

EXPLORING HUMAN GEOGRAPHY

Investigating People, Places, and Patterns



Grade 8 Geography

Aligned with the Ontario Curriculum



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Geography is the study of interactions among spatial variables.



A modern inquiry-based exploration of human geography designed to help students investigate patterns, relationships, and interactions among spatial variables.

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HOW TO USE THIS BOOK

Exploring Human Geography has been designed to help you think like a geographer.

Geographers investigate patterns, relationships, and interactions that help explain why places develop the way they do. Throughout this textbook, you will learn how to make observations, ask questions, gather evidence, analyze information, and communicate conclusions.

Each chapter contains a variety of features designed to support your learning:

Hero Images: At the beginning of each chapter, a hero image introduces an important geographic pattern, issue, or question that will be explored throughout the chapter.

Big Idea: The Big Idea highlights the most important concept in the chapter.

Central Question: The Central Question guides your learning and helps focus your geographic inquiry.

Know / Understand / Do Outcomes: These learning goals identify what you should know, understand, and be able to do by the end of the chapter.

Key Idea Boxes: Key Idea boxes highlight important geographic concepts and relationships.

Think About It: Think About It prompts encourage you to reflect, predict, and make connections before learning new information.

Think Like a Geographer: These activities help you apply geographic inquiry skills by investigating questions, gathering evidence, and explaining patterns.

Geographic Connections: Geographic Connections show how geographic concepts apply to real communities and places.

Figures and Maps: Figures, maps, diagrams, and photographs provide visual evidence that supports geographic understanding.

Chapter Reviews: Chapter Reviews help you check your understanding of important concepts and skills.

Chapter Challenges: Chapter Challenges allow you to apply what you have learned to a larger geographic investigation.

THE STUDY OF GEOGRAPHY

As you work through this textbook, remember that geography is more than the study of places. Geography helps us understand the interactions among spatial variables that shape people, places, environments, and communities.

INTRODUCTION

Why Study Geography?

Every day, people make decisions that are influenced by geography. Where should a new school be built? Why are some communities growing rapidly while others are shrinking? Why do transportation routes follow certain paths? Why do people settle in particular locations?

Questions such as these are geographical because they involve the relationships among people, places, and environments.

Geography helps us understand the patterns that shape the world around us. It helps explain why things are located where they are, how places are connected, and how people interact with natural and human systems.

In this textbook, you will learn to think like a geographer. You will learn how to:

- Make observations
- Ask geographic questions
- Gather evidence
- Analyze patterns
- Identify spatial variables
- Explain geographic relationships
- Communicate conclusions

Throughout the book, you will investigate real-world examples from Canada and around the world. You will learn how geographers use maps, data, observations, and inquiry to better understand people, places, and environments.

The goal of geography is not simply to learn where places are located. The goal is to understand why geographic patterns exist and how interactions among spatial variables influence the world around us.

Welcome to Exploring Human Geography.

CHAPTER 1: Geographic Foundations



Big Idea: Geography is the study of interactions among spatial variables.

Central Question: How do geographers understand and explain the world around them?

Geographic Focus: This chapter introduces the foundational skills and concepts that geographers use to investigate and explain patterns in the world around them. Students will learn how observations, spatial variables, maps, and inquiry help geographers understand relationships among people, places, and environments.

Why do most Canadians live close to the United States border? Why do some cities grow rapidly while others remain small? Why are major transportation routes located where they are? These questions may seem very different, but geographers investigate them using the same way of thinking.

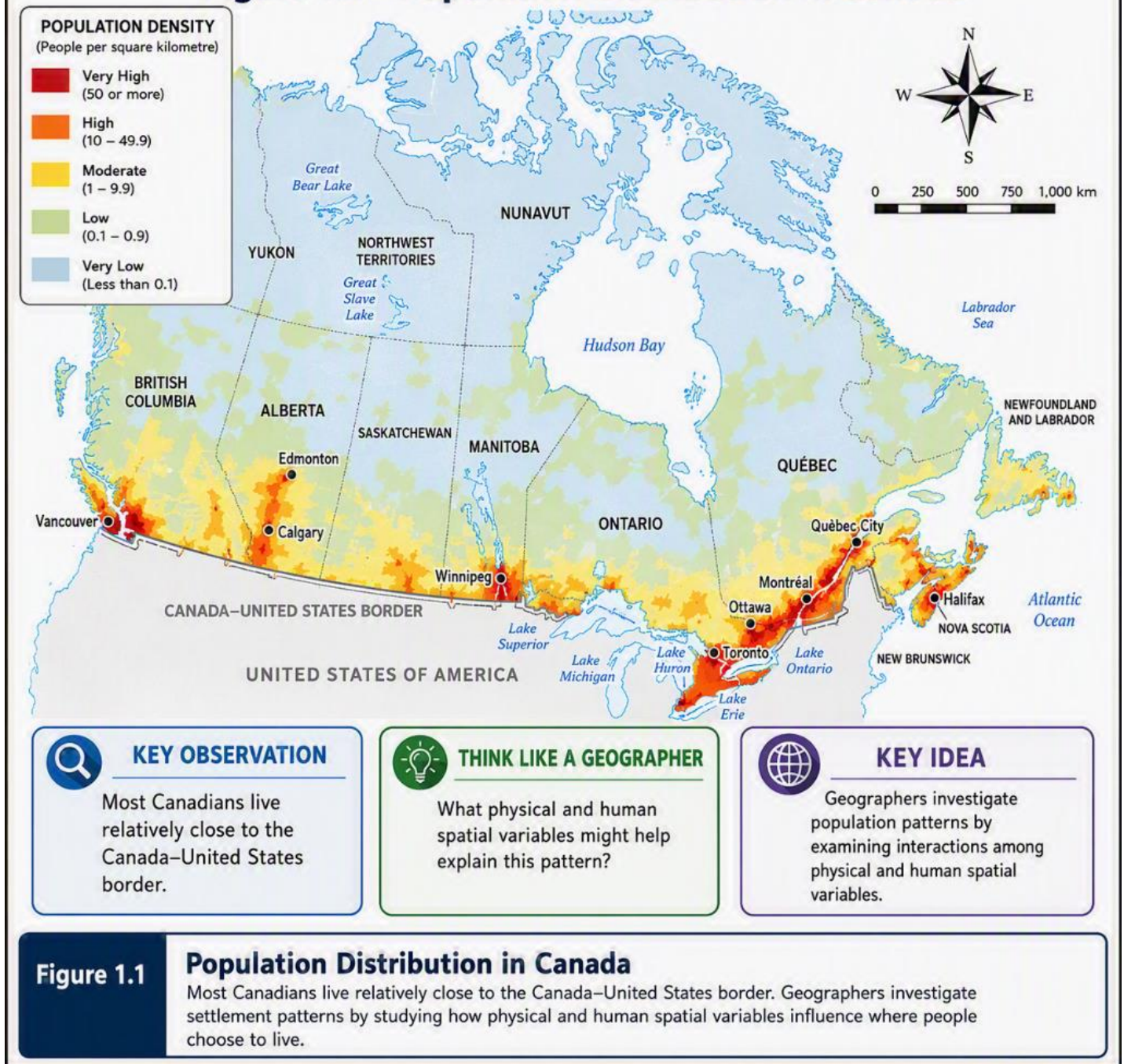
Every day, people make decisions about where to live, how to travel, where to work, and how to use resources. At the same time, natural features such as rivers, lakes, climate, and landforms influence those decisions. The interactions among these factors create patterns that can be observed across communities, regions, and countries.

