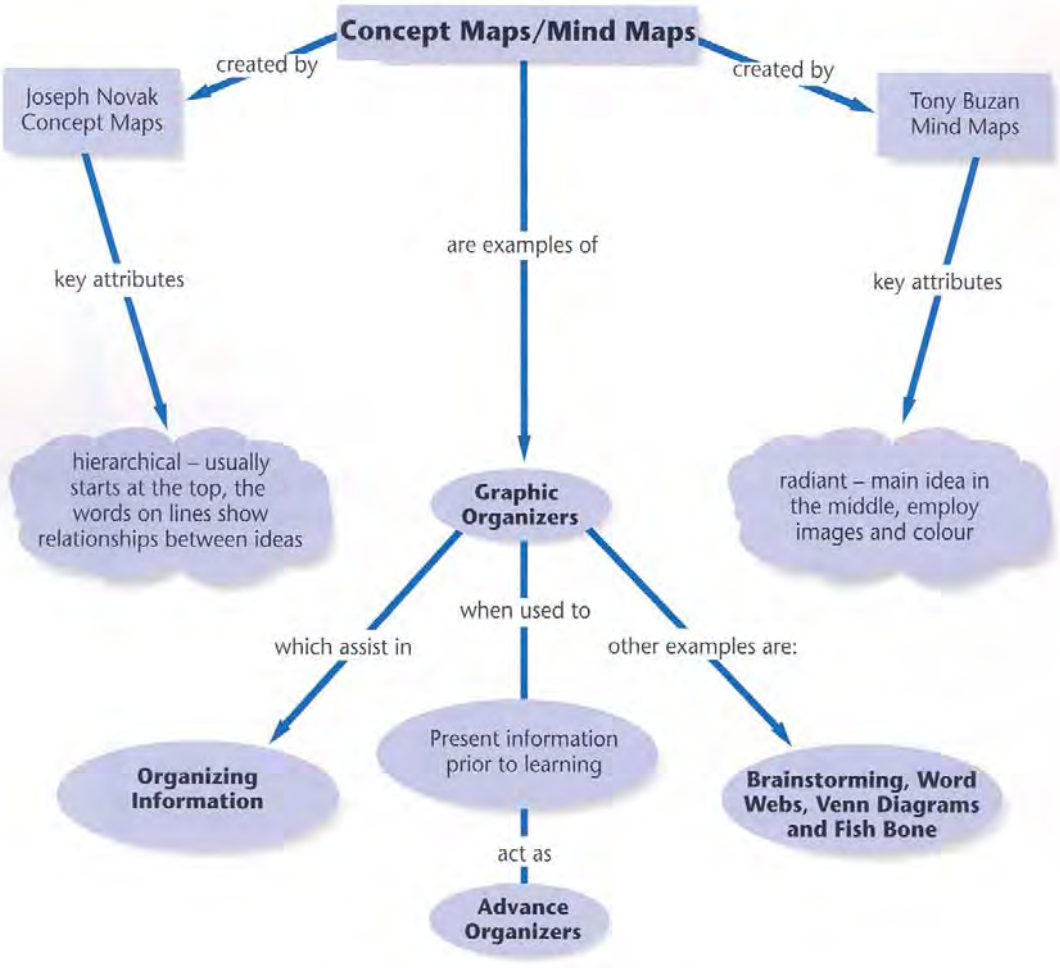
Appendix B

Visual Organizers

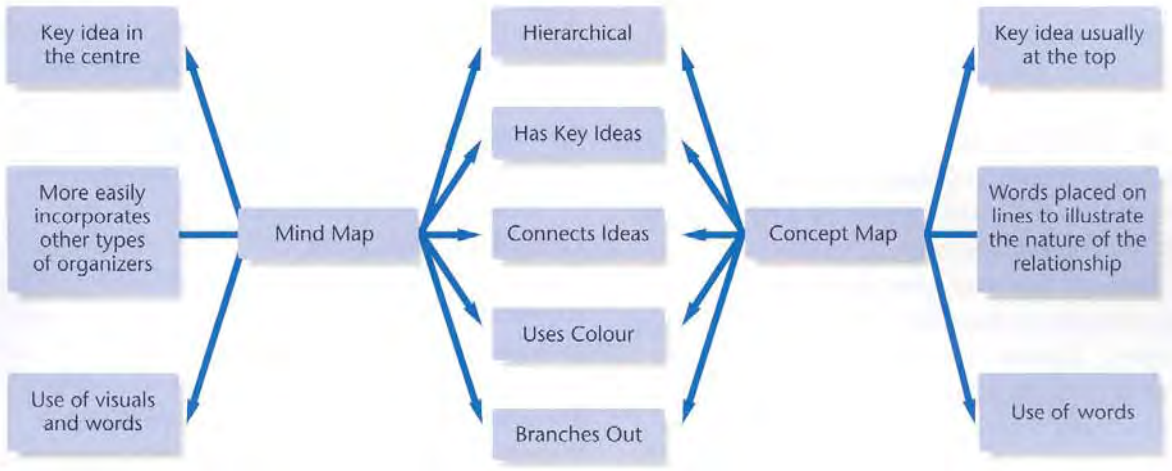
N.B.
Visual organizers (B-1 to B-10) in appendix B are used with permission from the following instructional resource: Bennett, B., & Rolheiser, C (2001). *Beyond Monet: The Artful Science of Instructional Integration*. Toronto: Bookation Inc. Check your school library or the professional development section of your school for the complete resource.

