

Domain-Based Unit Overview

Title of Domain: Exploring Maps, Grade 4

Learning Time: 10 days

Big Idea

Maps provide a scaled-down version of the features of Earth, as well as a system for locating those features. (CK Handbook, p.90)

What Students Need to Learn (CK Handbook, p.90)

- Measure distances using map scales
- Read maps and globes using latitude, longitude, coordinates and degrees
- Identify Prime Meridian; Greenwich, England; 180-degree line (International dateline)
- Read relief maps for elevations and depressions

MN Academic Standards

- Create and use various kinds of maps, including overlaying thematic maps, of places in the United States, and also Canada or Mexico; incorporate the “TODALS” map basics, as well as points, lines and colored areas to display spatial information (4.3.1.1.1)
- Use latitude and longitude on maps and globes to locate places in the United States, and also Canada or Mexico. (4.3.1.1.2)
- Choose the most appropriate data from maps, charts, and graphs in an atlas to answer specific questions about geographic issues in the United States, and also Canada or Mexico. (4.3.1.2.1)
- Use photographs or satellite-produced images to interpret spatial information about the United States, and also Canada or Mexico. (4.3.1.2.2)

Pre-Assessment

- Give students a map before lesson 1
 - Find distances using map scales
 - Find a location using latitude/longitude

Domain Lesson 1	TODALS Introduction & PowerPoint, 1 day
MN Academic Standards	Create and use various kinds of maps, including overlaying thematic maps, of places in the United States, and also Canada or Mexico; incorporate the “TODALS” map basics, as well as points, lines and colored areas to display spatial information. (4.3.1.1.1)
Objectives	<ul style="list-style-type: none"> ● I can use various types of maps of places in the US, Canada, & Mexico ● I can incorporate the “TODALS” map basics when looking at various types of maps

Vocabulary	T - Title O - Orientation D - Date A - Author L - Legend S - Scale
Procedure	<ul style="list-style-type: none"> ● Introduce TODALS PowerPoint with definitions ● Students take notes on TODALS worksheet
Poetry	<i>If Applicable</i>
Fiction	<i>If Applicable</i>
Saying and Phrases	<i>If Applicable</i>
Writing	<i>If Applicable</i>

Domain Lesson 2	Measuring Distance on a Map (CKHG, p. 14), 1 day
MN Academic Standards	Create and use various kinds of maps, including overlaying thematic maps, of places in the United States, and also Canada or Mexico; incorporate the “TODALS” map basics, as well as points, lines and colored areas to display spatial information. (4.3.1.1.1)
Objectives	<ul style="list-style-type: none"> ● I can explain why we need different types of maps ● I can use a Core Vocabulary word or phrase in a sentence
Vocabulary	Map, symbol, map key, map scale, kilometer, distance, direction, compass rose, interstate highway.
Procedure	<ul style="list-style-type: none"> ● Show students the globe, asking them to identify and describe what it is ● Briefly review geographic terms and concepts, such as naming each continents, North and South Pole, equator and Atlantic, Pacific, Indian and Arctic oceans ● Have students review the <i>Using Maps</i> Student Reader, including locating the Table of Contents ● Ask students, “What is the purpose of maps?” ● Read aloud Chapter 1 “Measuring Distance on a Map” from <i>Using Maps</i> Student Reader (Either students or teacher reads) <ul style="list-style-type: none"> ○ Distribute AP 1.1, 1.2 and 1.3 ● Ask students to answer objective question, “Why we need different types of maps?” with a partner ● Ask partners to choose one of the Core Vocabulary words or phrases and come up with an oral sentence using the word or phrase
Poetry	<i>If Applicable</i>
Fiction	<i>If Applicable</i>
Saying and Phrases	As the crow flies
Writing	<i>If Applicable</i>

Domain Lesson 3	Latitude and Longitude (CKHG, p.23), 1 day
MN Academic Standards	<ul style="list-style-type: none"> ● Use latitude and longitude on maps and globes to locate places in the United States, and also Canada or Mexico. (4.3.1.1.2)
Objectives	<ul style="list-style-type: none"> ● I can explain how meridians and parallels are helpful ● I can recognize that parallels of latitude run horizontally on a globe or map, from east to west without ever meeting ● I can recognize that meridians of longitude run vertically on a globe or map, meeting at the North and South Poles ● I can use latitude and longitude to locate points on a map
Vocabulary	Radar, GPS, parallel, latitude, equator, globe, degree, hemisphere, meridian, longitude, prime meridian, coordinates
Procedure	<ul style="list-style-type: none"> ● Review previous lesson, specifically why we use different kinds of maps ● Draw two large circles. On one circle, mark parallels of latitude. On the other, mark meridians of longitude. Draw a compass rose. Ask students to describe the lines drawn on each circle/globe, pointing out as many differences as they can ● Read aloud Chapter 2 “Latitude & Longitude” from <i>Using Maps</i> Student Reader (Either students or teacher reads) <ul style="list-style-type: none"> ○ Distribute AP 2.1, 2.2 and 2.3 ● Ask students to answer objective question, “How are meridians and parallels – lines identifying longitude and latitude – helpful?” with a partner ● Ask partners to choose one of the Core Vocabulary words or phrases and come up with an oral sentence using the word or phrase
Poetry	<i>If Applicable</i>
Fiction	<i>If Applicable</i>
Saying and Phrases	<i>If Applicable</i>
Writing	<i>If Applicable</i>