Geography is the study of these patterns and relationships. Geographers look for connections among people, places, environments, and systems. They investigate how different factors interact to shape the world around us.

In this chapter, you will learn how geographers observe patterns, identify spatial variables, ask questions, and investigate geographic issues. These skills will help you understand not only the places you learn about in this textbook but also your own community.

Key Observation: Most Canadians live relatively close to the United States border.

Figure 1.1 - Population Distribution in Canada



Think About It

Why might this pattern exist?

As you work through this chapter, consider what spatial variables might help explain this observation.

SECTION 1: WHAT IS GEOGRAPHY?

Geographers are interested in understanding why things are located where they are and how places are connected. They study people, environments, resources, transportation systems, settlements, and many other features of the world around us. Rather than examining these factors separately, geographers investigate how they interact to create patterns and relationships.

Imagine standing on a hill overlooking a community. You might observe roads connecting neighbourhoods, streams flowing through parks, businesses clustered along major streets, and homes located near schools. A geographer would not only notice these features but would also ask how they are connected and why they developed in those locations.

Geography begins with observation. By carefully observing a place, geographers identify patterns that require explanation. These observations form the starting point for geographic inquiry and help geographers understand the interactions among spatial variables.

BIG IDEA: Geography is the study of interactions among spatial variables.

Before geographers create maps or collect large amounts of data, they begin by observing the world around them.

DIRECT OBSERVATION

Direct observation occurs when a person examines a place using their own senses. A geographer visiting a community might observe the location of buildings, transportation routes, waterways, landforms, and patterns of human activity.

Direct observation often reveals important clues about geographic relationships. These observations help geographers identify patterns that require further investigation.

Observation is more than simply looking at a place. Geographers observe thoughtfully and systematically. They record information, identify patterns, and begin considering which spatial variables may be interacting.

AERIAL OBSERVATION

While direct observation provides valuable information, geographers are not always able to see an entire area from the ground. To gain a broader perspective, they often use aerial photographs. An aerial photograph is an image of Earth's surface taken from above by an aircraft, drone, or satellite.

Aerial photographs allow geographers to observe patterns that may be difficult to recognize from ground level. Roads, rivers, forests, agricultural fields, neighbourhoods, and industrial areas often form patterns that become much clearer when viewed from above.

Both direct observation and aerial observation provide information about the real world. Geographers use these observations to gather evidence, identify patterns, and develop questions for further investigation.

GEOGRAPHIC KNOWLEDGE BEFORE MODERN MAPS

Long before modern geography became an academic discipline, Indigenous Peoples developed detailed knowledge of the land through observation and experience. Generations of knowledge about waterways, seasonal changes, migration routes, natural resources, and relationships among living things helped communities travel, trade, hunt, and care for the environment.

These knowledge systems were based on careful observation, accumulated experience, and a deep understanding of local environments. Many Indigenous knowledge traditions continue to contribute valuable geographic perspectives today.

TASK: Explain the importance of observation to a geographer. Identify the kinds of observations a geography might make about your own community. Draw a ruled mental map of your community. Try to include the elements you would expect to find on a map (hint: Legend).

SECTION 2: SPATIAL VARIABLES AND GEOGRAPHIC PATTERNS

To understand why geographic patterns occur, geographers study spatial variables. A spatial variable is any characteristic that changes from one location to another and helps influence geographic patterns.

Spatial variables can be grouped into two broad categories: physical variables and human variables.

Examples of Spatial Variables

Physical Spatial Variables	Human Spatial Variables
<ul style="list-style-type: none">- Latitude- Longitude- Elevation- Slope- Aspect- Temperature- Precipitation- Drainage- Soil- Vegetation- Albedo- Natural Resources- Proximity to Water	<ul style="list-style-type: none">- Population- Population Density- Transportation Networks- Accessibility- Land Use- Infrastructure- Housing- Economic Activity- Technology- Political Boundaries- Government Policies- Services- Cultural Factors

This list is extensive, but geographers rarely study variables in isolation. Instead, they investigate how multiple variables interact to produce the patterns observed in communities, regions, and countries.

LOOKING MORE CLOSELY AT SPATIAL VARIABLES

Latitude: measures a location's distance north or south of the Equator. Latitude affects climate because it influences the amount of solar energy received by a location.

Elevation: refers to the height of a location above sea level. Temperature generally decreases as elevation increases, influencing vegetation, transportation, and settlement patterns.

Water Availability: Access to fresh water is one of the most important spatial variables affecting human settlement. Water supports drinking, agriculture, transportation, industry, and recreation.

Transportation Networks: connect people, goods, and services. They influence where businesses locate, where people live, and how communities grow.

Population Density: describes the number of people living within a given area. Density influences housing, transportation demand, land use, and service provision.