Chapter Ten

Complex Organizers: Mind Mapping and Concept Mapping



Mind Maps and Concept Maps: Similarities and Differences



On the following three pages are two lessons that incorporate one of each of these processes. You do not see the product; rather you see how the process is woven into the lesson.

Reproduced with permission of author

An Explanation of Mind Mapping

We strongly recommend Tony Buzan's (1993) book, *The Mind Map Book: Radiant Thinking*. It is an excellent and colourful resource for taking you deeper into the Mind Mapping process. It also provides numerous examples of Mind Maps. Buzan makes connections to the literature related to brain research and learning. He sees Mind Mapping as a natural function of the human brain.

Another useful book is Nancy Margulies' (1991) book, *Mapping Inner Space*. This book illustrates practical ways to get started. The ideas provided in both are essential - Buzan's book provides an in-depth explanation of the process while Marguiles' book provides a useful introduction regarding how to start.

Mind Mapping is an analytical process that involves creatively integrating a combination of visuals, colour, codes, words, and connectors. It can be employed as a method to take notes, to study before an exam, to brainstorm, or make connections between ideas. It can be extended with little effort to be an alternative way of applying Hilda Taba's Inductive Thinking model of teaching (see Chapter 9). Additionally, several high-school English teachers have students employ Mind Maps to collect and portray their arguments when involved in Academic Controversy (explained in Chapter 11).

Buzan states that Mind Maps have four essential characteristics and several non-essential characteristics. We would argue that colour is also a critical attribute rather than non-essential. Our rationale is the mind processes and is intrigued by colour.

ESSENTIAL:

1. a central image that represents the subject being mapped
2. main themes that radiate like branches from that central image
3. those branches have a key image or key word printed on an associated line
4. the branches have a connected structure

NON-ESSENTIAL:

1. colour
2. codes

RATIONALE: Mind Maps enhance the brain's capacity to store and recall information.

Because it uses visuals and colours, it provides a novel and interesting way to make sense of something the student is learning. It can be a motivating way for students to summarize a unit on a Friday afternoon when things are dragging and a bit of a "pick-me-up" is required. One enjoyable example of integration is to weave the Johnsons' Cooperative Learning process (explained in Chapter 7) with Buzan's Mind Mapping process to have a small group create a Mind Map. The lesson on heroes later in this chapter illustrates this integration.

Also, students can employ Cooperative Learning structures such as Gallery Tour and Three-Step-Interview to explain the major messages in their Mind Map.

Steps in Creating a Basic Mind Map

MATERIALS: Each student or group of students will need a sheet of paper and coloured pens or crayons. The size of paper will depend on the topic, the time, the amount students know, and what you are going to do with the Mind Maps. You can also have students cut and paste pictures from magazines instead of (or along with) their drawings.

SIZE: If the Mind Map is to be a poster for sharing, the size will be different than if it is to serve as notes and placed in a binder for review before a test. We saw a Mind Map that took up the complete wall of the classroom and evolved over the year—it served as an ongoing summary of the students' learning in a middle-school English class.

The following steps are only suggestions; feel free to add, adapt, or extend to make it responsive to your students' needs. Remember that when you do this with a partner, you are attending to five of the eight intelligences identified by Howard Gardner, as well as the brain's propensity for creating patterns and its need for talk.

1. **Select a topic** (for example "the heart" or "factoring" or "poetry" or "democracy").
   - Think of a visual that captures the essence of that topic and place that visual in the centre of the paper using colours that will assist you to remember that idea. For example, in a kindergarten class, the students did a Mind Map of the story "The Billy Goats Gruff." They put a picture of the bridge in the middle.

