

Delaware Model Unit

This unit has been created as an exemplary model for teachers in (re)design of course curricula. An exemplary model unit has undergone a rigorous peer review and jurying process to ensure alignment to selected Delaware Content Standards.

Unit Title: Using Maps and Globes
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District: Red Clay Consolidated School District
Content Area: Social Studies
Grade Level: 3

Summary of Unit

Maps are two-dimensional representations of a three-dimensional earth. Projections are used to convert a globe surface into a flat map. An embedded concept is that in making this conversion, either shapes of areas or the size of areas will be distorted. For instance, in the familiar rectangular Mercator projection of the world (a cylindrical projection), the equator and the North and South Pole are the same lengths. Since the pole is a point on the globe, an enormous amount of distortion occurs in the higher latitudes. While Greenland's shape on the globe is retained, its size on the map is greatly exaggerated. And, while a piece of string placed between two points on the globe represents the shortest distance, a straight line between the same points on the Mercator map does not. Students can easily prove this for themselves, and extend the concept by comparing different types of projections (Mercator vs. Peters, for example).

To "read" a map, one must translate real objects on the ground into symbols (icons) and observe the relative placement of these objects in an area seen from above. This is a developmentally-complex task that is best accomplished by first using air photographs of familiar objects such as a school and its surrounding streets, buildings, and open spaces.

For navigation using a photo or map, users must possess a sense of direction based on cardinal compass points and an understanding of scaled distance. Once again, moving from air photographs to maps is recommended as a way to advance understanding. Other means of teaching mapping include looking down from high points, building models, diagramming play spaces, or mapping the classroom.

Students will have already completed [Thinking About Maps and Globes](#) in kindergarten. Teachers wishing to review mental mapping concepts may consider adapting strategies or using assessments as a pre-test.

Stage 1 – Desired Results

(What students will know, do, and understand)

Delaware Content Standards

- **Geography Standard One K-3a:** Students will understand the nature and uses of maps, globes, and other geo-graphics.

Big Ideas

- Patterns
- Spatial thinking

Unit Enduring Understandings

Students will understand that:

- The ways mapped patterns are analyzed and used help solve societal problems.
- Maps can be used to distort or introduce bias into the information they portray.

Unit Essential Questions

- How do differences between flat maps and globes affect understanding of places in the world?
- Why are there different types of maps? How can they be “read” to discover the nature and contents of the real world?

Knowledge and Skills

Students will know ...

- Vocabulary – map, globe, map key, grid system, compass rose, scale, distortion.
- Different types of maps serve different purposes.
- Analyzing maps helps us understand the world and solve problems.

Students will be able to...

- Compare a world map and a globe.
- Identify distortions on a flat map.
- “Read” a variety of maps.
- Explain reasons for different types of maps.
- Analyze maps to solve real-world problems.

Stage 2 – Assessment Evidence

(Evidence that will be collected to determine whether or not Desired Results are achieved)

Transfer Task

This summative assessment is a transfer task that requires students to use knowledge and understandings to perform a task in a setting or context.

The assessment and scoring guide should be reviewed with students prior to instruction. Students should work on the task after lessons have been completed.

Students will have two options for completing this transfer task. Option 1 provides more scaffolding for students that need assistance.

Essential Questions Measured by the Transfer Task

- Why are there different types of maps?
- How can they be “read” to discover the nature and contents of the real world?

Transfer Task

Problem	<p>The state of Delaware is building an amusement park. Your help is needed to decide the best location for the park. The criteria are:</p> <ul style="list-style-type: none">• Easily accessible (roads);• By as many people as possible (population map);• Near a waterway (for the waterslide); and• Cost<ul style="list-style-type: none">▪ Cost of location A is \$500,000▪ Cost of location B is \$600,000▪ Cost of location C is \$300,000 <p>This information must be shared with students. Consider posting this information on the board.</p>
Role/ Perspective	<p>Students are the geographers in charge of choosing the best location for the park.</p>

Option 1

- All maps are provided within this unit.

Product/ Performance

Prepare a [proposal](#). After evaluating the [Maps of Delaware](#), then you must determine the best location in the state of Delaware to build an amusement park and explain your reasoning.

- Step 1: Record the criteria on your [decision-making chart](#).
- Step 2: Complete the decision-making chart while analyzing the maps. Possible locations are marked on the proposal form.
- Step 3: Analyze your chart and make a decision.
- Step 4: Complete the [proposal form](#). Circle the best location for the amusement park on the map of Delaware. Explain your reasoning using details to support your answer.

A document with the maps is provided above. They may also be located and printed from:

- <http://geology.com/state-map/delaware.shtml>
- http://commons.wikimedia.org/wiki/File:Delaware_population_map.png

Option 2: Teachers Assist with Locating Maps and Geo-Graphics

Option 2 follows the same steps as in Option 1, EXCEPT that students are given the responsibility of choosing criteria. Students should not be provided with the criteria noted above in Option 1.

This will present a challenge to the students and require a higher-level of critical thinking to solve this real-world problem. Teachers should assist students to find the information they need.

For example, students may decide that proximity to other amusement parks is an important piece of criteria, in which case teachers should assist student research via the Internet to determine the location of amusement parks in our surrounding area.

As another example, students may decide that an amusement park needs to be built on flat land versus hilly land, in which case teachers should provide students with a relief map of Delaware.

Ask students:

- How did you determine the most important criteria?
- If you could have chosen more than four criteria, would you have done so? Why or why not?
- Did the choices of criteria alter the location decision? Explain.

TEACHER TIPS

- Consider projecting geo-graphics on a large screen in your classroom for a number of students to see. Often these projections are clearer than copies.
- Use atlases and other geographical books you may have in your classroom or the school library.

Rubric

	Score of 1	Score of 2	Score of 3	Score of 4
Explain Reasoning (Options 1 and 2)	Explained reasoning without supporting details	Explained reasoning with very few or weak supporting details	Explained reasoning using some specific details from the maps	Fully explained reasoning using specific details from the maps
Determine the Criteria (Option 2 Only)	Listed one valid criteria	Listed two valid criteria	Listed three valid criteria	Listed four valid criteria

Performance Level	Option 1	Options 1 & 2
Advanced	4	8
Meets the Standard	3	6-7
Below the Standard	1-2	4-5
Well Below the Standard	n/a	2-3

[Click here for Sample Option 1 Responses.](#)

Student Self-Assessment and Reflection

When students are required to think about their own learning, to articulate what they understand and what they still need to learn, achievement improves.

– Black and William, 1998; Sternberg, 1996; Young, 2000.

How a teacher uses the information from assessments determines whether that assessment is formative or summative. Formative assessments should be used to direct learning and instruction and are not intended to be graded.

The Checks for Understanding at the end of each instructional strategy should be used as formative assessment and may be used as writing prompts or as small-group or whole-class discussion. Students should respond to feedback and be given opportunities to improve their work. The rubrics will help teachers frame that feedback.