INTERACTIONS CREATE PATTERNS

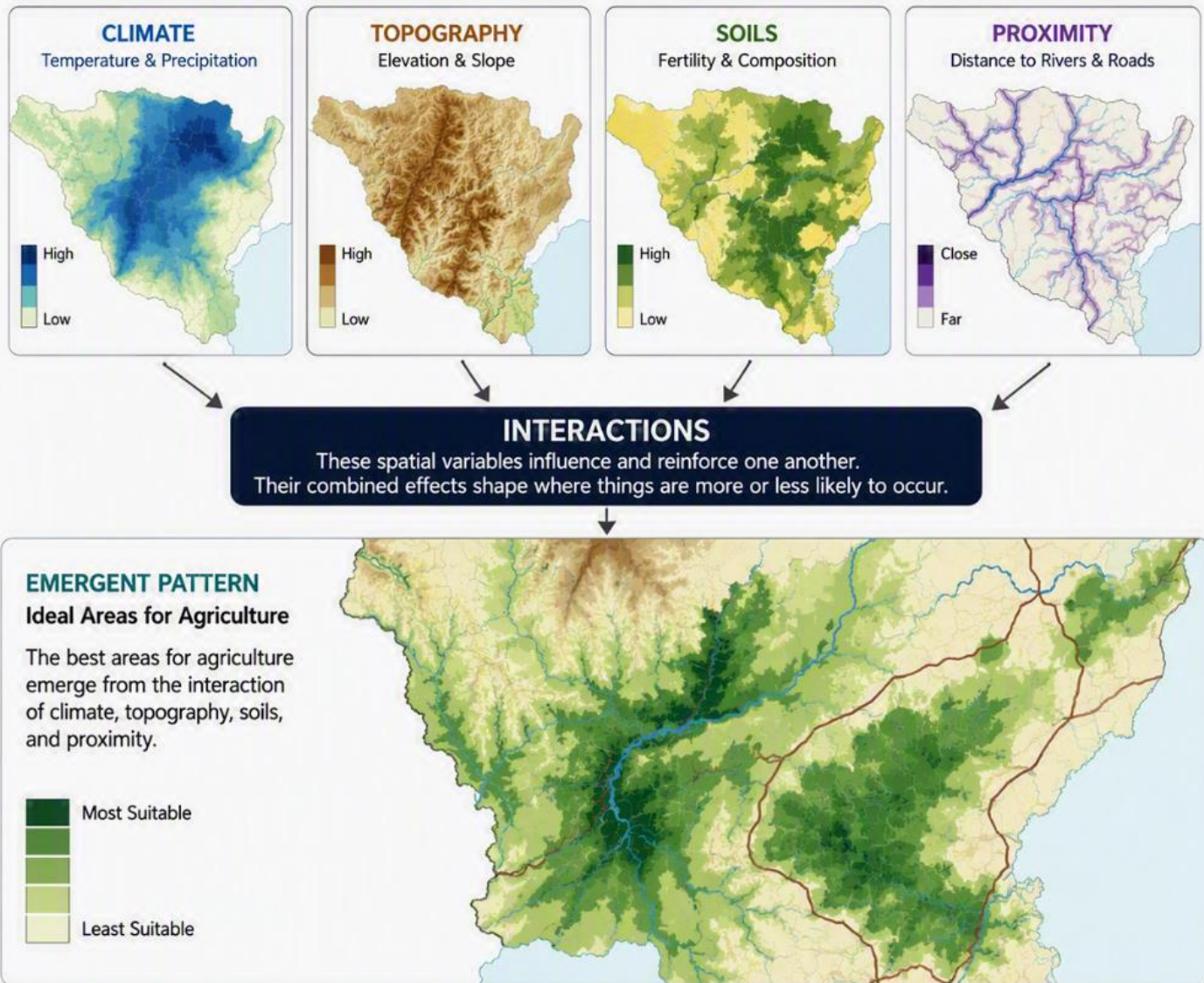
One of the most important ideas in geography is that spatial variables interact. Geographic patterns rarely result from a single factor. Instead, they emerge from relationships among many variables operating together.

Consider Hamilton as an example. Water access from Lake Ontario, transportation routes, landforms such as the Niagara Escarpment, industrial development, and population growth have all interacted over time to shape the city.

KEY IDEA: Geographic patterns emerge from interactions among spatial variables.

TASK: Examine the maps on the next page. Create a 4-point explanation as to why some areas are more suitable for agriculture than others.

KEY IDEA: Geographic patterns emerge from **interactions** among spatial variables.



Geographic patterns are not random—they result from the interaction of multiple spatial variables over space.

SECTION 3: THE FIVE THEMES OF GEOGRAPHY

Figure 1.2 - The Five Themes of Geography



The Five Themes of Geography provide a framework for organizing geographic information. Geographers use the themes of Location, Place, Human-Environment Interaction, Movement, and Region to investigate patterns, relationships, and interactions among spatial variables.

Geographers study complex relationships among people, places, environments, and systems. Because geographic information can be very detailed, geographers often use frameworks to help organize observations and investigations.

One of the most widely used frameworks is the Five Themes of Geography. Developed by geographers and educators, the Five Themes provide a way to examine places, identify patterns, and better understand geographic relationships.

MORE ON THE FIVE THEMES

THEME 1: LOCATION

Where Is It?





LOCATION

Location describes where something is found.

GEOGRAPHERS USE TWO TYPES OF LOCATION



ABSOLUTE LOCATION

An absolute location identifies the exact position of a place using a system such as latitude and longitude.

Example:
Hamilton, Ontario is located at approximately 43.3°N, 79.9°W.





RELATIVE LOCATION

A relative location describes where a place is in relation to other places.

Example:
Hamilton is located at the western end of Lake Ontario. It is situated between the Greater Toronto Area and the Niagara Region and is connected to surrounding communities through major transportation routes.





WHY IS LOCATION IMPORTANT?

Location helps geographers answer one of the most important geographic questions:



WHERE IS IT?



THEME 2: PLACE

PLACE

What Is It Like There?

Every location has characteristics that make it unique.

The theme of **Place** examines both the physical and human characteristics of a location.

TWO TYPES OF CHARACTERISTICS



PHYSICAL CHARACTERISTICS

Physical characteristics are natural features of a place.

- Landforms
- Climate
- Water Features
- Vegetation
- Natural Resources



HUMAN CHARACTERISTICS

Human characteristics are features created or influenced by people.

- Population
- Buildings
- Transportation Systems
- Economic Activities
- Cultural Features



EXAMPLE: HAMILTON, ONTARIO

Hamilton's physical characteristics include Hamilton Harbour and the Niagara Escarpment.



Its human characteristics include residential neighbourhoods, transportation networks, industries, and commercial districts.



WHY IS PLACE IMPORTANT?

Place helps geographers answer the question:

WHAT IS IT LIKE THERE?



THEME 3: HUMAN-ENVIRONMENT INTERACTION

How Do People and Environments Influence One Another?



