THE FIVE SETS OF GEOGRAPHIC SKILLS BY GRADE LEVEL

The geographic skills that all students need to develop are organized by benchmark year (by the end of the fifth, eighth and twelfth grades).

	K-5 (by the end of grade 5)	6-8 (by the end of grade 8)	9-12 (by the end of grade 12)
1 Asking geographic questions	1. Ask geographic questions – Where is it located? • What is significant about its location? • How is its location related to the locations of other people, places and environments? 2. Distinguish between geographic and non-geographic questions.	1. Identify geographic issues, define geographic problems and pose geographic questions. 2. Plan how to answer geographic questions.	1. Plan and organize a geographic research project (e.g. specify a problem, pose a research question or hypothesis and identify data sources)
2 Acquiring geographic information	1. Locate, gather and process information from a variety of primary and secondary sources including maps. 2. Make and record observations about the physical and human characteristics of places.	1. Use a variety of research skills to locate and collect geographic data. 2. Use maps to collect and/or compile geographic information. 3. Systematically observe the physical and human characteristics of places on the basis of fieldwork.	1. Systematically locate and gather geographic information from a variety of primary and secondary sources. 2. Systematically assess the value and use of geographic information.
3 Organizing geographic information	1. Prepare maps to display geographic information. 2. Construct graphs, tables and diagrams to display geographic information.	1. Prepare various forms of maps as a means of organizing geographic information. 2. Prepare various forms of graphs to organize and display geographic information. 3. Prepare various forms of diagrams, tables and charts to organize and display geographic information. 4. Integrate various types of materials to organize geographic information.	1. Select and design appropriate forms of maps to organize geographic information. 2. Select and design appropriate forms of graphs, diagrams, tables and charts to organize geographic information. 3. Use a variety of media to develop and organize integrated summaries of geographic information.
4 Analyzing geographic information	1. Use maps to observe and interpret geographic relationships. 2. Use tables and graphs to observe and interpret geographic trends and relationships. 3. Use texts, photographs and documents to observe and interpret geographic trends and relationships. 4. Use simple mathematics to analyze geographic data.	1. Interpret information obtained from maps, aerial photographs, satellite-produced images and geographic information systems. 2. Use statistics and other quantitative techniques to evaluate geographic information. 3. Interpret and synthesize information obtained from a variety of sources – graphs, charts, tables, diagrams, texts, photographs, documents and interviews.	1. Use quantitative methods of analysis to interpret geographic information. 2. Make inferences and draw conclusions from maps and other geographic representations. 3. Use the processes of analysis, synthesis, evaluation and explanation to interpret geographic information from a variety of sources.
5 Answering geographic questions	1. Present geographic information in the form of both oral and written reports accompanied by maps and graphics. 2. Use methods of geographic inquiry to acquire geographic information, draw conclusions and make generalizations. 3. Apply generalizations to solve geographic problems and make reasoned decisions.	1. Develop and present combinations of geographic information to answer geographic questions. 2. Make generalizations and assess their validity.	1. Formulate valid generalizations from the results of various kinds of geographic inquiry. 2. Evaluate the answers to geographic questions. 3. Apply geographic models, generalizations and theories to the analysis, interpretation and presentation of geographic information.

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Canadian National Standards for Geography

Scope and Sequence Chart

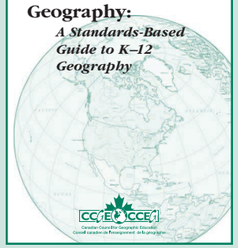
The Importance of Geography

An understanding of both physical and cultural geography is no longer an option for those who would successfully navigate twenty-first century society. Global, economic, cultural, and environmental forces increasingly shape our lives. What happens in one place affects other people and other cultures. If students are to leave school equipped to earn a decent living, enjoy the richness of life and participate responsibly in local, national and international affairs, they must learn to look at the world like geographers. A strong education in geography opens the door to an expanding array of interesting jobs and careers while enriching our lives by broadening our understanding of the world in which we live.