An interactive notebook or writing log could be used to organize student work and exhibit student growth and reflection.

Stage 3 – Learning Plan

(Design learning activities to align with Stage 1 and Stage 2 expectations)

Lesson One

Essential Question

- How do differences between flat maps and globes affect understanding of places in the world?

Background

Maps are two-dimensional representations of a three-dimensional earth. [Projections](#) are used to convert a globe surface into a flat map. An embedded concept is that in making this conversion, either shapes of areas or the size of areas will be distorted. For instance, on the familiar rectangular [Mercator](#) projection of the world (a cylindrical projection) the equator and the North and South Poles are the same length. Since the pole is a point on the globe, an enormous amount of distortion occurs in the higher latitudes. While [Greenland's shape](#) on the globe is retained, its size on the map is greatly exaggerated. And while a piece of string placed between two points on the globe represents the shortest distance, a straight line between the same points on the Mercator map does not.

Instructional Strategies

Strategy One: Gathering Information Graphic Organizers

Have students complete the [Maps and Globes Anticipation Guide](#).

Give students time in small groups to look closely at world maps and globes. Have students complete a graphic organizer in order to compare maps and globes.

On chart paper, complete a graphic organizer as a class outlining the similarities and differences that the students share. Have students add to, delete from, or modify their own graphic organizers. Click here for a sample [Three-Column Chart](#) or [Venn diagram](#).

Check for Understanding

- How are maps and globes similar and different?


Rubric

2 – This response gives a valid similarity and difference.

1 – This response gives a valid similarity or difference.

Sample Responses

This student scored a 1. He provided two valid differences (portability and scale) but no similarity.

All maps don't show the world and maps are portable. Globes only show the world and they are not portable. 

This student scored a 2. She provided a valid similarity (both contain a compass and key) and two valid differences (shape and portability).

Maps and globes are similar because they both show a compass and both have a key. Maps and globes are different because a globe is the sphere shape and a map lays flat on your desk. Another way they are different is that maps are portable and globes aren't.

Strategy Two: Extending and Refining Identifying Similarities and Differences

Stretching out a map flattens out a globe. The edges of a world map have the most distortion. They are the most "stretched out." Flattening the globe changes the shape of the Earth's features.

Have students pair together to examine a world map and a globe. Conduct a Think-Pair-Share strategy for students to respond to this question:

- Are Alaska and Asia relatively close or relatively far apart in the world?

Some students will say they are far apart. Now have students use a globe to answer the same question. Ask students why it might be easier to see the distance between locations on a globe rather than on a map.

Show students how the sides actually connect and say that this is a common misconception. Ask students to fold a world map to see that Alaska and Asia are relatively close.

Display the familiar rectangular [Mercator](#) projection of the world (a cylindrical projection) in which the equator and the North and South Pole are the same length.

Ask students while looking at a world map: How close is Greenland to the North Pole?

Have students use rulers to estimate the distance on a map compared to a globe.

Measure the globe's distances with a piece of string and then use the ruler to measure that distance.

Compare the poles on a world map versus a globe. Show students these maps of the [North Pole](#) and the [South Pole](#).

TEACHER TIP: A common saying known to geographers is, "Maps that lie flat lie." This fun quote may help students retain the concept of distortion.

Check for Understanding # 1

- When would you use a globe and why?

Rubric (each question)

2 – This response gives a valid occasion with an accurate and relevant reason.

1 – This response gives a valid occasion with an inaccurate, irrelevant, or no reason.

Sample Responses

Lesson 1 – Strategy 2 Check for Understanding

When would you use a globe and why?

I would use a globe when I am looking for a continent or country, to find out where it is.

This student earned a 2, giving a valid occasion of "when I am looking for a continent o[r] (sic) country" with an accurate reason – "to find out where it is."

I would use a globe when I want to see where the continents are and the oceans are located.

This student earned a 1, giving a valid occasion of “when I want to see where the contenets (sic) and the oceans are lockated (sic)” but did not provide a reason.

Check for Understanding # 2

- Why do the edges of a map have the most distortion?

Rubric

1 – This response gives a valid reason.

Strategy Three: Extending and Refining Take a Stand

Pose this question: Which geo-graphic would you use (a world map, a polar map, or a globe) to find the distance between South America and Antarctica?¹

Post three signs in the classroom—WORLD MAP, POLAR MAP, and GLOBE. Have students walk to the sign that they believe is the best answer. Groups of students at each sign should explain why they chose that answer. Students then share out their reasoning. After sharing out, allow students the opportunity to change locations if they have changed their minds about the best answer.

Globe is the best answer because it would be most accurate. Polar map is acceptable as long as the students can support their answer. A world map is not the best choice because of the distortions.

Check for Understanding

- Revisit the [Maps versus Globes Anticipation Guide](#) to clarify student understanding of maps and globes and discuss any previous misconceptions.
- *Fly By Airways* wants to plan a flight path from Wilmington, Delaware to Sydney, Australia. The company wants to fly the shortest route possible and needs to know the exact distance in order to plan for fuel usage. Why should *Fly By Airways* use a globe instead of a map to determine the flight path? Explain your answer.

Click for a [student handout](#) of this Check for Understanding.

TEACHER TIP: Students must be provided with a world map and a globe.

Upon completion of Check for Understanding # 1, go to <http://www.indo.com/cgi-bin/dist> to calculate the exact distance between Wilmington, Delaware and Sydney, Australia. Of course, you can use this site for any two cities. Consider extending this to an activity where you mark cities on a world map and record their distances. This is a fun activity that can incorporate estimating. It also reinforces the distortions on a flat world map.

Rubric (2nd bullet)

2 – This response gives a valid reason with an accurate and relevant explanation.

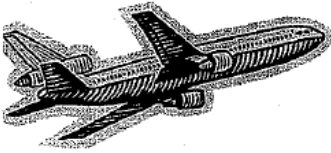
1 – This response gives a valid reason with an inaccurate, irrelevant, or no explanation.

¹ Students might need to be reminded that polar maps are used in Strategy 2.

Sample Responses

This student earned a 2 because she gave a valid reason "*a globe does not have distortion*" and explained it with "*you can find the right length.*"

Check for Understanding Lesson 1 – Strategy 3



Fly By Airways wants to plan a flight path from Bear, Delaware to Sydney, Australia. The company wants to fly the shortest route possible and needs to know the exact distance in order to plan for fuel usage.

Why should Fly By Airways use a globe instead of a map to determine the flight path?
Explain your answer.

Fly By Airways should use a globe instead of a map because a globe does not have distortions so you can find the right length.

This student earned a 2 because she gave a valid reason "*it has no distortion*" and explained it with "*it can tell the right distance.*"

They chose the globe because it has no distortion and it can tell the right distance

Lesson Two

Essential Questions

- Why are there different types of maps? How can they be “read” to discover the nature and contents of the real world?