Steps in Creating a Basic Mind Map:

2. **Brainstorm for the key ideas related to that topic.**
   - Record all the ideas that come to you - this can be personal or group brainstorming. Now you can simply pick out the most important ideas that will branch out first or you can group those ideas into common categories – give each of those categories a label and then those become the first key ideas.
   - Draw a picture or symbol that represents each of the key ideas you brainstormed. Then position those visuals that make sense to you around the outside of the visual you placed in the centre of the map. Put in the key word and then connect the key words to the centre topic with a line or bubbles.
   - Flow with ideas radiating out from each of those key ideas; again, think of visuals that capture the essence of that idea and place them in a way that makes sense to you. Then, place the word by the visual. Again, connect with lines.
   - Continue until you have exhausted the topic, the space, the time, or your patience.
3. **Reflect with a partner or with small groups or with the class —perhaps a Three-Step-Interview or Gallery Tour.**
   - In your mind or with a partner, talk through the journey you took to conceptualize the key ideas related to the topic. Explore the relationships between different aspects of the map.

Beyond Monet / Barrie Bennett / Carol Rolheiser

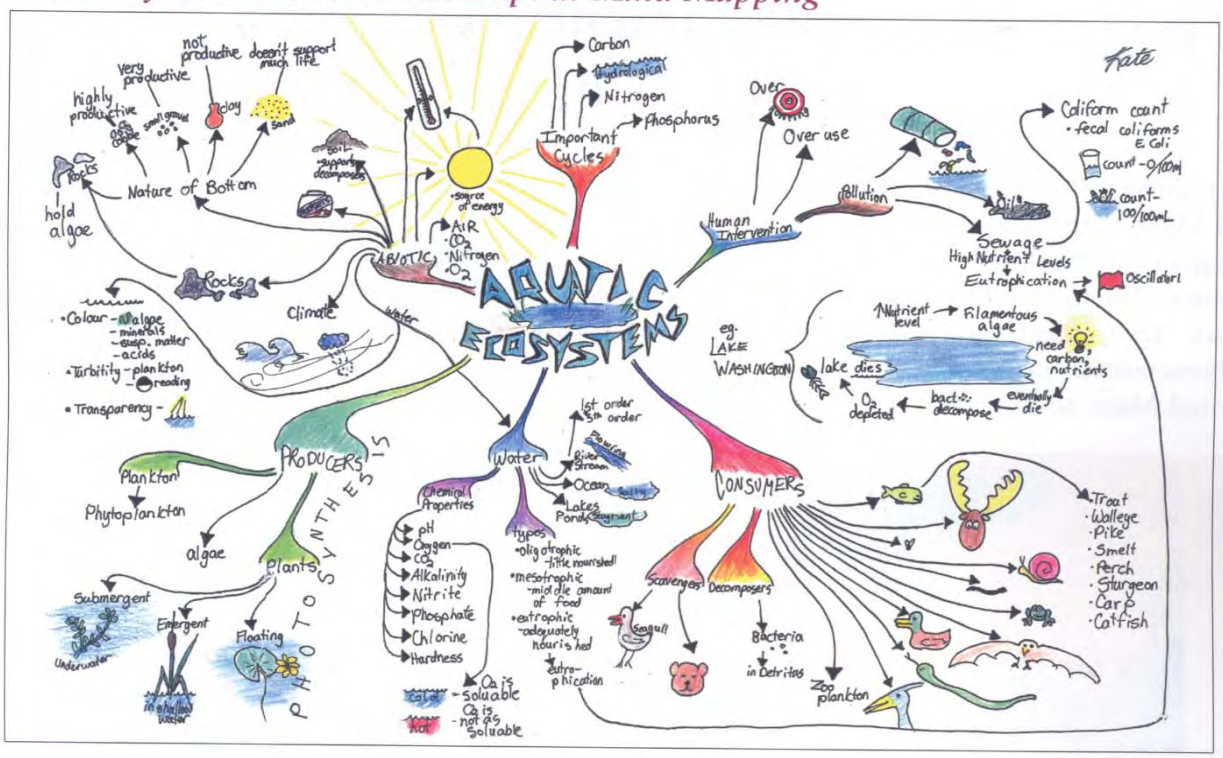
Sample Rubric for Evaluating a Mind Map

Rubric for Mind Map Performance Levels

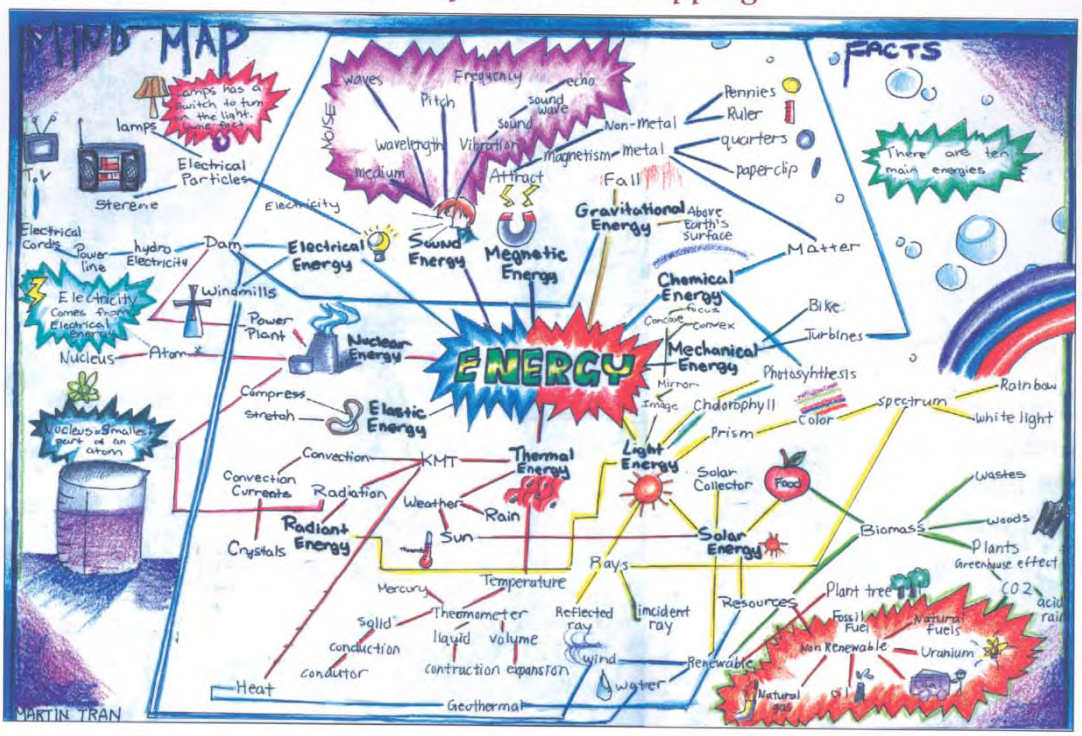
CRITERIA	PERFORMANCE INDICATORS (Observable descriptors indicating extent to which a criterion is met.)			
	Level1	Level 2	Level 3	Level 4
Central Image	Not clear; difficult to separate from other information	Present; not eye catching or memorable	Clear; use of picture or image that relates to key idea	Stands out; meaningfully grasps the key idea through metaphor or humour
Ideas radiate out from central image and from most to least complex	Little to no indication that ideas are connected to and radiating out from centre, from most to least complex	Ideas radiate out from centre, some confusion as you follow ideas moving from most to least complex	Ideas clearly connect to central image and ideas, and for the most part move from most to least complex	Ideas clearly connect to central image and ideas consistently and accurately shift from most to least complex