Using This Chart (see reverse)

The Standards Scope and Sequence Chart is extracted from ***Canadian National Standards for Geography***.* Voluntary national standards for the study of geography outline what students should know and be able to do in geography. They are organized into six "essential elements": (1) the world in spatial terms (location); (2) places and regions; (3) physical systems; (4) human systems; (5) environment and society; and (6) the uses of geography.

This chart illustrates critical content within the six elements as students progress from kindergarten to high school graduation. Teachers, parents and curriculum writers, using this tool, can now be "on the same page" as they seek to prepare our children to take their place in an ever shrinking world. We urge you to use this chart, to share it with friends and colleagues, and to reflect on the pressing need for a geographically literate society.



**** Canadian National Standards for Geography*** outlines what students should know and be able to do in geography, and is organized by the six "essential elements". This Standards-Based Guide contains broad learning objectives and sample learning activities. It provides explanations and activities that assist teachers, curriculum writers, parents and the general public to effectively integrate the geography standards into the school curriculum at all grade levels.

This guide is available online at the CCGE website www.ccge.org. A limited number of printed copies of this 80-page booklet are available from the CCGE office (39 McArthur Avenue, Ottawa K1L 8L7). Cost $8.00 plus GST.

The Six Essential Elements Of Geography

1 The World in Spatial Terms. Geography studies the spatial relationships among people, places and environments. Maps reveal the complex spatial interactions that touch the lives of all citizens.

2 Places and Regions. The identities and lives of individuals and peoples are rooted in particular places and regions, each of which has distinctive human and physical characteristics.

3 Physical Systems. Physical processes shape Earth's surface and interact with plant and animal life to create, sustain and modify the cultural and natural environment. Physical systems include such things as wind and ocean currents, plate tectonics, erosion, deposition and the water.

4 Human systems. Earth's surface is shaped by human activities. The spatial organization of society is a mosaic of population movements, settlement patterns, economic activity, transportation, communication and political organizations.

5 Environment and Society. The physical environment has been modified by human activities. In a traditional sense, early settlers cleared the land to plant crops and graze livestock. Today, air and water pollution and the management of solid waste and hazardous materials are a serious problem. The physical environment affects human activity as well. Soil types and water availability help to determine which crops will prosper. More dramatically, natural hazards (e.g., earthquakes, hurricanes and floods) have resulted in substantial loss of life and property.

6 The Uses of Geography. Understanding geography content and how to use the tools and technology available for geographic study prepares citizens for life in our modern society. Individuals, businesses and government entities use geography and maps of all kinds on a daily basis. Geography students have a wide choice of interesting and rewarding career opportunities.

Chart ⇨

SCOPE AND SEQUENCE IN GEOGRAPHIC EDUCATION: GRADES K-12

Canadian Council for Geographic Education
Conseil canadien de l'enseignement de la géographie

This matrix is based directly on the standards in *Canadian National Standards for Geography: A Standards-Based Guide to K-12 Geography.*