Instructional Strategies

Strategy One: Gathering Information Cooperative Learning

Using a variety of maps and other geo-graphics, have students locate the following “map features.”

- | | |
|---------------|----------------|
| ▪ Map key | ▪ Scale |
| ▪ Grid system | ▪ Compass rose |

Ask students to work in groups of 2-3 to record the purpose and helpfulness of each feature on the [Mapping Features](#) chart. Extra space is provided for additional features that teachers and/or students find important.

Model the first map or geo-graphic with the students, and then allow them to work in small groups. Ask students to share their recording and add to grids as needed.

Suggestions for locating maps and other geo-graphics:

- Classroom materials and texts, including periodicals
- School library
- [Delaware Geographic Alliance maps and map skills](#)
- www.worldatlas.com
- <http://www.nationalgeographic.com/xpeditions/atlas>
- [Google Earth](#)

Check for Understanding

- Mrs. Becker’s class is planning their visit to the Philadelphia Zoo. The zoo map does not have a scale.
- One student, Drew, feels that is not a problem. He does not really need a scale to visit the zoo. Another student, Grant, disagrees.
- Why might Grant want a scale on the map? Explain your answer.

Rubric

2 – This response gives a valid reason with an accurate and relevant explanation.

1 – This response gives a valid reason with an inaccurate, irrelevant, or no explanation.

Sample Responses

This student scored a 2 by providing a valid reason – “he wants to know how long it is and how far” – and adding relevant support for why he wants to know, in this case to get one “from one animal to someplace else.”

Grant wants a scale because the Philadelphia Zoo is a long area, he wants to know how long it is and how far like from one animal to someplace else.

This student scored a 1 by providing a valid reason – “he might not know how far the places are” – but not adding an explanation to support the reason.

Grant might want a scale on his map because he might not know how far the places are.

This student scored a 0 by not providing a valid reason. Scale is confused with direction (how to get to one place to another, how to get there).

Grant might want a scale so he can see how to get to one place to another. For example, camel rides to the point. You need to know how to get there that is why Grant might want a scale.

Strategy Two: Gathering Information Graphic Organizers

Using a variety of maps and other geo-graphics, have students take a close look at what maps can “tell” them and what conclusions we can draw from looking at a map. Have students’ record findings on the [Types of Maps](#) graphic organizer.

Note that the first column says “Type of Map/Purpose.” You may find numerous maps that do not have a specific type name (such as a relief map), but can better be described by their purposes (such as an interactive map showing the growth of Wal-Mart/Sam’s Club stores across the US—see third website listed below).

Model the first map or geo-graphic with the students, and then allow them to work in small groups of 2-3. Students should share out and add to their graphic organizers as needed.

In addition to the suggestions for locating maps listed in Strategy One, here are a few websites that have various interactive maps/geo-graphics:

- <http://adventure.nationalgeographic.com/americas-best-adventures/interactive-map>
- <http://projects.flowingdata.com/walmart/>
- [Delaware DataMIL](#)
- [Demographic Maps and Reports of the United States 1790 - present](#)
- [NASA Earth Observatory](#)
- [National Atlas](#)
- [World Mapper](#)

Check for Understanding

- Why are there different types of maps? Support your answer with an example.

Rubric

2 – This response gives a valid explanation with an accurate and relevant example.

1 – This response gives a valid explanation with an inaccurate, irrelevant, or no example.

Strategy Three: Extending and Refining Think-Pair-Share

[Click here for a map of the Philadelphia Zoo](#) or teachers may obtain maps directly from the zoo.

Have students respond to questions on the [Reading the Philadelphia Zoo Map](#) worksheet using a Think-Pair-Share strategy.

While students remain in pairs, ask one student to select a location on the map (for example, the Bird Lake). Have his or her partner then use the map to verbally give directions to the zoo's exit. Students can trace the map with a finger to help illustrate the path. Reverse the process so that both students give directions.

Students will be given a list of places in the zoo that they will visit. The [places to visit in the zoo](#) will be in random order. Students may work individually, in partners, or in small groups.

Have students cut the paper into strips along the dotted lines. After studying the zoo map, students should put all the places in a logical order to visit. Students should glue the strips on a piece of paper/construction paper in the decided order.

Students should draw the route on their map with marker. Then the students should write out the directions, sharing with another group to check the accuracy of the directions.

TEACHER TIP: Laminate the maps and have students use overhead markers to mark their routes.

Questions for discussion (that lead to analyzing the map):

- The map key is based on visitor needs. What symbols could we add to the map key for people without a lot of background knowledge?
- Is the size of the animals in "proportion" with the rest of the map? Why do you think the animals are so large in comparison to the zoo?

To ensure that each student individually works on the questions, ask each student to respond and share with a partner before discussing results with the whole group.

Suggestions for modification and/or additional student practice:

- Students choose where they want to visit in the zoo.
- Use a map of a grocery store with list of foods.
- Map of amusement park with list of rides.
- Map of town with list of errands to run.

Check for Understanding

- [Click here for two items](#) that illustrate the assessment of this benchmark. These test items ask students to demonstrate use of a map.

See the links below for more items and sample, annotated student responses.

[2008 Item Sampler - Grades 4 & 6](#)

[2002 Item Sampler - Grades 4 & 6](#)

Strategy Four: Extending and Refining Graphic Organizers

Tell students that the town of [Reedsville](#) wants to build a new park.

Ask the students what information they would want or need in order to make a good decision. Record the ideas for the students to see.

Ask why one would want this information. Possible answers include: proximity to houses, location of other parks, etc.

Students will most likely need to be provided with the background information that the further a location is away from existing homes and buildings, the more expensive it would be to build—due to preparing the land, running electricity and water, building roads, etc.

Have students complete the top of the [decision-making grid](#) with these four criteria:

- Near children;
- Location of other parks;
- Cost;
- Access to roadways.

Model for students how to read the map and determine if the location is good or bad (plus + or minus –) based on each criteria. For example, if the criteria is proximity to homes, meaning you want the location to be near homes, and location C is in an industrial area, then it would be marked with a minus –. If location C is near a neighborhood, then it would be marked with a plus +.

Have students in groups of 2-3 continue to work through the decision-making grid, gradually releasing more responsibility to the students. Have each group of students make a decision and explain the reasons for their choices.

- Which location did your group choose?
- Which criteria were most important to you when selecting a location?

TEACHER TIP: A “correct” answer is not necessarily obvious. The reasoning possibilities are varied. This will lend itself nicely to an effective class discussion.

Check for Understanding

- Why is it important to think about different criteria when making a decision? Explain your answer with an example.

Rubric

2 – This response gives a valid reason with an accurate and relevant example.

1 – This response gives a valid reason with an inaccurate, irrelevant, or no example.