Domain Lesson 4	Practice with Latitude and Longitude, 1 day
MN Academic Standards	<ul style="list-style-type: none"> ● Use latitude and longitude on maps and globes to locate places in the United States, and also Canada or Mexico. (4.3.1.1.2)
Objectives	<ul style="list-style-type: none"> ● I can find places on a map using latitude and longitude coordinates.
Vocabulary	parallel, latitude, equator, globe, degree, hemisphere, meridian, longitude, prime meridian, coordinates, global address
Procedure	<ul style="list-style-type: none"> ● Review latitude longitude with the saying “Latitude - flatitude, Longitude- loooooonnggitude” ● Pass out student Latitude and longitude sheet ● Read aloud the informational text & pause for fill in the blanks

	<ul style="list-style-type: none"> • Lead students through powerpoint while you practice finding points on a map using coordinates • Have students try one on their own as a lesson wrap up • Latitude and longitude practice sheet with partners/independent
Poetry	<i>If Applicable</i>
Fiction	<i>If Applicable</i>
Saying and Phrases	<i>If Applicable</i>
Writing	<i>If Applicable</i>

Domain Lesson 5	Finding a Place on a Map (CKHG, p.31), 1 day
MN Academic Standards	Create and use various kinds of maps, including overlaying thematic maps, of places in the United States, and also Canada or Mexico; incorporate the “TODALS” map basics, as well as points, lines and colored areas to display spatial information. (4.3.1.1.1)
Objectives	<ul style="list-style-type: none"> • I can explain that coordinates include a unit of measure called a “degree” and describe what a degree measure • I can understand the map terms <i>degree</i> and <i>minute</i> • I can use coordinates to locate points on a map • I can use a grid to locate points on a road map
Vocabulary	Minute, atlas, index
Procedure	<ul style="list-style-type: none"> • Call students’ attention to the Transcontinental Railroad map, photo, and caption on page 25 of the Student Reader • Prompt students to recall that the primary means of travel at that time was by horse or covered wagon, so the building of a railroad for travel across the country was an important new and exciting idea because it made travel from the East to the West much faster. Journeys that used to take weeks and months could now be done in days • Choose two volunteers (of different heights) to be part of a demonstration • Read aloud Chapter 3 “Finding a Place on a Map” from <i>Using Maps</i> Student Reader (Either students or teacher reads) • Ask students to answer objective question, “Coordinates include a unit of measure called a ‘degree.’ What does a degree measure?” on paper • Ask students to choose one of the Core Vocabulary words and write a sentence using the word • Complete “Map Skills Review Challenge: Chapters 1-3” <ul style="list-style-type: none"> ○ Distribute AP 3.1, 3.2 and 3.3
Poetry	<i>If Applicable</i>
Fiction	<i>If Applicable</i>
Saying and Phrases	<i>If Applicable</i>

Writing	<i>If Applicable</i>
Domain Lesson 6	Time Zones (CKHG, p.40), 1 day
MN Academic Standards	<i>Create and use various kinds of maps, including overlaying thematic maps, of places in the United States, and also Canada or Mexico; incorporate the “TODALS” map basics, as well as points, lines and colored areas to display spatial information. (4.3.1.1.1)</i>
Objectives	<ul style="list-style-type: none"> ● I can explain how time zones and Earth’s rotations are connected ● I can identify what the international date line is ● I can understand what happens when you cross the international date line from east to west and west to east ● I can use time zones to calculate the time of day in different parts of the world
Vocabulary	international date line, time zone, axis, rotation
Procedure	<ul style="list-style-type: none"> ● Ask students to think about different trips they may have taken. ● Call attention to the time on the large clock you have brought in for display. Explain to students that the current time in their classroom and (the city, town, or state in which it’s located) is not the same time for everyone around the world. ● Read aloud Chapter 4 “Time Zones” from <i>Using Maps</i> Student Reader (Either students or teacher reads) ● Ask students to answer objective question, “How are time zones and Earth’s rotation connected?” with a partner ● Ask students to choose one of the Core Vocabulary words and come up with an oral sentence using the word ● Complete “Time Zones and Map Skills Puzzles” <ul style="list-style-type: none"> ○ Distribute copies of AP 4.1 and 4.2
Poetry	<i>If Applicable</i>
Fiction	<i>If Applicable</i>
Saying and Phrases	<i>If Applicable</i>
Writing	<i>If Applicable</i>

Domain Lesson 7	How to Read Physical Maps (CKHG, p.46), 1 day
MN Academic Standards	
Objectives	<ul style="list-style-type: none"> ● I can describe what a physical map reveals that a city map does not ● I can recognize that some physical maps show the features of the land ● I can explain that elevation refers to the height of the land ● I can demonstrate how a physical map can help you plan a route