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⇩ Six Essential Elements of Geography / Grade Level Sequence ⇨	K - 1 PERSONAL / LOCAL Province, Canada, World	2 - 3 LOCAL / PROVINCE Canada / World	4 - 5 PROVINCE, CANADA World	6 - 8 CANADA, WORLD	9 - 12 WORLD Patterns, Issues, Problems, Interdependence
1 The World in Spatial Terms Geography studies the spatial relationships among people, places and environments. Maps reveal the complex spatial interactions that touch the lives of all citizens.	• Personal directions (e.g. left/right, up/down, front/back) • Location in the home or classroom • The globe as a model of Earth • Maps as representations of local and distant places • Location and names of places in school and the neighbourhood • Relative location (e.g. near/far, above/below) • Location of continents and oceans	• The globe as a model of Earth (hemispheres, poles, equator) • Map elements (title, scale, symbols, legend, grid, cardinal and intermediate directions) • Spatial elements of point, line and area • Relative and absolute locations • Location and distribution of physical and human features • Local and provincial maps and atlases • Major cities of the province	• Location of major human and physical features on Earth • Physical/political maps of the province, Canada and the world • Latitude, longitude, and the global grid • Time zones • Mental maps • Spatial graphics (e.g. air photos, satellite images, various map types and atlases) • Provinces and Territories of Canada • Major cities of the province and Canada.	• Distribution of major human and physical features at country and global scales • Map types (e.g. topographic, navigational, thematic) • Locational technology (GPS and GIS) • Major countries of the world • Major cities of the province, Canada and the world • Expanding mental maps • Map projections (e.g. size, shape, distance, and direction)	• Map, globe, and atlas use (e.g. observing and analyzing relationships) • Expanding locational technology (including remote sensing, GPS, and GIS) • Map projections for specific applications • Location/allocation situations (e.g. the best location for a fast food outlet and the extent of its market area; the best location for a hospital and the area it serves) • Mental maps and spatial relationships
2 Places and Regions The identities and lives of individuals and peoples are rooted in particular places and regions, each of which has distinctive human and physical characteristics.	• Concept of physical features (e.g. mountains, plains, hills, oceans, and islands) • Concept of human features (e.g. cities, buildings, farms, roads, and railroads) • Description of places, what's old and what's new • Local natural environment	• Concept of formal (uniform) regions • Physical and human characteristics of neighbourhood and community • Similarities and differences of local places and regions with other places and regions • Changes in places and regions over time	• Physical and human characteristics of places and regions within the province and Canada • Changes in places and regions over time • Perceptions of places and regions • Regions defined by multiple criteria	• Physical and human characteristics of places and regions in Canada and the world • Factors that influence people's perception of places and regions • Changes in places and regions over time • How culture affects places and regions (e.g. cultural landscapes) • Concepts of formal, functional and perceptual regions • World political regions • World cultural regions	• Physical and human processes shape places and regions • The importance of places and regions to individual and social identity • Changes in places and regions over time • Interdependence of places and regions • Political and historical characteristics of regions • Critical issues and problems of places and regions • Regional analysis of geographic issues and questions
3 Physical Systems Physical processes shape Earth's surface and interact with plant and animal life to create, sustain and modify the cultural and natural environment. Physical systems include such things as wind and ocean currents, plate tectonics, erosion, deposition and the water.	• Weather • Seasons	• Basic components of Earth's physical systems (e.g. landforms, water and weather) • Concept of an ecosystem (interdependence of plants and animals) • Earth-Sun relationships (day/night, length of day) • Introduction to the water cycle	• Physical processes shape Earth's features and patterns (e.g. weathering, erosion, deposition, plate tectonics, continental drift) • Concept of an ecosystem at difference scales • Earth-Sun relationships (e.g. rotation - day/night; revolution – seasons; energy balance; tides) • Climate types • Hydrologic cycle (precipitation, evaporation, condensation) • Extreme natural events (e.g. floods, hurricanes, earthquakes, tornadoes)	• Physical processes shape patterns in the physical environment • Ecozones (major ecological communities such as boreal forest, polar regions, grassland, wetlands and desert) • Global patterns of wind and water • River systems of Canada and the world • Types of precipitation (orographic, cyclonic, convectional) • Implications of the hydrologic cycle (hydrogeology, surface water, drought, floods, watersheds) • Causes and patterns of extreme natural events (e.g. floods, hurricanes, earthquakes, tornadoes)	• Components of Earth's physical system (atmosphere, lithosphere, biosphere, and hydrosphere) • Plate tectonics / continental drift • World patterns of extreme events • Global ocean and atmospheric systems • World climate regions • World patterns of biodiversity • Inter-annual climate variation