Strategy Five: Application Setting Criteria

Provide students with a copy of the [map sketch](#) of the area around North Star Elementary School. Additionally, go to www.maps.google.com and enter “1340 Little Baltimore Road, Hockessin, Delaware, 19707.” Click and print both the map view and satellite view. This will give the students three views of the same area.

TEACHER TIP: Consider sketching a map of your town and entering the address of your school at the above website to make this activity more meaningful to your students.

Pose this question to the students: Where should a new ice cream shop be built—location A, B, or C? The criteria are proximity to other ice cream shops, access by roads, cost, and proximity to houses. Students should work in small groups to complete a decision-making grid. Students should share out their decisions with supporting reasons. Some would argue that an ice cream shop should **not** be opened near other ice cream shops to avoid the competition, while others would argue that opening an ice cream shop near other shops is the way to go—as long as people are going out for ice cream anyway, they now have another choice. Both answers should be accepted as long as a clear explanation is given.

Suggestions for additional student practice and/or concept review:

- Decide where to build a grocery store.
- Decide where to set up a lemonade stand.
- Decide where to build a baseball field.

Check for Understanding

- Luigi just moved into town from Italy. He wants your advice on where to open a pizza parlor.
- What information would you give him to help him with his decision?

Rubric

1 – This response gives valid criteria.

Resources and Teaching Tips

Literature recommendations to provide background information and/or supplement the unit include:

- *Me on the Map* by Joan Sweeney
- *Where Do I Live?* by Neil Chesnow
- *Maps and Globes* by Jack Knowlton
- *As the Crow Flies: A First Book of Maps* by Gail Hartman
- *Map Keys* (Rookie Read-About Geography) by Rebecca Aberg

Common Core English Language Arts Standards Integrated in Instruction

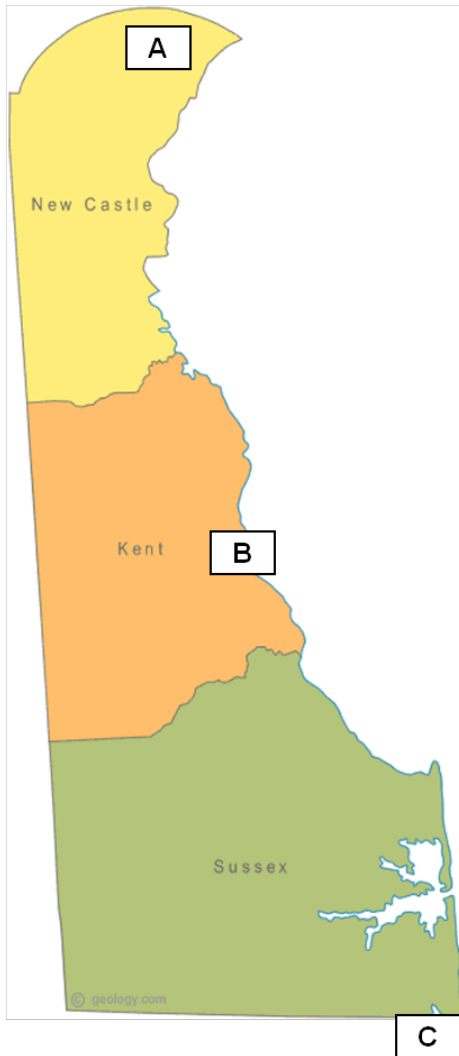
Reading Standards for Informational Text

4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to grade 3 social studies.

Writing Standards

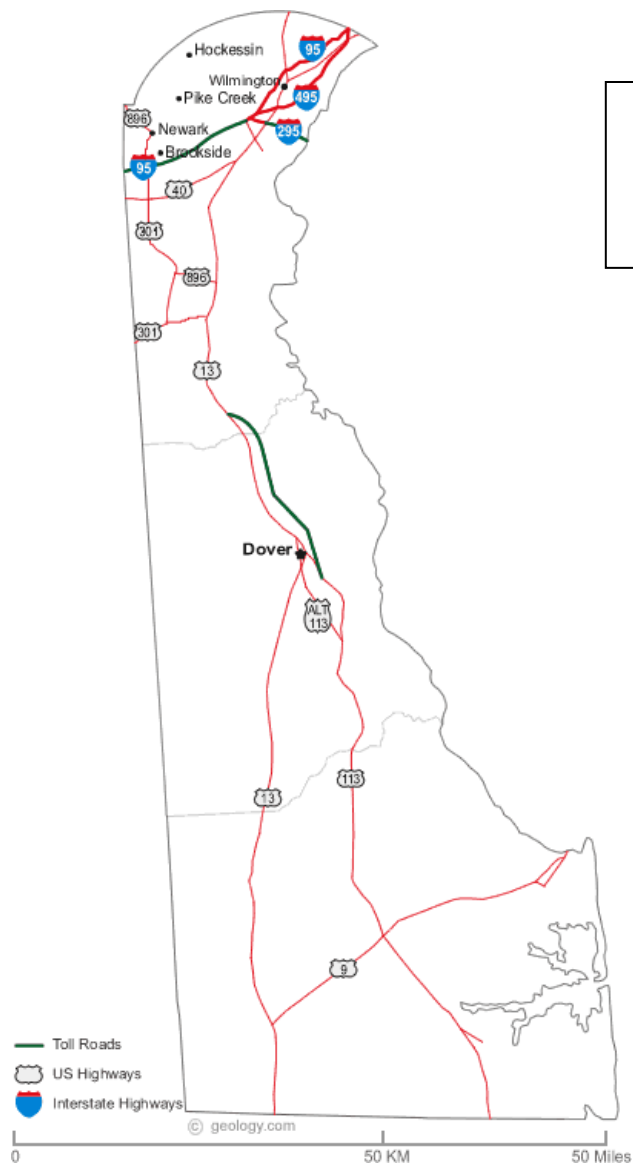
2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Transfer Task Proposal



1. Circle the best location on the outline map of Delaware.
2. Explain your reasoning for your decision. Use details from the maps to support your answer.

