1e

Maps and the Pictures in our Heads

When we list types of media, we seldom include maps. But maps, as mass produced representations, are ideal for deeper explorations of media "constructedness" – for example, that mediated messages contain both truths and distortions, that choices of what to include and exclude can have political and social consequences, and that media cloaked in a scientific "aura of credibility" are seldom questioned. Through uncovering the bias and subjectivity inherent in maps, students puncture the false assumption that maps (or any media) are ever truly "objective."

Objectives: Students will be able to…

1. Evaluate the advantages and limitations of different maps.
2. Deepen the process of understanding that all media are created and therefore, like maps, contain both truths and distortions.
3. Explain how the design of a map (scale, color, projection, etc.) can influence our understanding of what it represents.

Correlation With McRel National Standards:

Language Arts Standards and Benchmarks

- Grades 3-5: (S9/B1), (S10/B2)
- Grades 6-8: (S10/B7)
- Grades 9-12: (S9/B10)

Geography Standards and Benchmarks

- Grades 6-8: (S1/B1, B4)
- Grades 9-12: (S1/B1)

Materials/Preparation:

1. World Maps: Mercator, Peter's Projection, What's Up? South! Map and a globe. Some of these maps can be found at: **www.petersmap.com**
2. Copies of Handout 1E #1 "Challenging Maps" or 1E #2 "A Quick Quiz about World Maps" with relative land size questions. #1 is for elementary grades and #2 is for upper grades.
3. For a wealth of instructional strategies on helping kids make their own maps – from floor plans or their bedroom to a map of the neighborhood – check out *I See What You Mean: Children at Work with Visual Information*. (If not already available in your media library, order through CML/GPN's online catalog at **www.medialit.org/catalog**. Put product number "1036" in the keyword search window.)

Teaching Strategies:

I. Basic Mapping

- Show a globe and discuss our planet and how maps can show us our world. Ask:
  - ? What information can we learn from a map?
  - ? What are some different types of maps?
- Show the *Mercator Map* and discuss the difficulty of getting a round object onto a flat surface (from three dimensions to two dimensions). Ask:

- ? Can maps be misleading? How?
- ? What information do we not get from maps?

II. Comparing Relative Land Size

- Distribute Handout. Have student teams compare and discuss relative size of the landforms pictured in the handout. They should begin by answering just the first question, comparing the relative land size of Europe vs. South America.
- In a whole group discussion, review their answers to the first question. Once they know the correct answer, discuss different world maps, analyzing their advantages and disadvantages. View the *Peter's Projection Map* and the *What's Up? South! Map.*
- Have students return to their team to discuss and answer the remaining question(s).
  - ↶ Younger students compare Greenland vs. Africa.
  - ⤴ Older students compare Scandinavia vs. India and Greenland vs. China.
- With the whole class, have students present and defend their answers. Use different maps to arrive at answers with which everyone can agree.

III. Making Maps

- To apply their understanding of 'constructedness,' have students make different types of maps: of their classroom, of their street, or neighborhood, or bedroom, three-dimensional
- maps, picture maps, etc.

  Analyze student made maps by discussing what things each person included and what items are missing. Also question what things are drawn bigger and what things are drawn smaller.

  Scale, projection and symbols are three aspects of maps that involve many decisions and affect the final look of the map. For older students, the lesson can be expanded in both depth and breadth by using the following suggestions for further inquiry.