HUMAN-ENVIRONMENT INTERACTION

People depend on, adapt to, and modify their environments.



Human-environment interaction examines the relationships between people and the natural world.

WAYS PEOPLE INTERACT WITH THEIR ENVIRONMENT

1 ADAPTING TO THE ENVIRONMENT

Farmers adapting to climate and soil conditions.



2 MODIFYING THE ENVIRONMENT

Communities building flood-control structures near rivers.



3 USING NATURAL RESOURCES

People using natural resources to support industries.



4 PROTECTING THE ENVIRONMENT

Governments protecting environmentally sensitive areas.



EXAMPLE

HAMILTON, ONTARIO



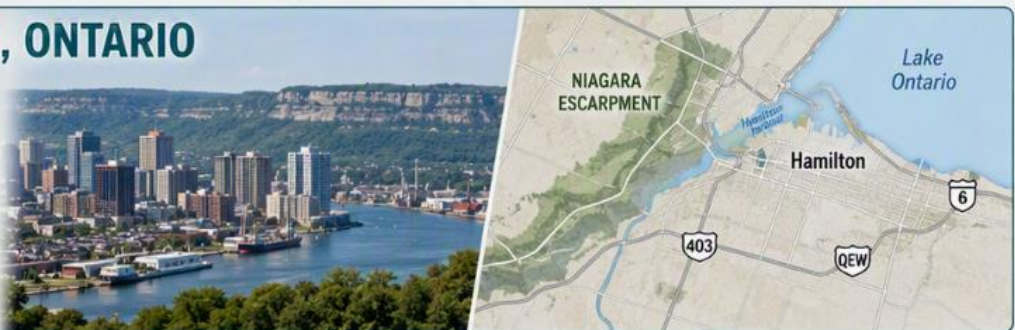
Hamilton provides many examples of human-environment interaction.



The Niagara Escarpment influences where people build transportation routes and communities.



Hamilton Harbour supports shipping, industry, recreation, and local ecosystems.



THEME 4: MOVEMENT

MOVEMENT

How Are Places Connected?

People, goods, information, and ideas move constantly from place to place.

Movement helps geographers understand how places become connected.



WHAT MOVES?

1 PEOPLE

People travelling to work or school.



2 GOODS

Goods transported by trucks, trains, ships, and airplanes.



3 INFORMATION

Information shared through communication networks.



4 IDEAS

Ideas spread through culture, education, travel, and collaboration.



Movement creates **connections**. These connections shape our world.



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THEME 5: REGION

How Are Places Similar and Different?

REGION

A region is an area that shares one or more common characteristics.



HOW ARE REGIONS IDENTIFIED?

1 PHYSICAL CHARACTERISTICS

Regions may be based on physical features such as landforms, climate, vegetation, and natural resources.



2 CULTURAL CHARACTERISTICS

Regions may be based on shared language, traditions, beliefs, and ways of life.



3 ECONOMIC ACTIVITIES

Regions may be based on common industries, resources, or economic patterns.



4 POLITICAL BOUNDARIES

Regions may be defined by provincial, territorial, national, or municipal boundaries.



REGIONS CAN BE DIFFERENT

Some regions have clearly defined boundaries, while others are less precise.

DEFINED REGION

Clearly recognized boundaries shown on a map.

- Examples:
- Provincial boundaries
 - Countries
 - Municipal boundaries



FUZZY REGION

Boundaries that may overlap or be interpreted differently.

- Examples:
- Cultural regions
 - Economic regions
 - Tourism regions



EXAMPLES OF REGIONS



PATTERN FINDER

Regions help geographers compare places and identify patterns across larger areas.

CHARACTERISTIC	REGION A (e.g., The Prairie Provinces)	REGION B (e.g., Atlantic Canada)	REGION C (e.g., The Arctic Region)	PATTERN (What do we notice?)
Climate				Colder north, warmer south
Natural Resources				Resources reflect physical environments
Economic Activities				Activities match resources and climate
Population Density				More people in settled, milder areas

WHY IS REGION IMPORTANT?

Studying regions helps us understand how places are alike and different. It helps us make better decisions about the environment, economy, culture, and the future.



Understand our world



Respect cultural diversity



Plan for economic growth



Make informed choices

This theme helps answer the question:

HOW ARE PLACES SIMILAR AND DIFFERENT?

Geographers rarely use only one theme when studying a place. Instead, the themes work together to provide a more complete understanding.

Consider Hamilton:

Location: Hamilton is located at the western end of Lake Ontario.

Place: Hamilton contains Hamilton Harbour, the Niagara Escarpment, industries, and residential communities.

Human-Environment Interaction: The harbour and escarpment have influenced settlement and economic development.

Movement: Highways, railways, and shipping routes connect Hamilton to other regions.

Region: Hamilton is part of the Greater Golden Horseshoe.

By examining all five themes together, geographers gain a deeper understanding of how spatial variables interact to create geographic patterns.

KEY IDEA: The Five Themes of Geography provide a framework for organizing observations, investigating geographic questions, and understanding relationships among spatial variables.

TASK: Create a 5- column graphic organizer which identifies the five themes of geographic inquiry and uses each theme to describe the community in which you live.

SECTION 4: FROM OBSERVATION TO MAPS



Figure 1.3

Geographers use observations and collected information to create maps that represent the real world. Maps help organize geographic information, identify patterns, and support the investigation of relationships among spatial variables.

Geographers collect information in many different ways, but information becomes most useful when it can be organized, analyzed, and shared. One of the most powerful tools for accomplishing this is the map.

Maps help geographers represent information about places, identify patterns, and communicate geographic knowledge to others. Maps are not reality. They are representations of reality.

Cartographers, people who create maps, use observations, measurements, and collected data to create maps that help people understand geographic information.

Every map simplifies reality. Cartographers select information that is most important for a particular purpose and omit information that is less relevant.

Different maps can reveal different geographic patterns even when they represent the same place. A transportation map, for example, highlights roads, railways, and transit routes. A physical map emphasizes landforms, water features, and elevation. A population map focuses on where people live and how population is distributed. By selecting specific information, maps allow geographers to focus on particular spatial variables and examine how those variables interact.

FROM REALITY TO REPRESENTATION

Geographic information often moves through several stages before appearing on a map.

1. First, geographers observe the real world through direct observation, aerial photographs, satellite imagery, surveys, measurements, and data collection.
2. Next, the information is organized and analyzed.
3. Finally, the most important information is displayed on a map.
4. This process allows large amounts of geographic information to be communicated clearly and efficiently.