Ideas have key images or key words	Little to no evidence of key images. May have a few keywords or vice-versa	Images and keywords are evident, but either too few or imprecise	Images and key words clearly show an understanding of the content, although not that memorable	Dynamic use of images and keywords. They clearly connect to central image. See use of metaphor, humour, cut-outs from magazines, clipart, etc.
Colour or codes or links used to illustrate connections between ideas	Little to no use of colour, codes, or links to illustrate connections between ideas	Obvious attempt is made to use colour, codes or links to enhance clarity and memory. Still a bit confusing.	Clearly uses colour, codes, or links to clarify connections and to assist with memory for most aspects of Mind Map	Effectively uses colour, codes, or links to meaningfully clarify connections for all aspects of Mind Map
Depth of coverage	Insufficient coverage of content covered	Shows a basic level of coverage of key ideas but little extension of ideas	Shows a solid grasp of most of the content and shows extensions of most key ideas	Shows a solid grasp of all the content covered. Extensions of the key ideas show a deep understanding of that content

Note: this is one teacher's suggestion for evaluation – please feel free to design your own or adapt this one.

university student's second attempt at Mind Mapping



grade eight student's second attempt at Mind Mapping



An Explanation of Concept Mapping

Although we provide you with an introduction to Concept Mapping, as stated previously, we recommend that you read Novak's and Gowan's (1984) book, *Learning How to Learn.* As well, you may want to read articles related to Concept Mapping to assist you in taking the process deeper. Chapter Two in the book *Probing for Understanding* by Richard White and Richard Gunstone (1992) provides a useful and detailed explanation of the process with a number of student examples of Concept Maps.

EXPLANATION: A Concept Map is a visual representation that illustrates how one understands relationships between concepts. Those concepts could be any combination of things, people, ideas, arguments, solutions, places, etc. Concept mapping serves to move the learner from simply recalling facts to making the linkages or relationships between those facts. It encourages more complex and meaningful thinking. Below are the essential characteristics of a Concept Map.