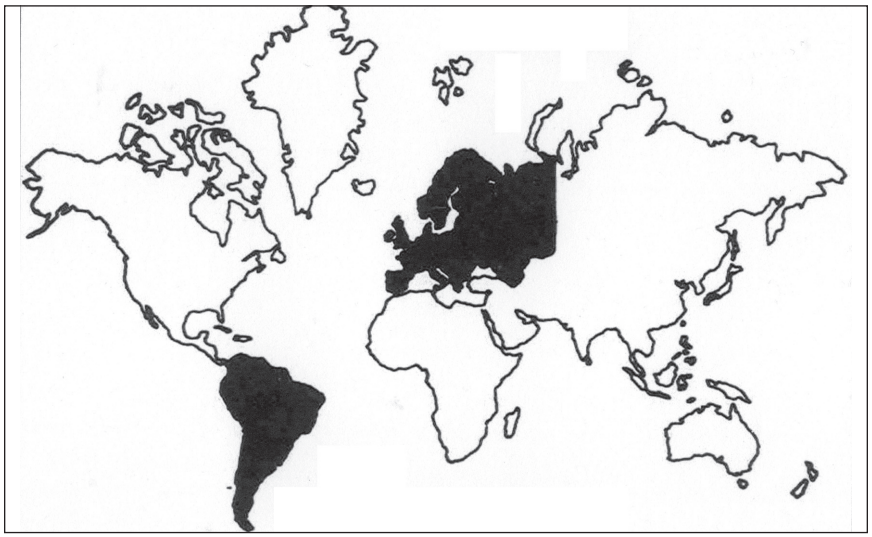
  ⤴ **Scale:**
  1. ***Compare*** a small-scale map to a large-scale map. For example: compare a world map to a state map, or compare a community map to a map of the classroom.
  2. ***Identify*** the ratio of a classroom map to the actual thing: one piece of paper is equal to the entire room.
  3. ***Compare*** that ratio to the ratio of a world map.
  4. ***Discuss*** the following questions: What *detail* is missing from a large-scale map that is included in a small-scale map? What are the advantages and disadvantages of including or excluding those *details*?

  ⤴ **Projection:**
  1. ***Identify*** from what perspective we are looking at the map: are we above looking down, from below looking up, or from a side?
  2. ***Discuss*** the following questions: What is in the middle of the map? What is on top and what is on bottom? How else could we view this same scene and make a different map? Why is this view better or worse than another view?

  ↶ **Symbols:**
  1. ***Identify*** and record symbols used on different maps.
  2. ***Analyze*** what symbols are easiest to read and recognize, then ask why.
  3. ***Create*** symbols for class maps.
  4. ***Analyze*** the colors used in maps and ***experiment*** with changing colors for different effects.
  5. ***Experiment*** with a foreign map in a different language.

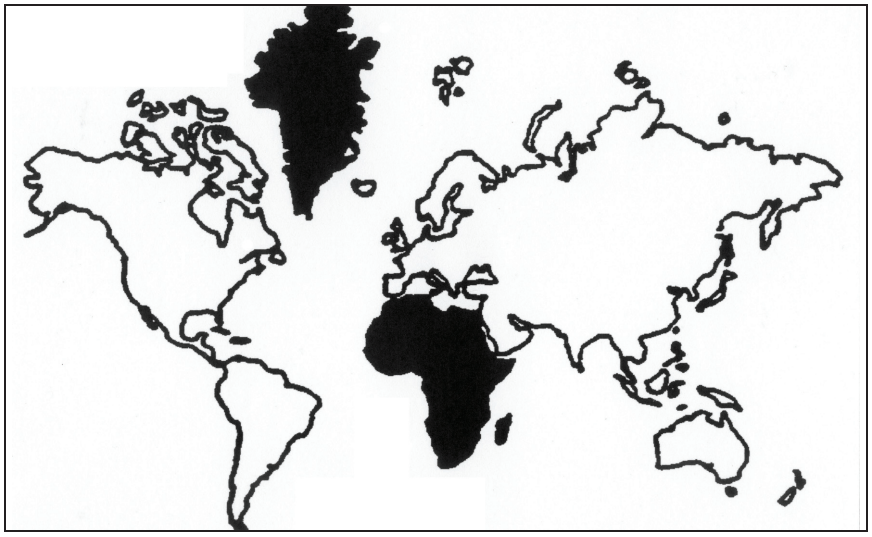
Thanks to Costas Criticos for the idea of this exercise described in *La Educacion para los Medios de Comunicacion*, Roberto Aparici, ed.; Mexico: Universidad Pedagogica Nacional, 1997.