Vocabulary	Valley, physical map, elevation, mountain range, peak, bird's-eye view, sea level
Procedure	<ul style="list-style-type: none"> ● Review what students have learned about maps so far ● Now ask students whether they can think of any particular information those types of maps do not include. ● Read aloud Chapter 5 “How to Read Physical Maps” from <i>Using Maps</i> Student Reader (Either students or teacher reads) ● Ask students to answer objective question, “What does a physical map reveal that city road map does not?” on paper ● Ask students to choose one of the Core Vocabulary words or idiom, and write a sentence using the word or idiom ● Complete “Domain Vocabulary: Chapters 4-5” <ul style="list-style-type: none"> ○ Distribute copies AP 5.1
Poetry	<i>If Applicable</i>
Fiction	<i>If Applicable</i>
Saying and Phrases	Bird's-eye view (idiom)
Writing	<i>If Applicable</i>

Domain Lesson 8	Google Earth, 1 day
MN Academic Standards	Use photographs or satellite-produced images to interpret spatial information about the United States, and also Canada or Mexico. (4.3.1.2.2)
Objectives	<ul style="list-style-type: none"> ● I can use photographs from Google Earth or satellite produced images to interpret spatial information about North America.
Vocabulary	Satellite, Google Earth, spatial information, North America
Procedure	<ul style="list-style-type: none"> ● Use laptops to discover spatial information about cities in North America using Google Earth
Poetry	<i>If Applicable</i>
Fiction	<i>If Applicable</i>
Saying and Phrases	<i>If Applicable</i>
Writing	<i>If Applicable</i>

Domain Lesson 9	Review, 1 day
MN Academic Standards	<ul style="list-style-type: none"> ● Create and use various kinds of maps, including overlaying thematic maps, of places in the United States, and also Canada or Mexico; incorporate the “TODALS” map basics, as well as points, lines and colored areas to display spatial information (4.3.1.1.1) ● Use latitude and longitude on maps and globes to locate places in the United States, and also Canada or Mexico. (4.3.1.1.2) ● Choose the most appropriate data from maps, charts, and graphs in an atlas to answer specific questions about geographic issues in the United States, and also Canada or Mexico. (4.3.1.2.1)

Objectives	<ul style="list-style-type: none"> I can show my knowledge of map skills to answer questions about a map correctly.
Vocabulary	Andes Mountain, Appalachian Mountains, Rocky Mountains, Himalayas Mountains, Urals Mountains, Atlas Mountains, Alps, High Mountains, Relief, physical map, elevation, depression, Thematic, Physical, Political, Climate, Resource, Topographic, Latitude, Longitude, Coordinates
Procedure	<ul style="list-style-type: none"> Review game
Poetry	<i>If Applicable</i>
Fiction	<i>If Applicable</i>
Saying and Phrases	<i>If Applicable</i>
Writing	<i>If Applicable</i>

Domain Lesson 10	Unit Assessment, 1 day
MN Academic Standards	<ul style="list-style-type: none"> Create and use various kinds of maps, including overlapping thematic maps of places in the United States, and also Canada or Mexico; incorporate the “TODALS” map basics, as well as points, lines and colored areas to display spatial information (4.3.1.1.1) Use latitude and longitude on maps and globes to locate places in the United States, and also Canada or Mexico. (4.3.1.1.2) Choose the most appropriate data from maps, charts, and graphs in an atlas to answer specific questions about geographic issues in the United States, and also Canada or Mexico. (4.3.1.2.1)
Objectives	<ul style="list-style-type: none"> I can show my knowledge of map skills to answer questions about a map correctly
Vocabulary	
Procedure	<ul style="list-style-type: none"> Students will take “Unit Assessment: <i>Using Maps</i>”
Poetry	<i>If Applicable</i>
Fiction	<i>If Applicable</i>
Saying and Phrases	<i>If Applicable</i>
Writing	<i>If Applicable</i>

<u>Cross-Curricular Connections</u>	
Art	<ul style="list-style-type: none"> Look and label areas on the map Learn and discuss specific artists location, homeland, and travel
Media	<ul style="list-style-type: none"> Google Earth scavenger hunt, selections from “Got Geography!,” “Interactive 3-D Maps: American History”
Music	<ul style="list-style-type: none"> Find composers’ hometown and/or song’s area of origin on a world map.

	<ul style="list-style-type: none"> ● Discuss natural features of composers' home country and/or song's country of origin. ● Discuss mappable features mentioned in songs. <ul style="list-style-type: none"> ○ Seas <ul style="list-style-type: none"> ■ Blow the Man Down ■ Cockles and Mussels ○ Mountains <ul style="list-style-type: none"> ■ I Love the Mountains ○ Lakes <ul style="list-style-type: none"> ■ Loch Lomond ● Look at a map of the orchestra ● Transcontinental Railroad - Railroad Songs <ul style="list-style-type: none"> ○ She'll Be Comin' Round the Mountain (CK 1st) ○ I've Been Working on the Railroad (CK 2nd) ○ John Henry (CK 2nd)
P.E.	<ul style="list-style-type: none"> ● Orienteering, Geocaching