ESSENTIAL:

1. Start with a major term or idea from which the next term or idea extends either in a hierarchical or radiating format — Concept Maps usually start at the top.
2. Shift is from a more complex to less complex idea or major idea to minor idea. It often ends with an example.
2. Connecting line is drawn between concepts.
3. Linking words are placed on the lines stating the relationship between concepts
4. Cross links between one segment of the concept hierarchy or classification and another

NON-ESSENTIAL:

1. Colour to clarify segment areas or ideas that relate. This is useful when the use of connecting lines makes it confusing to follow the relationships.
2. Examples of the concept being presented. This adds meaning, communicates that the student understands the concept and aids in retention of the information.

Who can use Concept Maps? Like Mind Maps, Concept Maps can be used by students of all ages (kindergarten to adult learners – although younger students will need more help). For more in-depth information on younger students, see Stice (1987). This educator examined the potential of using Concept Maps with kindergarten to grade five students. With older students, teachers often employ Concept Maps as alternatives to essays or as organizers for essays.

Like Mind Maps, Concept Maps (often called semantic maps) increase students' abilities to organize and represent their thoughts. Initially, Concept Mapping was associated primarily with metacognition and science. More recently, it has been applied to reading comprehension as it helps the learner activate and retrieve prior knowledge. In one of our doctoral classes (a research colloquium on current brain research) large concept maps were created to facilitate the synthesis of each book and to find connections and patterns between books.

Jeni Wilson (1987) in her article on Concept Mapping, argues that although Concept Maps are personal, peer discussion is extremely worthwhile for assisting students to verify, clarify, and extend their graphic representation.

Beyond Monet / Barrie Bennett / Carol Rolheiser

Steps in Creating a Basic Concept Map

The steps are similar to those of Mind Mapping. Before we describe the steps, we will review the four major differences between Mind Maps and Concept Maps.

First, Concept Maps usually start at the top, but can begin at the bottom or sides or in the centre; whereas Mind Maps begin in the middle and radiate out.

Second, Concept Maps employ words on the lines between concepts to illustrate the link between those concepts. Mind Maps usually do not.

Third, Concept Maps seldom employ colour; Minds Map usually employ colour.

Fourth, Concept Maps seldom employ visuals; Minds Maps employ visuals.
You can see that these two processes can be easily integrated.

MATERIALS: Each student or group of students will need a sheet of paper and coloured pens or crayons. The size of paper will depend on the topic, the time, the amount you know, and what you are going to do with it.

SIZE: If the Concept Map is to be a poster to be shared, the size will be different than if it is to serve as notes and placed in a binder for a review before a test.

The following steps are only suggestions, feel free to add, adapt, or extend to make Concept Mapping responsive to the students' needs. Remember that when you do this with a partner, you are attending to five of the eight intelligences identified by Howard Gardner, as well as the brain's propensity for creating patterns and its need for talk.

Steps in Creating a Concept Map:

1. Brainstorm (individually or in a group) the key ideas. So if you are studying energy, you might introduce the unit by creating a class Concept Map of the students' current understanding of energy. The result might be items such as: solar energy, nuclear energy, electrical energy, nuclear waste, global warming, sun, solar heating, gas, oil, pollution, fossil fuel, etc.
2. Students put the ideas onto cards or post–it notes. (Students enjoy manipulating the data.) Once the ideas are on cards, they can begin to sort and classify these cards, looking for relationships between ideas. If working alone, they can work for a few minutes, and then do a Walk-About to see how others are sorting the cards.
3. The students can now paste or transfer the ideas onto a piece of paper. They then draw lines between the concepts and place words on the lines that illustrate their thinking about the relationships between the concepts. They will have to decide whether they want to create a hierarchical Concept Map or a more radiant Concept Map (similar to Mind Mapping).
4. Students also look for cross links between different concepts.