Challenging Maps



1. Compare the land size and choose the best sentence.

- ❑ Europe is the same size as South America. (Europe = South America)
- ❑ Europe is smaller than South America. (Europe < South America)
- ❑ Europe is larger than South America. (Europe > South America)

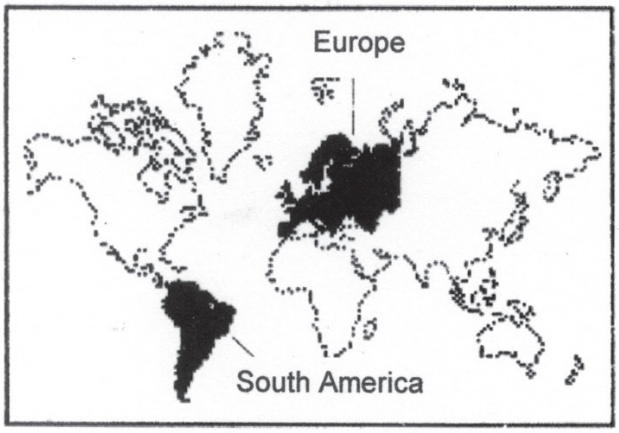


2. Compare the land size and choose the best sentence.

- ❑ Greenland is the same size as Africa. (Greenland = Africa)
- ❑ Greenland is smaller than Africa. (Greenland < Africa)
- ❑ Greenland is larger than Africa. (Greenland > Africa)

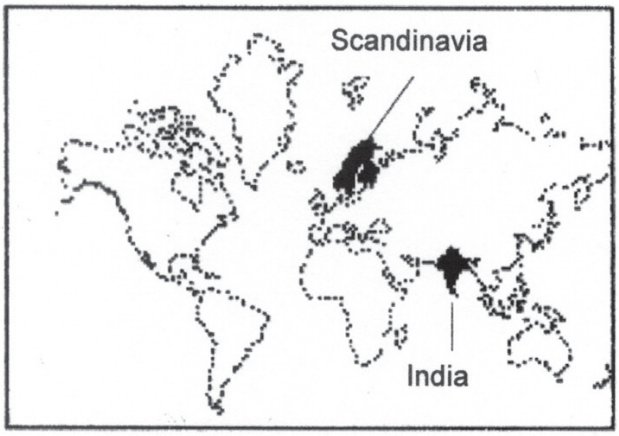
A Quick Quiz about World Maps

Compare the relative land size and choose the box that best completes each sentence.



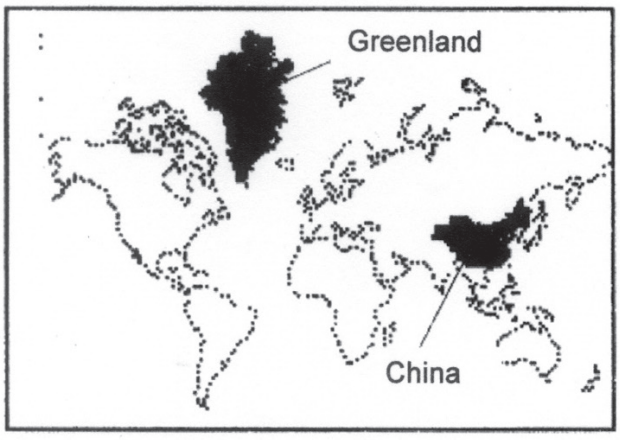
South America is

- ❒ the same size as Europe.
- ❒ two times larger than Europe.
- ❒ half the size of Europe.



Scandinavia is

- ❒ the same size as India.
- ❒ three times larger than India.
- ❒ one third the size of India.



Greenland is

- ❒ the same size as China.
- ❒ four times larger than China.
- ❒ one fourth the size of China.