Maps of Delaware



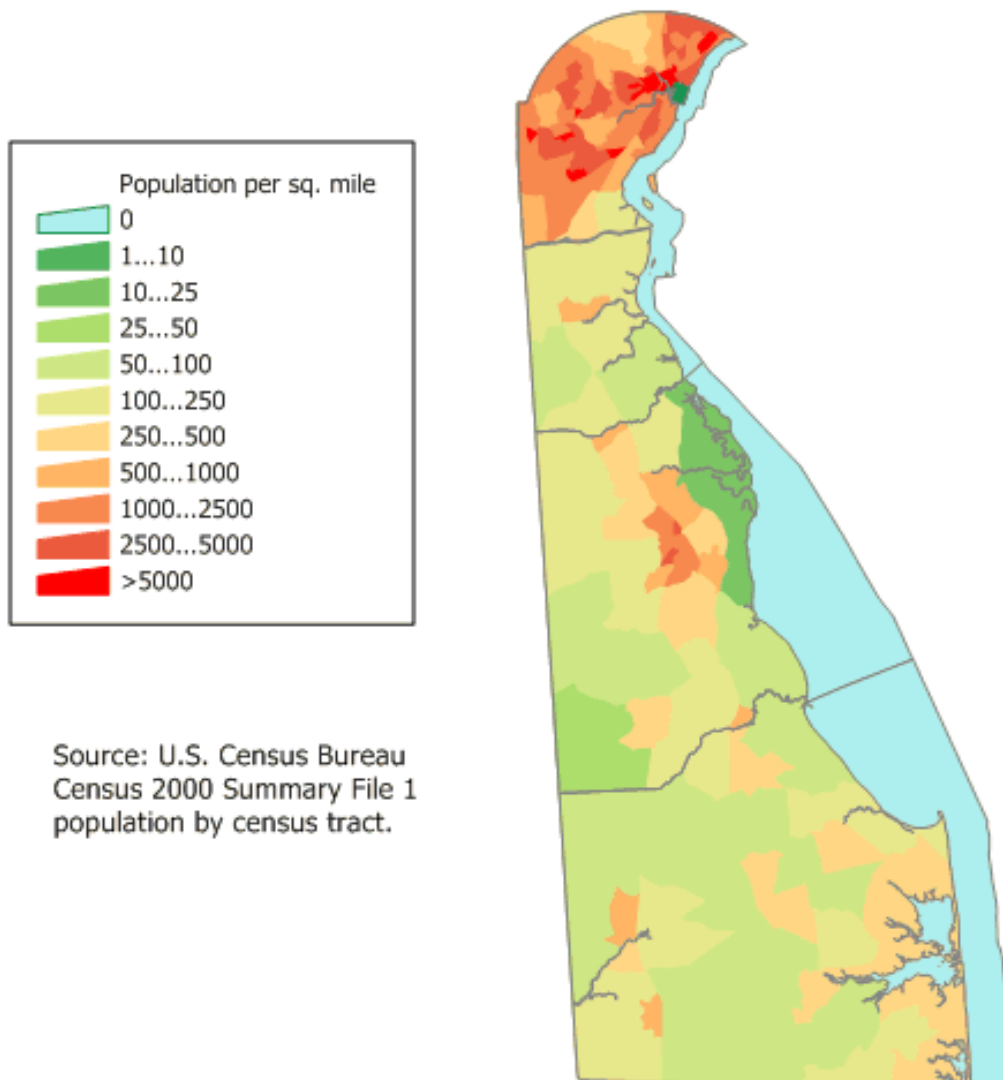
Road Map
of
Delaware

Source

<http://geology.com/state-map/delaware.shtml>

Population Map of Delaware

Source: http://commons.wikimedia.org/wiki/File:Delaware_population_map.png



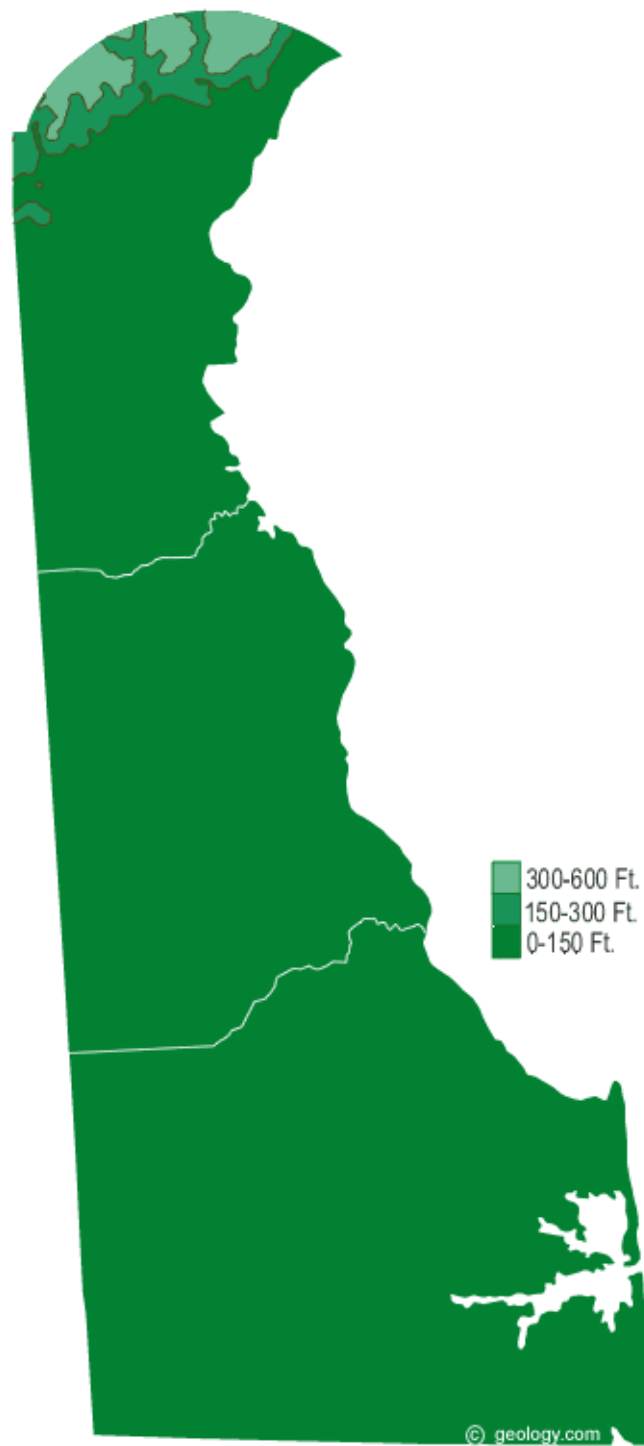
Delaware's Waterways Map



Source

<http://geology.com/state-map/delaware.shtml>

Elevation Map of Delaware



Source

<http://geology.com/state-map/delaware.shtml>

Decision-Making Chart

Criteria	Near Children	Location of Other Parks	Cost	Access to Roadways
Location 1				
Location 2				
Location 3				

Map Projections

Projections: converting three-dimensional globe to two-dimensional map.