Sample Rubric for Evaluating a Concept Map

Performance Levels

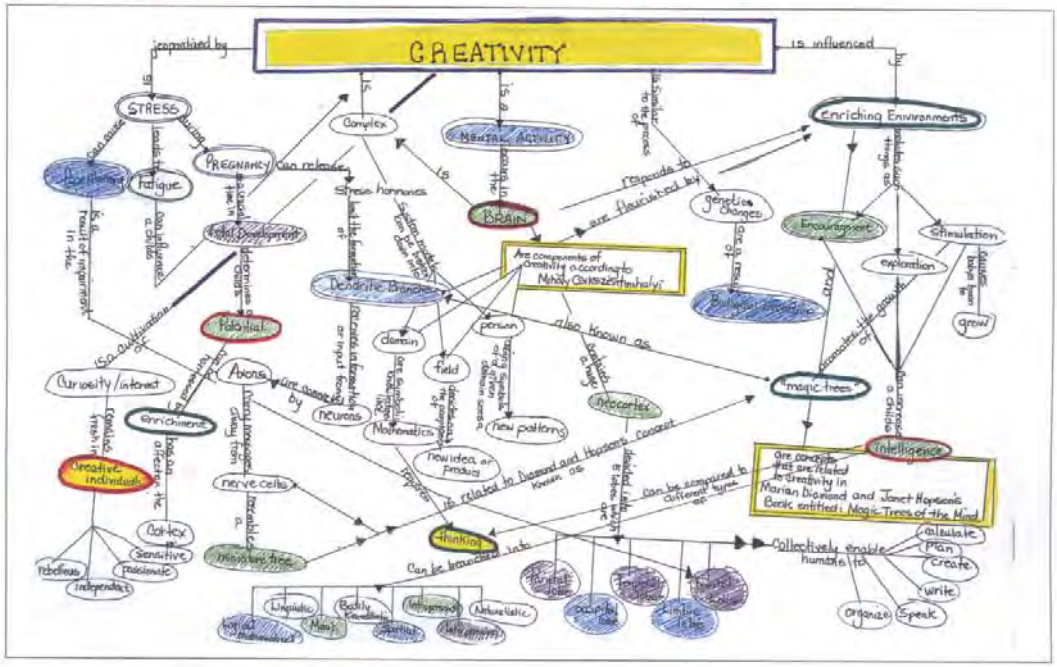
Performance Indicators	Level 1	Level 2	Level 3	Level 4
Concepts	• Insufficient number of concepts selected relating to topic • Arrangement of concepts illustrates no understanding of conceptual relationships	• Minimal but acceptable number of concepts selected, with some relationships to the topic • Arrangement of concepts demonstrates simple understanding of subordinate conceptual relationships	• Most concepts relating to topic were selected • Arrangement of concepts demonstrates an understanding of subordinate conceptual relationships	• Most concepts and all significant concepts selected and they clearly relate to the topic • Arrangement of concepts demonstrates complete understanding of subordinate conceptual relationships
Hierarchical Structure	• Concepts are displayed in a linear sequence. Little or no sense of hierarchical structure	• Limited hierarchical structure used	• Concepts connected in a hierarchical structure	• Concepts connected in a hierarchical structure leading to more specific concepts
Linkages	• Some basic relationships indicated by connected lines • Linking words are simple and repetitive	• Straightforward relationships connected with linking words • Linking words show variety	• Most relationships indicated with a connecting line and labeled with linking words • Linking words are accurate and varied	• All relationships indicated by a connecting line and accurately labeled with appropriate linking words • Linking words are expressive and purposeful
Cross Links	• Cross links not used	• Few cross links are used to illustrate minimal connections	• Cross links used to reflect straightforward connections	• Cross links show complex relationships between two or more distinct segments of the concept map

Designed by: Shirley Smith, Bev Elaschuk

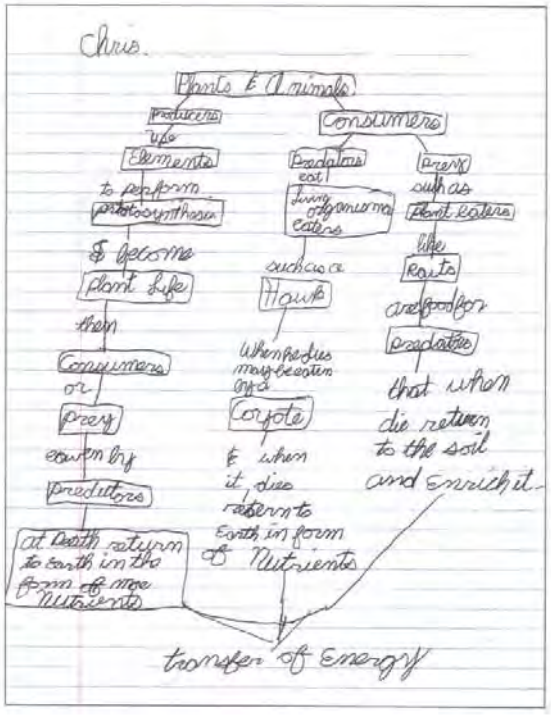
Feel free to adapt this rubric or create your own.

