

Week 3: Types of Maps and Their Uses

1. Introduction and Learning Objectives

Maps are fundamental tools in the field of geography. This week introduces students to the **main types of maps**, their **functions**, and **how to describe them in English**. Understanding the **terminology of cartography** is essential for interpreting, creating, and communicating geographic information.

By the end of this session, students will be able to:

- Identify and distinguish between different types of maps.
- Use appropriate vocabulary to describe maps.
- Understand key cartographic terms (scale, legend, contour, topography, thematic map).
- Apply simple structures for interpreting and comparing maps.

2. The Importance of Maps in Geography

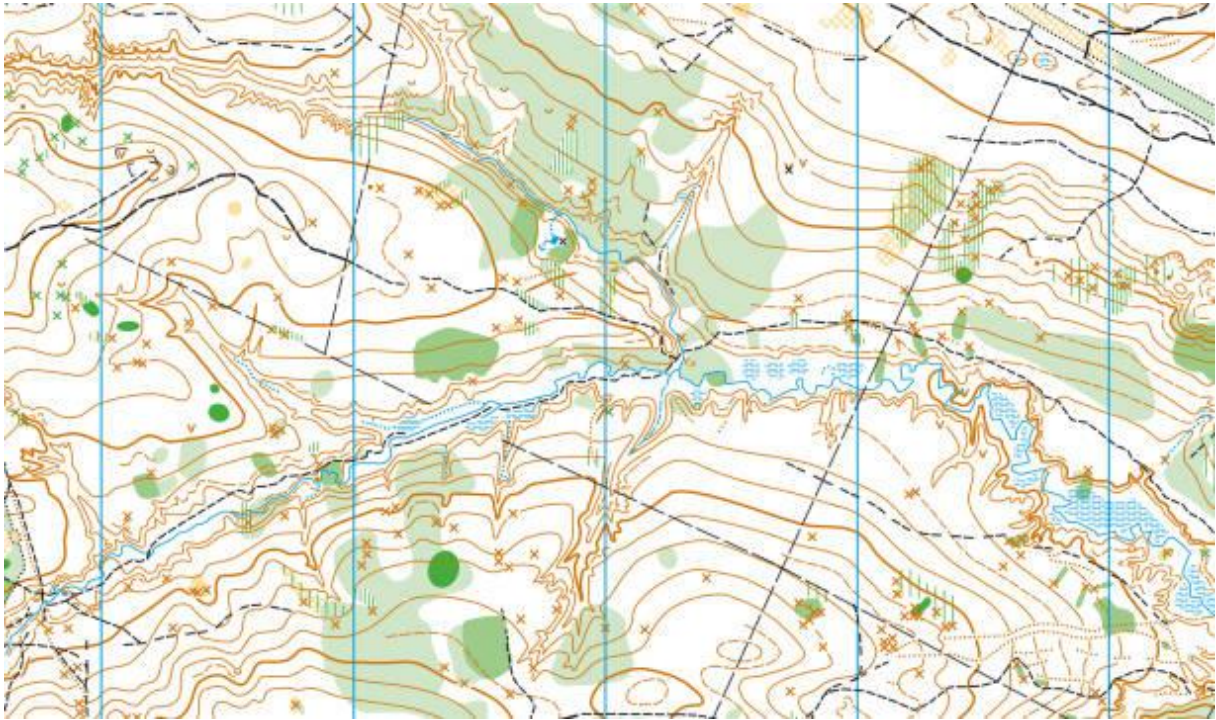
Maps provide visual representations of spatial data. They allow geographers and planners to observe patterns, analyze relationships, and make decisions. Whether for urban planning, environmental monitoring, or land use management, maps are indispensable.

References:

- Monmonier, M. (2018). *How to Lie with Maps*. University of Chicago Press.
- Slocum, T. A., et al. (2008). *Thematic Cartography and Geovisualization*. Pearson.

3. Key Cartographic Vocabulary (With Dual Definitions + Examples)

3 .1. Topographic Map



- **Definition 1:**

“A map that shows the shape and elevation of terrain using contour lines.”

— *National Geographic Education Glossary*, 2021.