A single map can show patterns that would be difficult to recognize through direct observation alone.

ELEMENTS OF A MAP

Most maps contain several common elements that help users understand the information being presented. Below you will find a description of elements that are common to most maps.

Title: The title identifies what the map shows. A clear title helps readers understand the purpose of the map.

Legend: The legend explains the meaning of colours, symbols, and patterns used on the map. Without a legend, many map symbols would be difficult to interpret accurately.

Symbols: Symbols represent geographic features such as roads, rivers, schools, railways, hospitals, and airports. Symbols allow complex information to be displayed using simple visual representations.

Scale: The scale shows the relationship between distances on the map and actual distances on the ground. Scale helps map users estimate real-world distances and compare locations.

Compass Rose: A compass rose shows direction. It helps readers determine north, south, east, and west and understand how different locations relate to one another.

Labels: Labels identify important places, features, and geographic information. Maps often use labels to identify cities, rivers, roads, regions, and physical features.

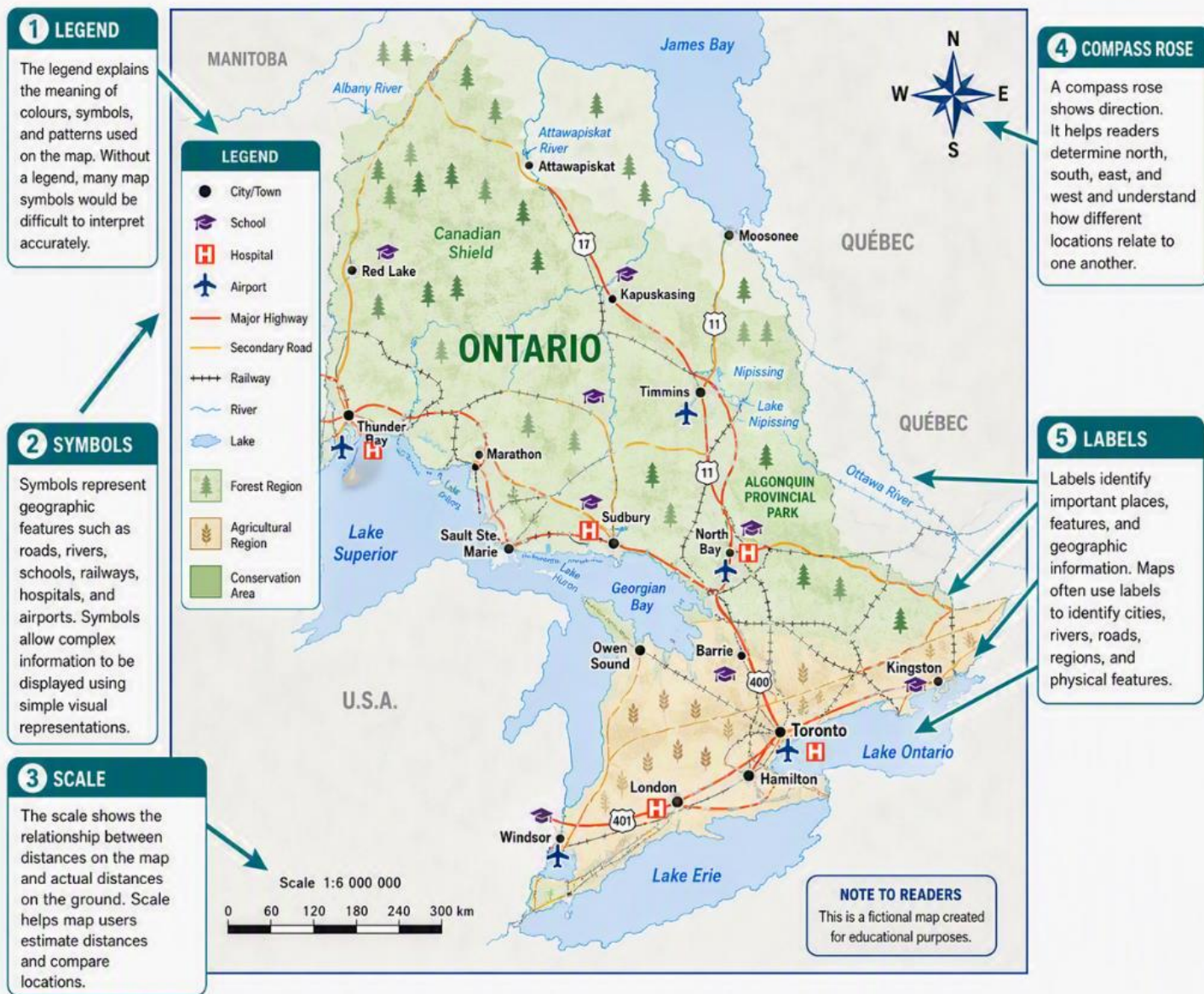
Together, these map elements help geographers communicate geographic information clearly and accurately.

TASK: Examine the map on the next page to remind yourself of the elements of maps. Now refer to the mental map of your community which you created earlier in the chapter.

Once you have reviewed your previous work, create Version 2.0 of your original map using your reflections and the resources in this section of the chapter.

Figure 1.6 Parts of a Map

Maps contain standard elements that help us read, interpret, and understand geographic information.



KEY GEOGRAPHIC IDEA

Maps communicate geographic information using standardized elements.

Understanding these elements allows people to read, interpret, and compare maps accurately.