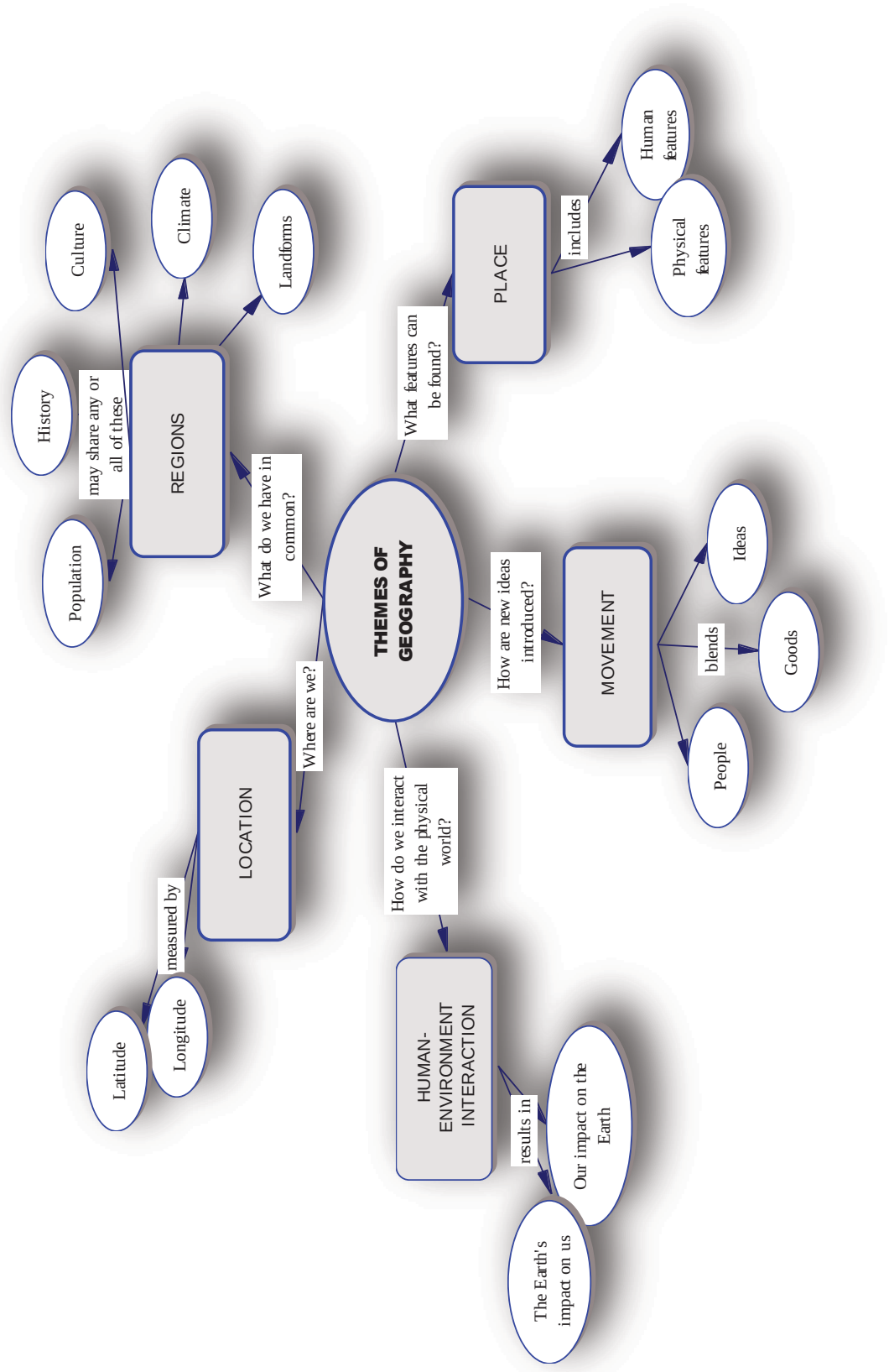
Concept Maps

university student's first attempt at a Concept Map



grade four's first attempt at a Concept Map




THEMES OF GEOGRAPHY
What do we have in common?
REGIONS
may share any or all of these
History
Culture
Climate
Landforms
Population
Where are we?
LOCATION
measured by
Latitude
Longitude
What features can be found?
PLACE
includes
Human features
Physical features
How are new ideas introduced?
MOVEMENT
Ideas
blends
Goods
People
How do we interact with the physical world?
HUMAN-ENVIRONMENT INTERACTION
results in
Our impact on the Earth
The Earth's impact on us

T-Chart

Purpose
This organizer is used to examine or compare dual sides of an issue or two aspects of a concept, such as similarities and differences.