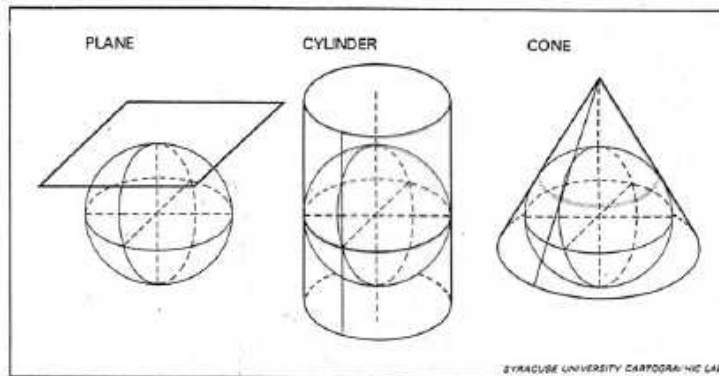
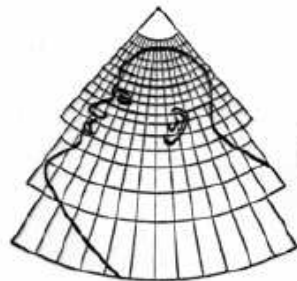
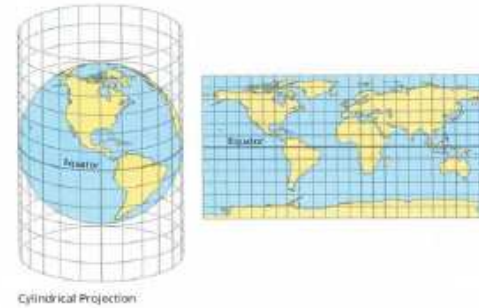


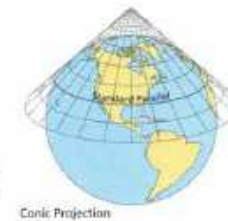
Figure 1. Profiles of developable surfaces and the globe.



Maps can portray accurate area or accurate shape, but not both globe properties on a two-dimensional map, hence all maps are distortions of the real-world



Cylindrical Projection

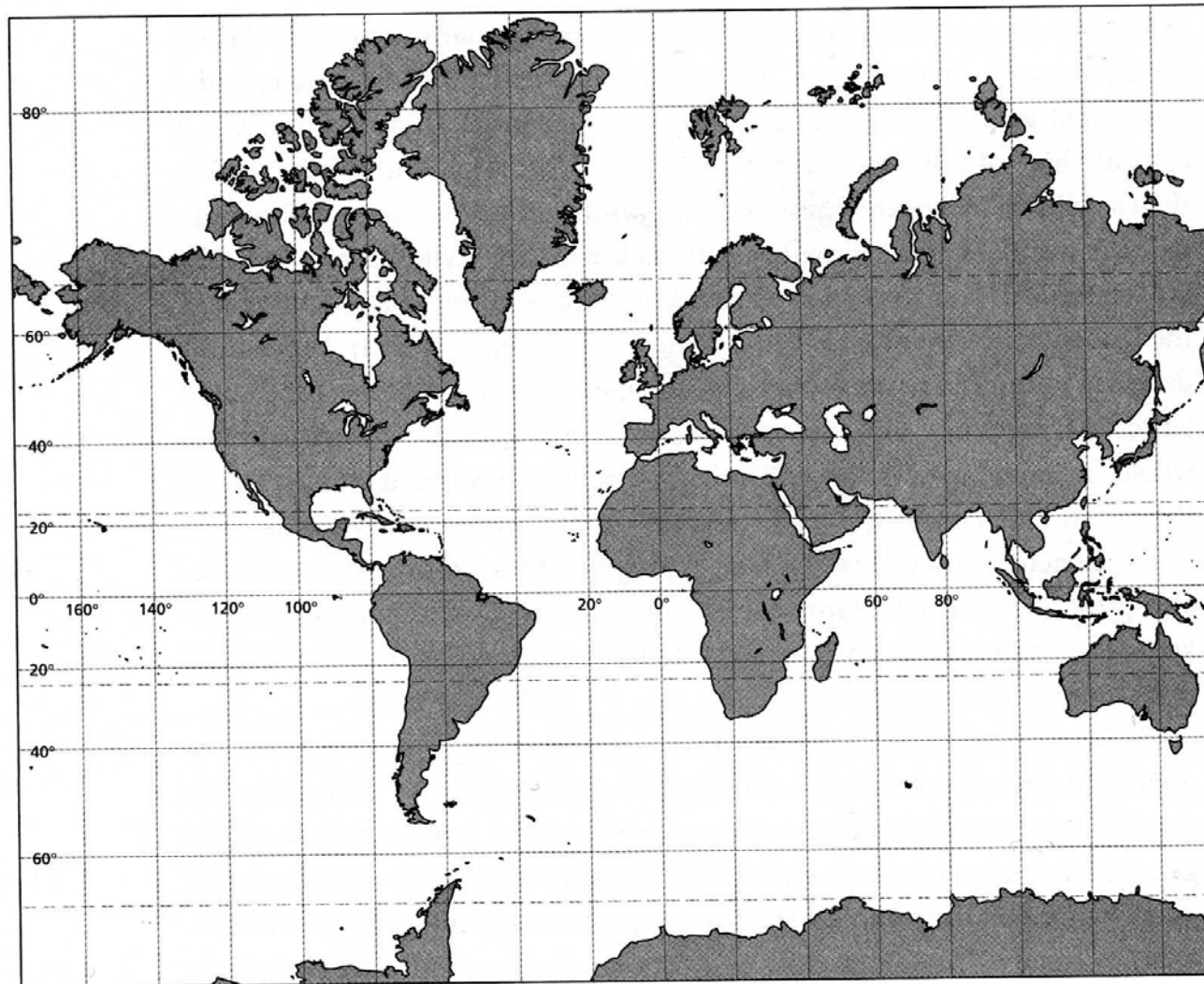


Conic Projection



Azimuthal Projection

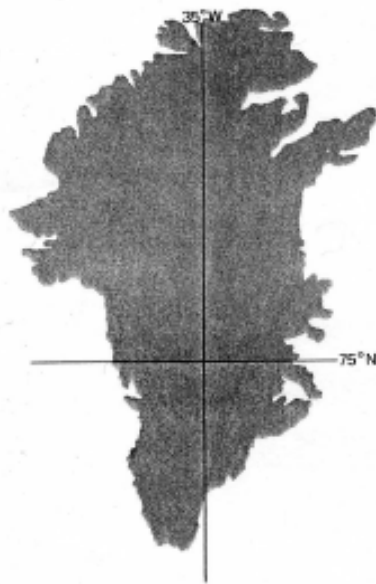
Mercator Projection



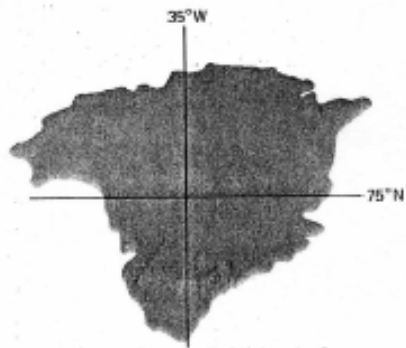
Greenland's Shape

MAPS AND THE PERCEPTION OF SPACE

23



A. Mercator conformal cylindrical projection

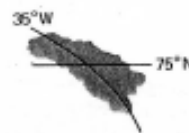


B. Miller's conformal cylindrical projection

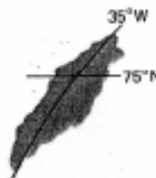
Equatorial scale 1: 40,000,000



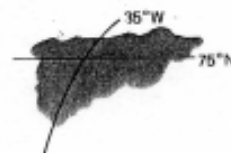
C. Polar azimuthal stereographic projection



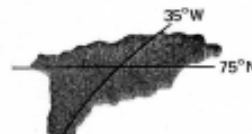
D. Goode's interrupted homolosine projection



E. Sinusoidal equal-area projection



F. Eckert's equal-area projection



G. Mollweide's homolographic projection

Figure 2-5 Variations on a theme. The shape and size of Greenland according to seven different projections, all with the same equatorial scale. The most accurate is c. (Compare with Figures 2-2, 2-4, 2-6, and 2-10.)