Maps help geographers answer important geographic questions. They can be used to:

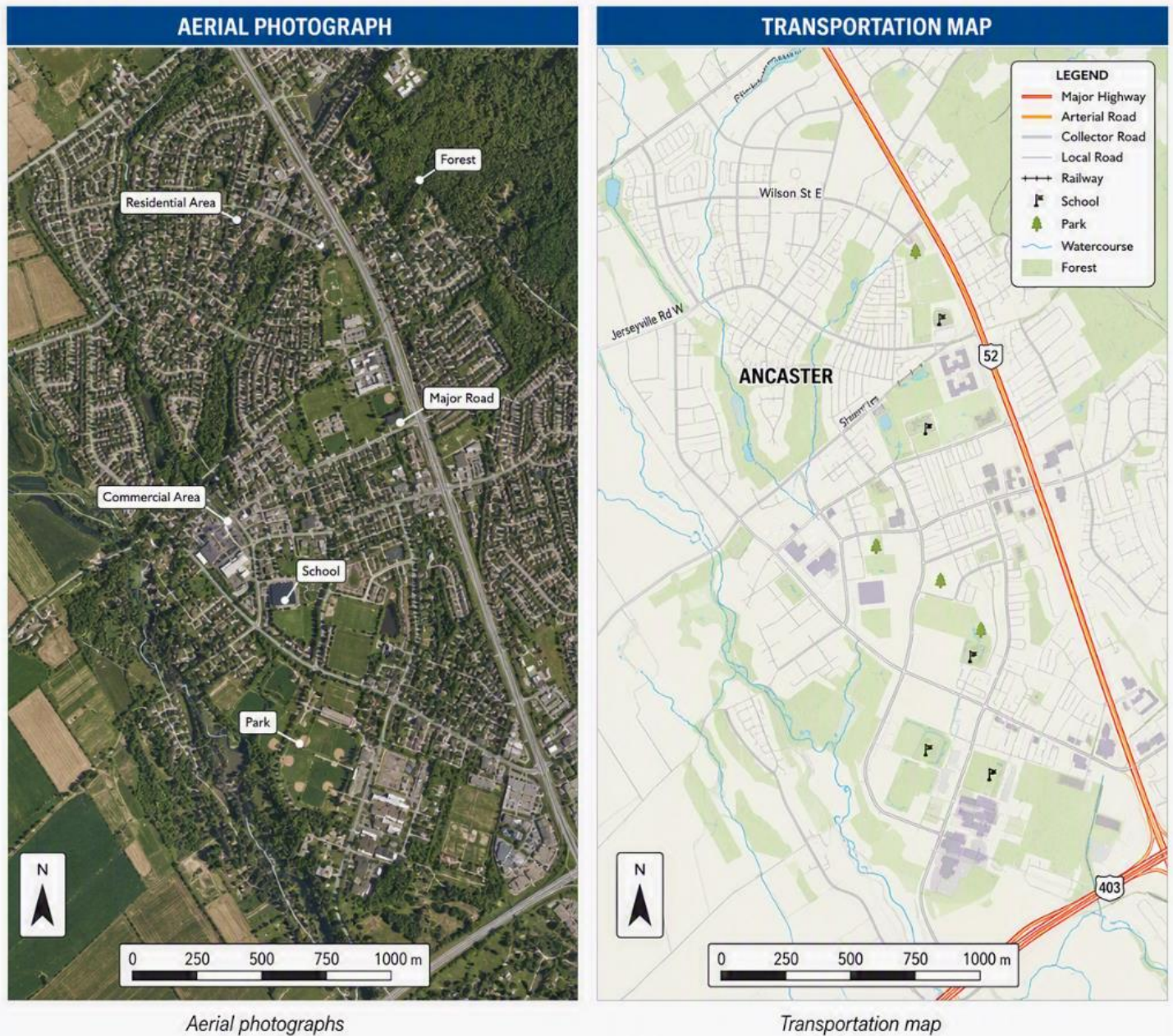
- Identify geographic patterns
- Compare locations
- Study spatial variables
- Communicate geographic information
- Investigate relationships among people, places, and environments

For example, a map showing population density may reveal that people tend to cluster in particular areas. A geographer can then investigate why those patterns exist by examining other spatial variables such as climate, transportation, water availability, or economic activity.

Maps therefore do more than show where things are located. They help geographers explain why geographic patterns occur.

FIGURE 1.3.2 AERIAL PHOTOGRAPH AND TRANSPORTATION MAP OF ANCASTER, ONTARIO

Geographers often compare aerial photographs and maps because each representation reveals different information about the same place.



TASK: Examine the above map and aerial photograph. Observe the watercourses, transportation routes, residential areas, commercial features and natural areas.

Compare:

- What is easier to identify on the map?
- What is easier to identify on the aerial photograph?

Analyze:

- What patterns can you observe?
- What spatial variables may be interacting?

Reflect:

- Why might a geographer use both a map and an aerial photograph when investigating a place?

Record your reflections in your notebook.

KEY IDEA: Maps are geographic representations created from observations, measurements, and collected data. They help geographers identify patterns, analyze spatial variables, and communicate geographic information.

SECTION 5: GEOGRAPHIC INQUIRY

Figure 1.4 - The Geographic Inquiry Process



Figure 1.4: The Geographic Inquiry Process: Geographers use a structured inquiry process to investigate geographic questions. By making observations, gathering evidence, identifying spatial variables, analyzing relationships, and communicating findings, geographers explain geographic patterns and issues.

CANADIAN CONNECTION: MAP AND AERIAL PHOTO ACTIVITY: THINK LIKE A GEOGRAPHER

Why Did Winnipeg develop as it did and where it did?

Skill: Use maps and aerial photographs of Winnipeg to investigate why a major city developed in this location. On the next page you will see an analysis of how and why Winnipeg developed as it did. Take time to study this exemplar. You will be tasked with determining how and why Toronto developed where it did from the perspective of a geographer.



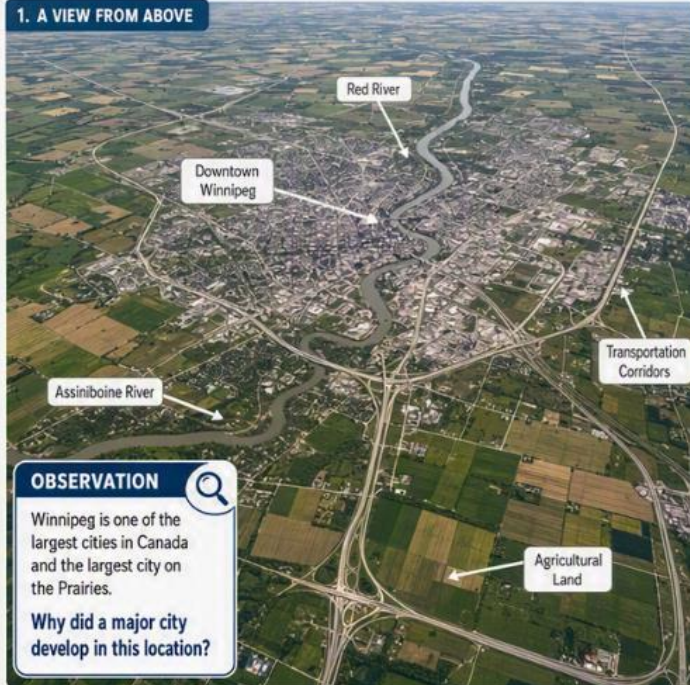
CASE STUDY: WINNIPEG, MANITOBA



Why did a major city develop here?