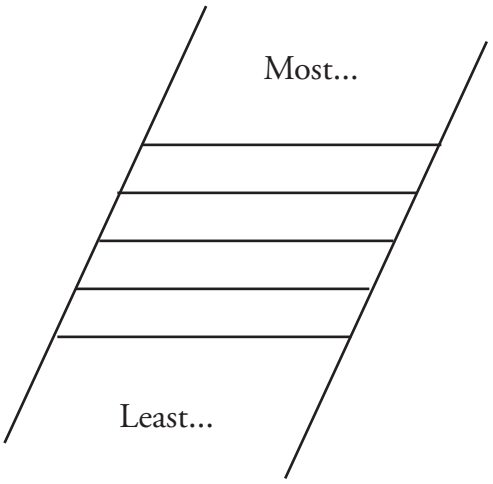
Pros	Cons

Similarities	Differences

Factors Contributing to Climate and Climate Change	
Physical Factors	*Human-Made Factors*
Surrounding waters	Carbon emissions

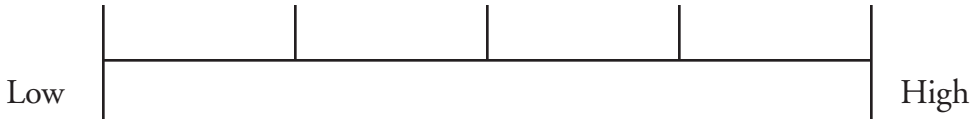
Ranking Ladder

Purpose
This organizer provides a means of ranking ideas or concepts according to given criteria: importance, relevance, probability, significance, or other.



Continuum

Purpose
Similar to the ranking ladder, this organizer can be used in a variety of ways. It is useful in creating time lines, sequences, rating scales, or opinion scales. It is important to consider the criteria that will form the ends of the line.



Developing and Developed Countries

KWL

Purpose
Use the KWL chart as a pre-lesson activity or as a diagnostic tool to determine the level of knowledge of a particular topic or concept. Students jot notes as to what they already KNOW, what they WANT to know, and later—what they have LEARNED about a particular area.

K	W	L

Appendix C

Reading Strategies

Sample Anticipation Guide

Respond to each statement twice — once before reading the text and again after reading it. To respond write "Agree" or "Disagree" in the space provided.
(*World Studies: Foundations of Geography,* pp. 74-75).

Economies

Response before reading		Response after reading
_____	An economy is a system that exchanges cash only for goods.	_____
_____	Canada has the same kind of economy as the United States.	_____
_____	If governments tun farms, factories, and other businesses, it is a communist economy.	_____
_____	If you are a consumer, it means that you produce goods.	_____
_____	It is possible to have a mixed economic system.	_____

Note:

- A strong anticipation guide statement is one with which some students agree and some disagree.
- Use two to four statements. Any more than that and you risk losing your audience.
- An anticipation guide helps struggling readers by establishing a PURPOSE for the reading. Now they have something specific to look for while they read. Giving weak readers the questions only after the text has been read is too late. They're unlikely to reread in search of answers.

Adapted from Council of Atlantic Ministers of Education and Training (CAMET). (2006). *Cross-curricular reading tools.*

Sample Vocabulary Exercise

Understanding Culture

From the NEW to the KNOWN...

This word is totally new to me.	I've seen or heard this word but I'm not sure what it means.	I know one definition or could use this word in a sentence.	I know several ways this word could be used.

Word list

institution cultural landscape civilization culture

Procedure

- Either individually or in groups, students slot words into the graphic organizer.
- Students hold brief class discussion to establish which words create the most confusion.
- Students read the relevant text (see *World Studies: Foundations of Geography,* pp. 92-95).
- Ask students to consider the context where the words appear.
- If you really want to help, **TEACH** them how to use context clues.

Adaped from Janet Allen. (1999). *Words, words, words*. (York, Maine: Stenhouse.)

Sample Text Reformulation Exercise

What is it?
- An after-reading strategy in which students turn one type of text into another type of text.

How does it work?
- Students change expository text into narrative, newspaper articles into poetry, case studies into story boards or news articles, and so on.

Why use it?
- Encourages students to reread the text for main ideas, themes, cause-and-effect relationships, and character motivation; and to think critically without becoming overwhelmed by the text.
- Provides a valid alternative to the overused read-and-answer-questions strategy.

Suggestions
- Model the strategy!
- Consider a variety of reformulation options. The book *When Kids Can't Read*, by Kylene Beers, available in your school library, lists and explains a number of them (pp. 159-165).
- Allow students to choose the type of reformulation.
- Include text reformulation in group work, even as a bonus.

Examples of a limerick and a haiku using "physical forces" as a context:

Grand Canyon

There once was a canyon called "Grand",
Where water eats away at the sand.
For years it's been munching,
Grinding, wearing, and crunching,
Til a deep trench remains of the land.

Limerick Rules
lines 1, 2, and 5 must rhyme
lines 3 and 4 are short and rhyme
sing-songy rhythm

Magma

Magma and movement
Creating volcanic mass
Welcome the Andes!

Haiku Rules
line 1 is 5 syllables
line 2 is 7 syllables
line 3 is 5 syllables

Adapted from Kylene Beers. (2003). *When Kids Can't Read.* (Portsmouth, NH: Heinemann.)