Maps and Globes
Anticipation Guide

Directions: Mark each statement with either an “A” for agree or a “D” for disagree.

- 1) _____ A world map is a model of the earth.
- 2) _____ A world map shows the continents and the oceans.
- 3) _____ A world map is just like a globe, but FLAT.
- 4) _____ A globe is a model of the earth.
- 5) _____ A globe shows the continents and the oceans.
- 6) _____ A globe is just like a world map, but a SPHERE.
- 7) _____ A map can be used for giving directions.

Three-Column Chart

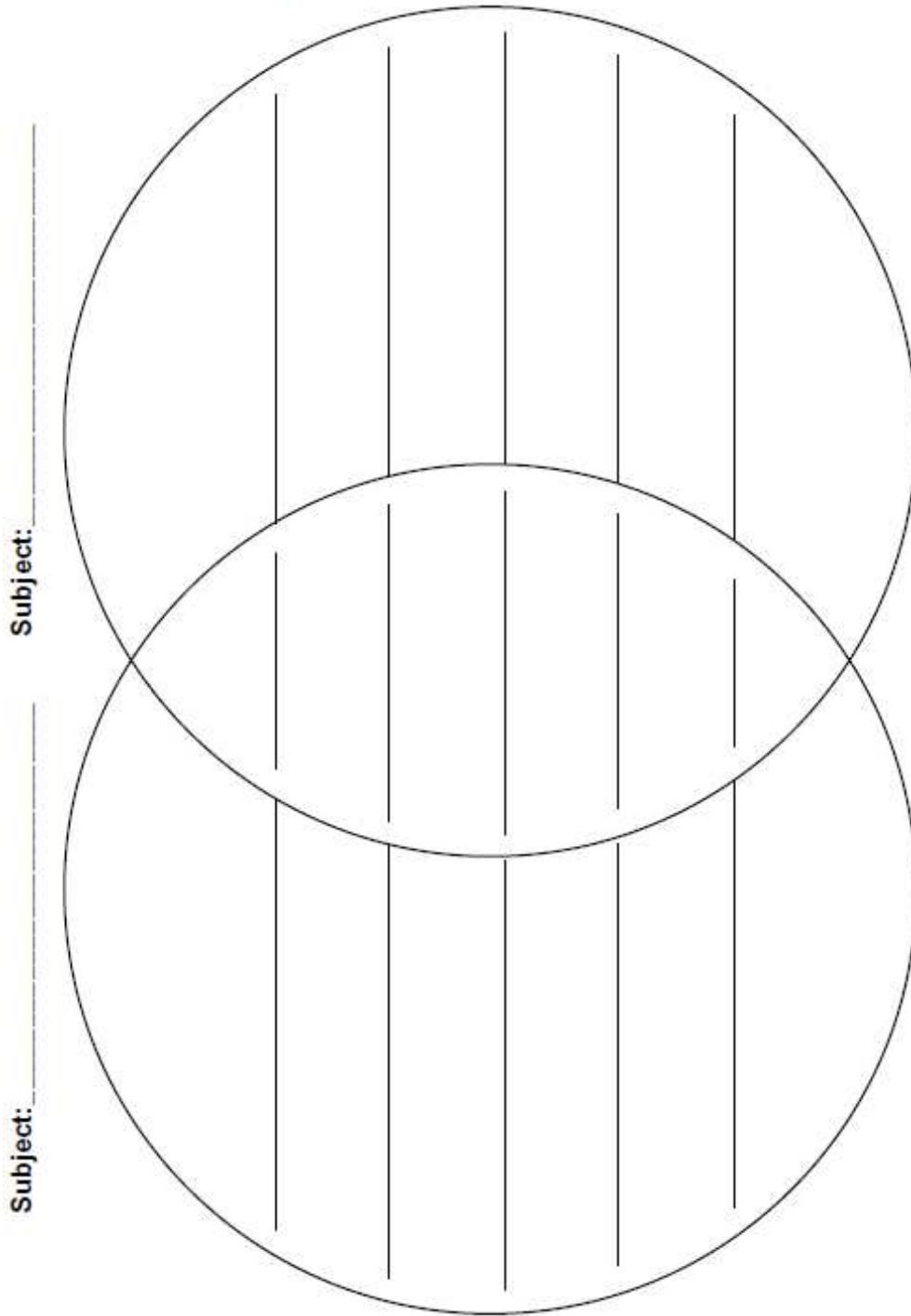
World Map	Both	Globe

Map	Both	Globe
<p>flat</p> <p>distorted view - especially at the poles</p> <p>illustration of the earth</p> <p>tell you how to get somewhere</p>	<p>continents</p> <p>oceans</p> <p>equator</p> <p>shows the location of places</p>	<p>sphere</p> <p>fairly accurate view</p> <p>model of the earth</p>

Venn Diagram

Venn Diagram

Write details that tell how the subjects are different in the outer circles. Write details that tell how the subjects are alike where the circles overlap.



Mapping Features Chart

Feature	How It Is Used	Why It Is Helpful

Feature	How It Is Used	Why It Is Helpful
Map Key	To identify different symbols on a map.	Symbols represent real things on a map.
Scale	To measure the distance from one place to another.	To plan trips. To know whether a piece of furniture would fit in a room or not.
Grid System	To identify a location of a place on a map.	To find places quickly and easily.
Compass Rose	To help describe position and movement.	To help find places and describe location.

Types of Maps Organizer

Type of Map/ Purpose	What the Map “Says”	What We Can Conclude From the Map

Type of Map/ Purpose	What the Map “Says”	What We Can Conclude From the Map
Walmart (Flowing Data Map)	Walmart stores first appeared in Arkansas.	Walmart built more and more stores around the original in Arkansas and eventually almost every town had a Walmart.

Reading the Philadelphia Zoo Map

Directions: Take a close look at the Philadelphia Zoo Map. Then respond to the following questions.