- **Definition 2:**

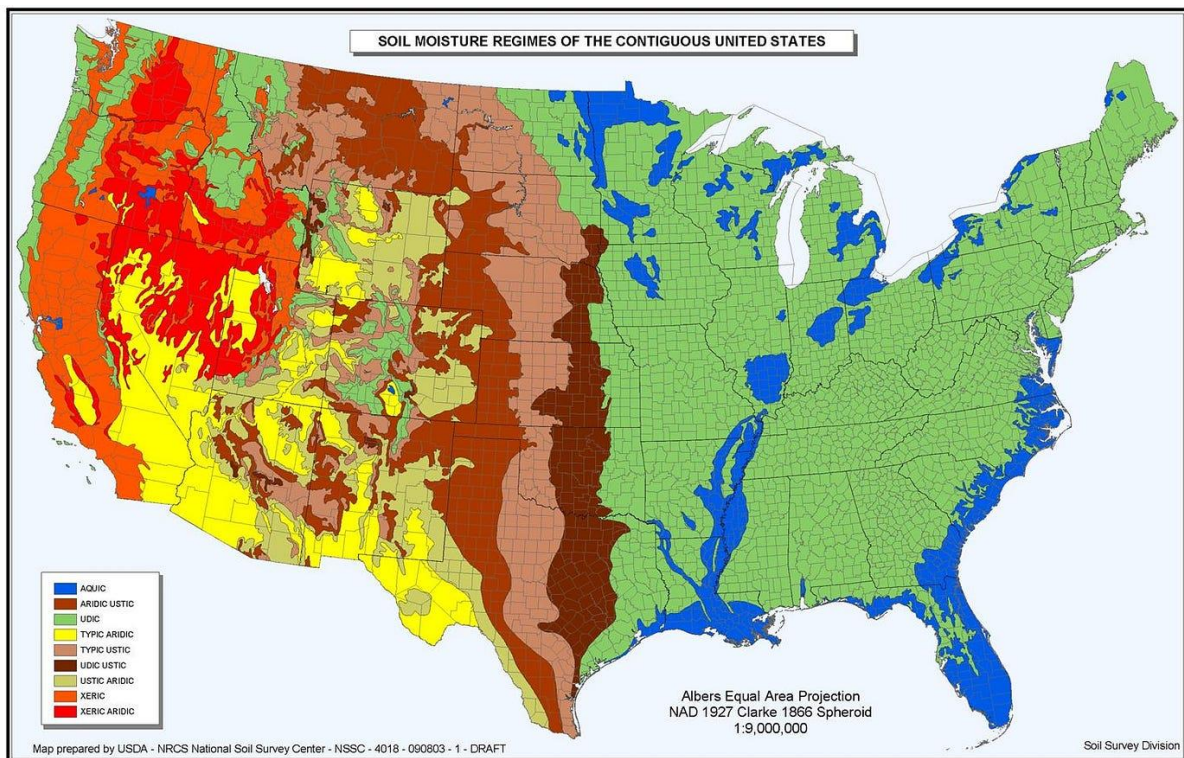
“A detailed and accurate representation of natural and man-made features on the Earth’s surface, showing elevation and landforms.”

— *Oxford Dictionary of Geography*, 2023.

Examples:

- *Topographic maps are commonly used for hiking and land surveying.*
- *The map displays contour lines indicating elevation differences in the terrain.*

3 .2. Thematic Map



- **Definition 1:**

“A map designed to show a particular theme connected with a specific geographic area.”

— *ESRI GIS Dictionary*, 2022.

- **Definition 2:**

“A type of map that focuses on specific data like population, climate, or land use, rather than physical features.”