4 Human systems Earth's surface is shaped by human activities. The spatial organization of society is a mosaic of population movements, settlement patterns, economic activity, transportation, communication and political organizations.	• Culture of the local community and other communities (e.g. food, clothing, housing, holidays, sports, games) • Land use in the local community (e.g. farms, parks, factories, houses, stores) • Places where people work • Transportation networks in daily life	• Patterns of cultural traits (e.g. language, religion, family structure) • Patterns of land use and economic activity in the community (e.g. agricultural, industrial, commercial, residential, educational, recreational) • Political units and hierarchies (e.g. differences between community, city, municipality, province, country) • Transportation (people and goods) and communication networks • Population distribution • Human settlement patterns (e.g. rural, urban, suburban) • Changes in culture (e.g. spread of ideas, people, goods)	• Patterns and processes of migration past and present (push/pull and diffusion) • Population characteristics of the province and Canada (e.g. density, distribution, growth rates) • Human settlement patterns and land use • Cultural regions (e.g. religion, language, ethnicity) • Types of economic activity (resources, manufacturing, service) • Development of transportation and communication networks • Provincial and interprovincial commerce	• Population density, distribution, and growth rates • Demographic transition of a country • Human migration patterns (forced/voluntary) • Types and patterns of human settlement (from villages to megacities) • Internal structure of cities • Cities as providers of goods and services • Processes of cultural diffusion • Patterns of culture in Canada and the world (e.g. religion, language, ethnicity, economy) • Regional development in Canada and the world • Transportation and communications networks in Canada and the world • Types and patterns of economic activity (primary, secondary, tertiary, quaternary) • Global economic interdependence (trade, commerce and communication) • Territorial dispute and conflict	• Population characteristics by world regions, country and regions within countries • Demographic transition • Impact of human migration • Changes in human settlement patterns over time (from villages to megacities) • Internal structures of cities in developed and developing countries • Convergence and divergence of cultures • Economic development by world regions, country and regions within countries • Global economic interdependence (e.g. regional specialization, trade, transnationalism, multinationals) • Patterns of global power and influence (e.g. NATO, United Nations, European Union) • Cooperation and conflict in the division and control of Earth's surface
5 Environment and Society The physical environment has been modified by human activities. In a traditional sense, early settlers cleared the land to plant crops and graze livestock. Today, air and water pollution and the management of solid waste and hazardous materials are a serious problem. The physical environment affects human activity as well. Soil types and water availability help to determine which crops will prosper. More dramatically, natural hazards (e.g., earthquakes, hurricanes and floods) have resulted in substantial loss of life and property.	• Introduction to resources (e.g. food from farms, wood from trees, minerals from the ground, fish from the sea) • Impact of weather on everyday life • Environmental issues (e.g. litter and recycling)	• Physical environment influences human activities (e.g. availability of water, climate, fertility of soils) • Human activities change Earth (e.g. agriculture, transportation, industry) • Earth's natural resources (e.g. minerals, air, water, land) • Environmental issues (e.g. solid waste, water quality)	• Human modification of the physical environment (e.g. construction of dams, strip mining, draining wetlands) • Human adaptation to the physical environment (e.g. use of air conditioning, irrigation, agricultural activities) • Renewable (land, forests, water) and non-renewable (minerals, fossil fuels) resources • Impact of extreme natural events (earthquakes, tornadoes, floods, hurricanes, volcanic eruptions, mudslides) on the human and physical environment • Environmental issues (e.g. water supply, air quality, solid waste)	• Effects of human modification of the physical environment (e.g. global warming, deforestation, desertification, urbanization) • Impact of natural and technological hazards/disasters on the human and physical environment • Perceptions of and reactions to extreme natural events • Limits and opportunities of the physical environment for human activities • World patterns of resource distribution and utilization • Changes in the importance of energy resources • Watershed management • Environmental issues (e.g. air pollution, water pollution, and solid waste, including hazardous and toxic materials)	• Global effects of human modification of the physical environment • Global effects on the human environment by changes in the physical environment • Impacts of major natural hazards/disasters on humans • Impacts of technological hazards/disasters on the physical environment • World patterns of resource distribution and utilization • Use and sustainability of resources • Environmental issues (e.g. global warming, loss of biodiversity, deforestation, ozone depletion, air pollution, water pollution, acid precipitation, disposal of solid waste)
6 The Uses of Geography Understanding geography content and how to use the tools and technology available for geographic study prepares citizens for life in our modern society. Individuals, businesses and government entities use geography and maps of all kinds on a daily basis. Geography students have a wide choice of interesting and rewarding career opportunities.	• Description of places in past times • Environmental problems in the present and future	• Physical and human characteristics of places change over time • Spatial dimensions of geographical problems	• Influences of physical and human features on historical events • Interaction of physical and human systems and influence on current and future conditions	• Effects of physical and human geographic factors on major historic events • Role of multiple points of view in contemporary geographic policies and issues	• Influence of geographical features on the evolution of significant historic events and movements • Local, regional, and world policies and problems with spatial dimensions

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