1. Name a mapping feature on this map. Tell how it is used. Tell how it is helpful.

2. What mapping feature do you think this map needs? Why?

3. Who would want to use this map?

4. Name one way a person might use this map.

Places to Visit in the Zoo

Cut along dotted lines.

Eagle's Roost

African Plains

Zoo Shop

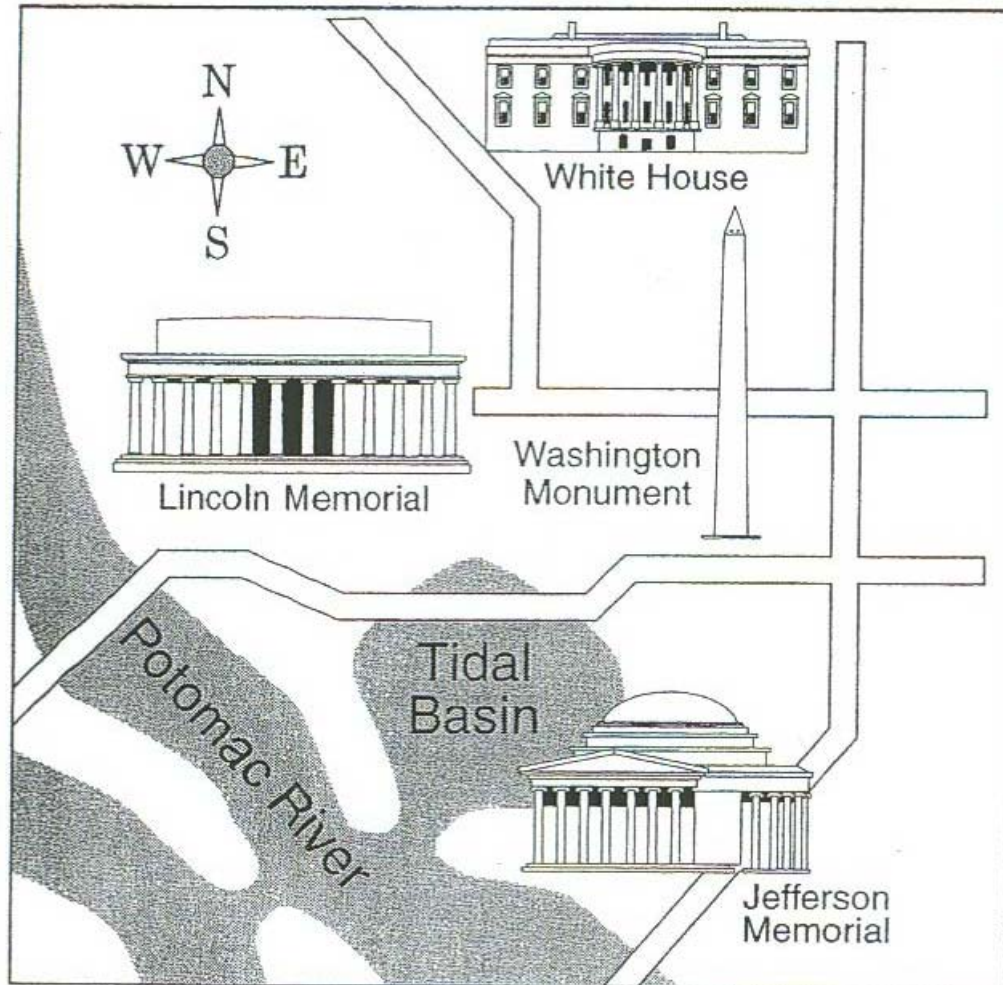
Face Painting

Camel Rides

McNeil Avian Center

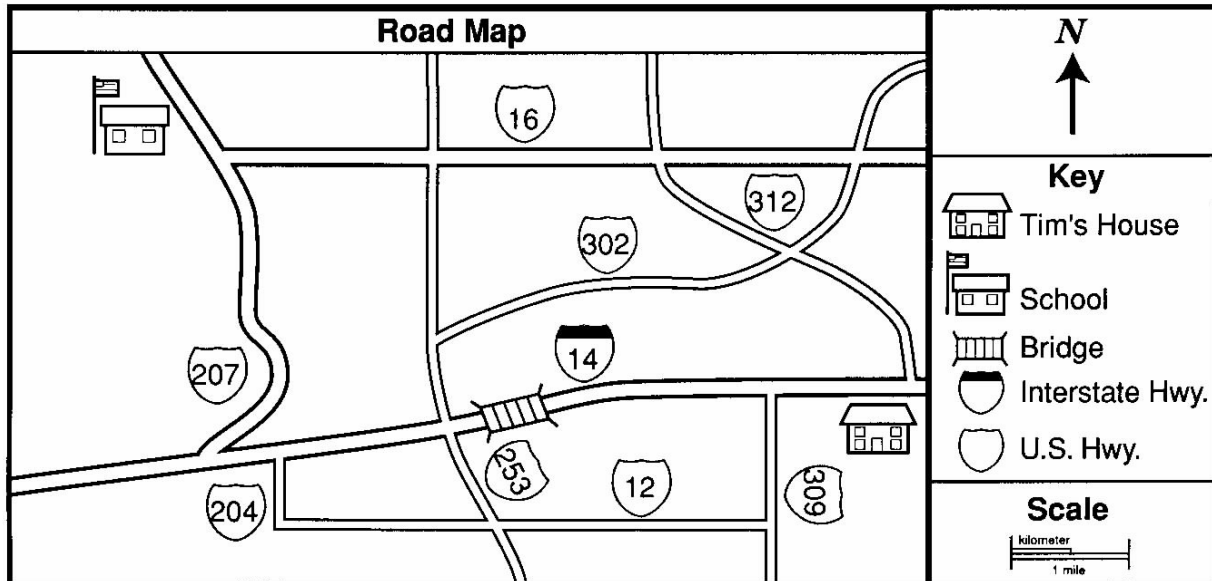
Lesson Two, Strategy Three

This map shows the Tidal Basin in Washington, D.C.
Which building is northwest of the Tidal Basin?



- A. White House
- B. Washington Monument
- C. Jefferson Memorial
- D. Lincoln Memorial

Tim's mother takes him to school each morning. She drives west on Interstate Hwy. 14 and then north on U.S. Hwy. 207. For a week, the bridge on Interstate Hwy. 14 will be closed. She must plan a new route for the drive to school.



Use the map to write directions for a new route to school. Explain why you chose this route.

[illegible]

Town of Reedsville



The town of Reedsville would like to build a new park and playground. The map shows 3 sites that are being considered for a new park. Park 1 will cost \$5,000 to build. Park 2 will cost \$10,000 to build. Park 3 will cost \$3,000 to build. Which site should the town choose?

Decision-Making Grid

Criteria	near children	location of other parks	cost	access to roadways
Location 1				
Location 2				
Location 3				

Map Sketch