Geographers investigate this question by examining evidence and identifying interactions among spatial variables.

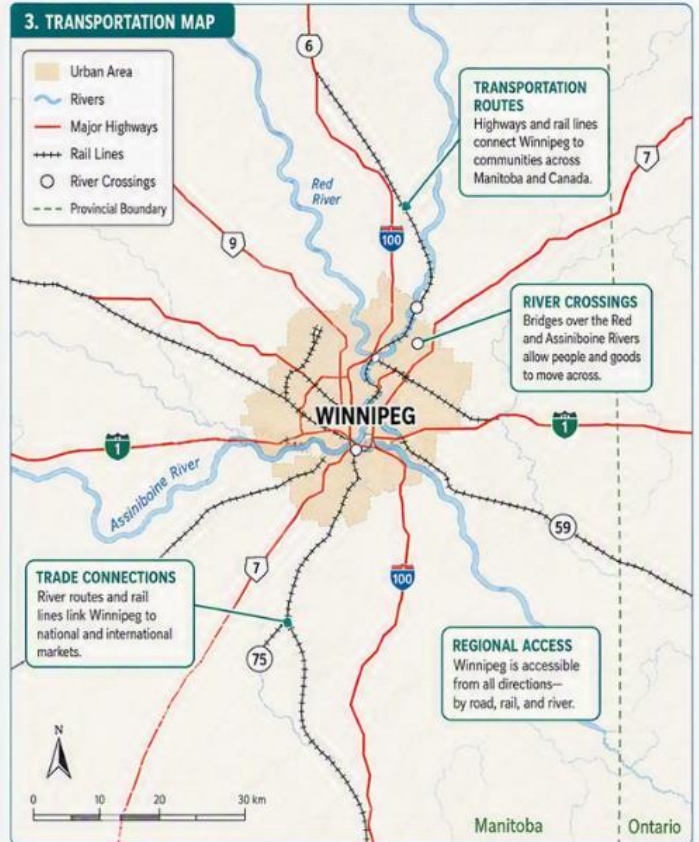
1. A VIEW FROM ABOVE



2. WHAT EVIDENCE WOULD A GEOGRAPHER COLLECT?



3. TRANSPORTATION MAP



4. IDENTIFYING PATTERNS



TASK: Use the exemplar above to examine the aerial photograph and map of Toronto below. Make observations and draw conclusions to explain the development of the city of Toronto. Use the questions beneath to guide your thinking and record your answers as well as the questions in your notebook.

CASE STUDY: TORONTO, ONTARIO

Central Question: Why did a major city develop here?
Use evidence from the aerial photograph and transportation map to develop your own geographic explanation.

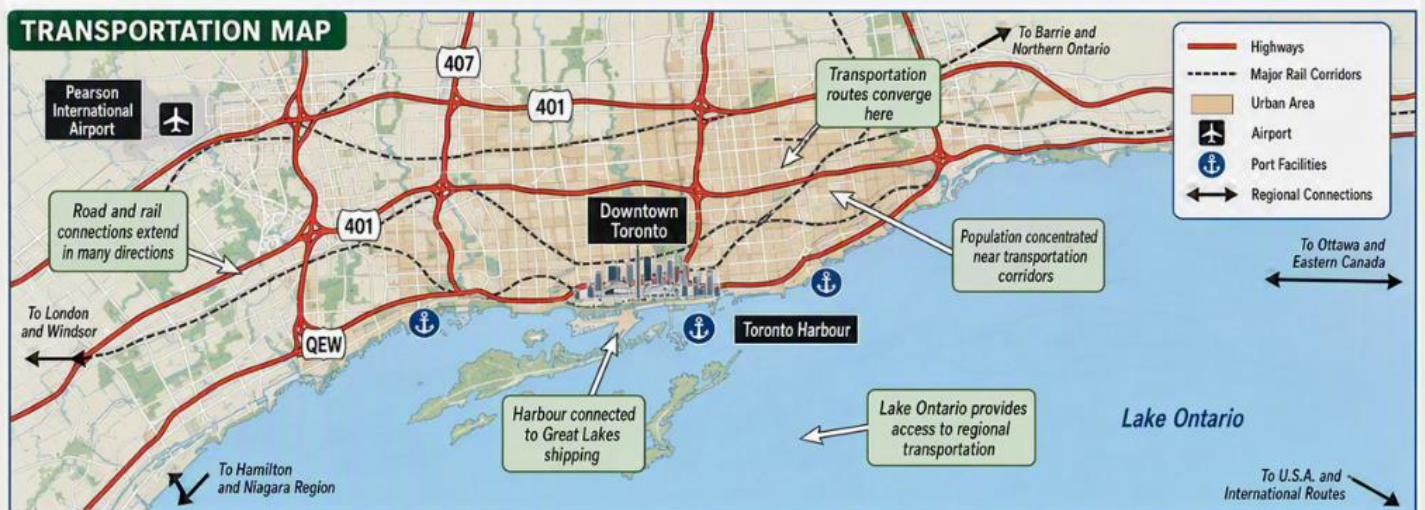
A VIEW FROM ABOVE



OBSERVATIONS TO CONSIDER

- Toronto is located on Lake Ontario.
- Major transportation routes converge in the region.
- The area contains a large harbour.
- A major airport serves the region.
- Population is concentrated near transportation infrastructure.

TRANSPORTATION MAP



KEY GEOGRAPHIC IDEA

Geographers use observations, maps, and evidence to identify patterns. Explanations require connecting those patterns to interactions among spatial variables.

1. Which spatial variables may have helped Toronto grow into Canada's largest city?
2. How might Lake Ontario have influenced transportation, trade, and settlement patterns?
3. Using evidence from the maps and photographs, explain why Toronto developed in its present location.

SUCCESS CRITERIA

I can:

- Make geographic observations.
- Develop geographic questions.
- Identify spatial variables.
- Gather geographic evidence.
- Explain interactions among variables.
- Use evidence to support conclusions.

Answer the following questions in your notebook.

Knowledge

1. Define geography.
2. What is a spatial variable?
3. List the Five Themes of Geography.

Understanding

4. Explain why geographers study interactions among spatial variables rather than individual variables in isolation.
5. Explain why geographic inquiry begins with observation.
6. Explain why maps are considered representations rather than reality.