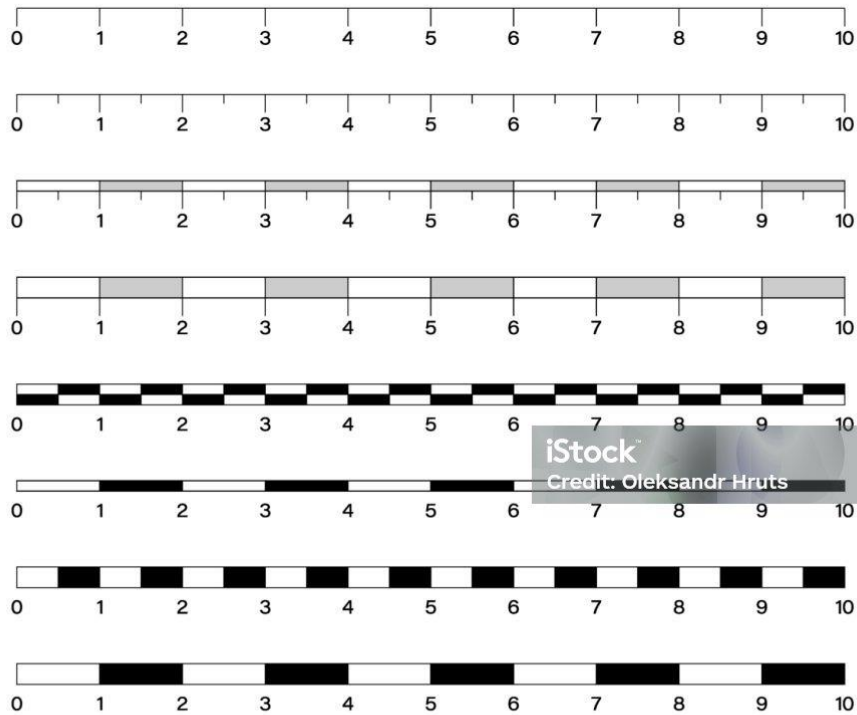
— *Dictionary of Human Geography*, Wiley-Blackwell, 2019.

Examples:

- *A thematic map can illustrate population density across regions.*
- *This land use map is a type of thematic map showing agricultural areas.*

3.3. Scale

MAP SCALE



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-Definition 1:

“The relationship between a distance on the map and the corresponding distance on the ground.”

— *Cambridge Dictionary of Geography*, 2021.

-Definition 2:

“A ratio that expresses how much the real world is reduced to fit on a map.”






















— *Longman Illustrated Geography Glossary*, 2020.

Examples:

- *A map with a scale of 1:50,000 means 1 cm on the map equals 500 m in reality.*
- *Large-scale maps show smaller areas in more detail.*

3.4. Legend (Map Key)

Map Legend Road Signs

	State Capitals		Toll Roads & Bridges
	County Seat		Interstate Highways
	Cities 500,000+		U.S. Highways
	Cities 100,000-499,999		State Roads
	Cities 50,000-99,999		Major Rivers
	Cities 10,000-49,999		Intermediate Rivers
	Cities 0,9-9,999		Motor Way
	Lakes		Track
	Interstate		Pipeline
	U.S. Highway		All Wather Roads
	State Highway		

-Definition 1:

“A guide that explains the symbols, colors, and lines used on a map.”

— *Oxford English for Careers: Geography*, 2018.

-Definition 2:

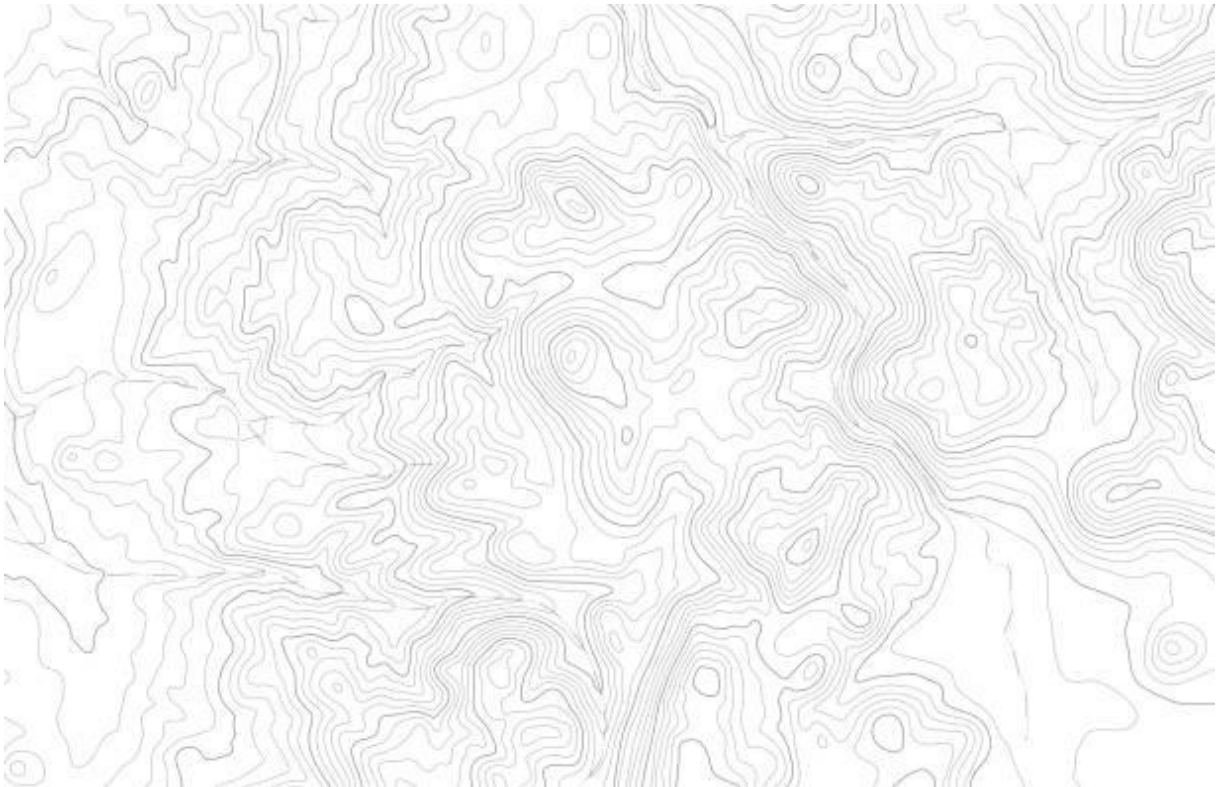
“An explanatory table or chart that helps the user interpret information on a map.”

— *Collins English Dictionary – Geography Edition*, 2021.

Examples:

- *The legend indicates that green areas represent forests.*
- *Always check the legend before interpreting map symbols.*

3.5. Contour Line



-Definition 1:

“A line on a map joining points of equal elevation.”

— *National Atlas of Cartography*, 2019.

-Definition 2:

“A line used to illustrate height and slope on topographic maps.”

— *Dictionary of Earth Sciences*, Oxford University Press, 2022.

Examples:

- The *contour lines* are close together, indicating a steep slope.
- Widely spaced contour lines show flat or gently sloping land.

4. Grammar Focus: Using the Passive Voice to Describe Maps

In geography, especially in writing about maps, we often use the **passive voice** to describe what is shown rather than who shows it.

- **Passive Voice Structure**

Subject + to be (in correct tense) + past participle + (by agent - optional)

Examples in Context

- “Population density is represented by color gradients on the map.”
- “Contour lines are used to show elevation.”
- “Different land uses are marked by specific patterns.”

Grammar References:

- Murphy, R. (2012). *English Grammar in Use*. Cambridge University Press.
- Hewings, M. (2013). *Advanced Grammar in Use*. Cambridge University Press.

5. Practice Activity: Map Interpretation Task

Task:

Each student receives a simple map (topographic or thematic). In pairs, they must:

- Identify the type of map
- Describe what features are represented
- Use at least **3 of the target vocabulary words**
- Use **2 passive voice sentences**

Example Description:

“This is a topographic map of a hilly region. Elevation is shown using contour lines. Rivers are marked in blue. Urban areas are represented by red squares. The legend explains all the symbols.”

6. Homework Assignment

Choose one map from your geography textbook or any atlas (topographic or thematic).

Task:

Write a **short paragraph (6–8 sentences)** to describe the map.

- Include: 4 key terms from today
- Use at least 2 passive voice structures
- Include one complex sentence (e.g., using *because*, *although*, *while*)

7. References

- Monmonier, M. (2018). *How to Lie with Maps*. University of Chicago Press.

- Slocum, T. A., et al. (2008). *Thematic Cartography and Geovisualization*. Pearson.
- Oxford Dictionary of Geography (2023).
- National Geographic Education Glossary (2021).
- Murphy, R. (2012). *English Grammar in Use*. CUP.
- Collins English Dictionary (Geography Edition), 2021.
- ESRI GIS Dictionary, 2022.
- Dictionary of Human Geography, Wiley-Blackwell, 2019.