Application

7. Identify three spatial variables that influence your community.
8. Explain how two of those variables interact.

Inquiry and Chapter Challenge: Investigating Green River Community

Study Figure 1.5 on the next page.

Figure 1.5 – Green River Community

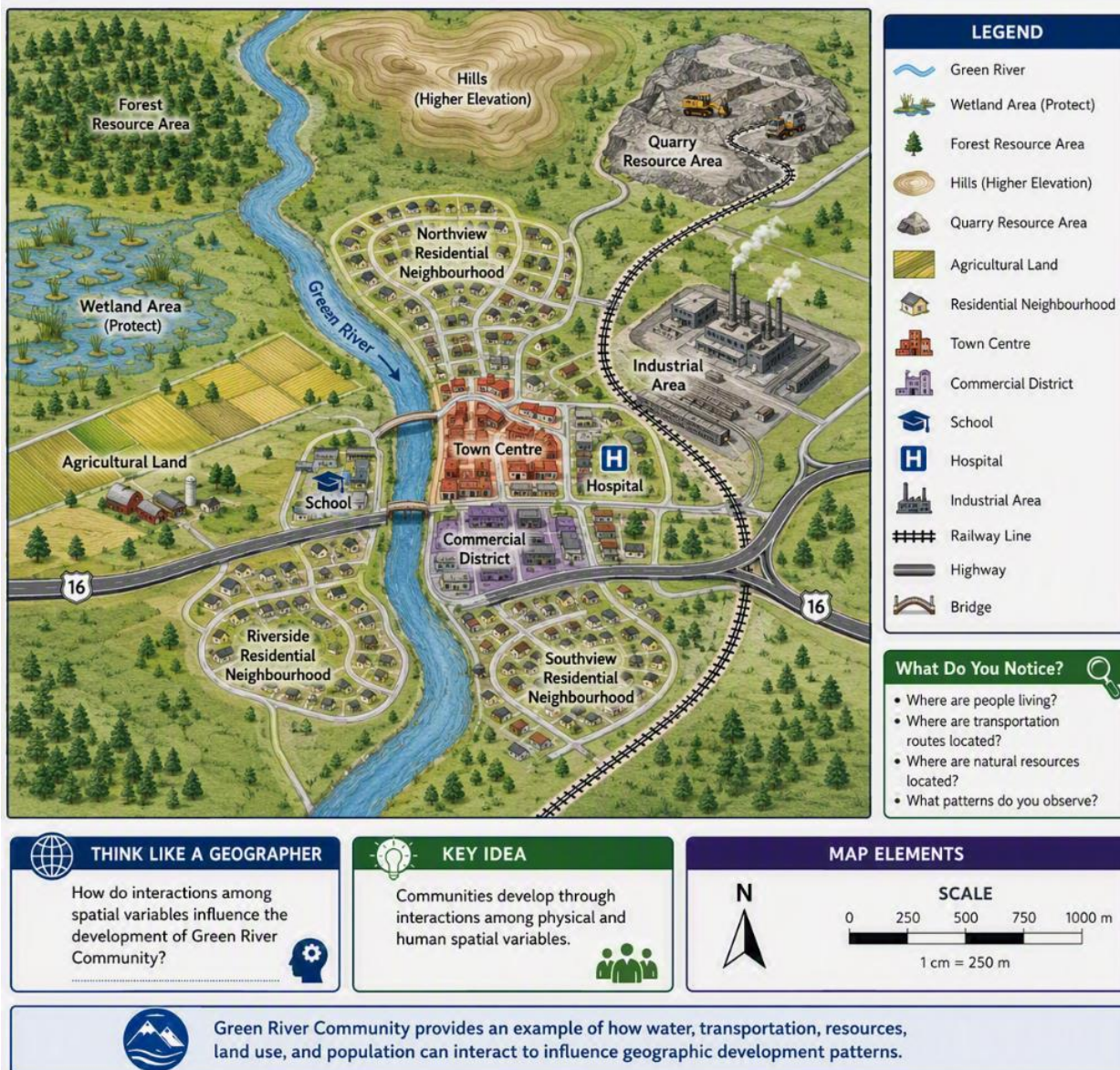


Figure 1.5: Green River Community: The Green River Community contains a variety of physical and human geographic features. Geographers can use the map to investigate how water, transportation, natural resources, land use, and population interact to influence patterns of community development.

Task 1: Record ten observations about the green river community.

Task 2: Identify at least five spatial variables. Use the list of spatial variables earlier in the chapter to help you do this.

Task 3: Community Growth: The population is expected to double. Using evidence from the map:

- Suggest one location for new housing. Explain your reasoning for your suggestion.
- Suggest one location for a new industrial area. Explain your reasoning for your suggestion.
- Suggest one location that should be protected. Explain your reasoning for your suggestion.

GLOSSARY

Aerial Photograph: An image of Earth's surface taken from above by an aircraft, drone, or satellite.

Analysis: The examination of evidence and relationships to explain geographic patterns.

Cartographer: A person who creates maps.

Climate: The long-term pattern of weather conditions in a region.

Communication: The process of presenting geographic findings and conclusions.

Compass Rose: A map element that shows direction, including north, south, east, and west.

Conclusion: An evidence-based explanation developed through geographic inquiry.

Direct Observation: The process of examining a place using one's own senses.

Evidence: Information collected to support geographic explanations.

Geographic Inquiry: A process used by geographers to investigate questions, gather evidence, identify patterns, and explain geographic phenomena.

Geographic Representation: A tool used to represent geographic information, such as maps, aerial photographs, diagrams, models, or graphs.

Geography: The study of interactions among spatial variables.

Human Geography: The study of people, communities, and human activities and how they interact with places and environments.

Investigation: The process of gathering information to answer a geographic question.

Label: Text on a map that identifies places, features, or geographic information.

Legend: A map element that explains the meaning of colours, symbols, and patterns.

Map: A simplified representation of a real place.

Pattern Recognition: The process of identifying similarities, relationships, and trends in geographic information.

Physical Geography: The study of natural features and processes found on Earth.

Scale: A map element that shows the relationship between map distances and real-world distances.

Spatial Variable: A geographic characteristic that changes from one location to another and helps influence geographic patterns.

Satellite Imagery: Images of Earth collected by satellites orbiting the planet.

Title: A map element that identifies what a map displays.