

Instructor's Teaching Guide for *Many Ways to See the World* **DVD from ODT, Inc.**

These materials were prepared by Ann Hopkins of ODT, and designed to be used with middle school students and older. We plan to include further detailed lesson plans and exercises on this web page and would appreciate your contributions to this copyright-free resource section. Please submit your ideas to BAbramms@aol.com.

For a brief and general class discussion of the film (10-20 minutes), you can ask:

Which map story had the greatest impact on you? And why?

Which map did you like the best? And why?

Do you think all maps are biased? Or have a hidden agenda?

And if so, why or why not?

The above can also be a written assignment, to be collected & critiqued by the teacher.

For a more comprehensive discussion of the film, let's go back to the narrator's statement of the film's goals:

There are three powerful messages conveyed through an analysis of maps:

First: We can understand the world only if we're willing to see things from multiple perspectives

Second: To understand "reality" it must be viewed from many vantage points

Third: One person's voice can impact the planet!

Our overall goal:

To recognize that maps DO make a difference in how we see and interpret the world!

Here are some specific objectives of the DVD:

To understand that the world can be represented accurately in more than one way.

To realize that each mapmaker has a specific purpose when he/she sets out to make a map.

To understand that a map can offer significant insight into a culture, a people, or a point in history.

For a 30-50 minute class discussion here are additional questions that might be asked after viewing the DVD:

What can you learn about maps from the exercise of peeling an orange?

Which map surprised you most? Why?

Before you watched the DVD did you think that one map was correct?

If yes, which one?

What do you think now?

Do you think that ~~each~~ of the projections you saw were real maps?

How do you know?

How can you tell what the purpose of a map is?

Can you make a checklist of questions that could help you determine a map's purpose?

(See SEEING THROUGH MAPS, © 2006 edition, Chapter 3, pages 36 –40, and also page 126)

What was the purpose of the Mercator map? How do we know?

Do you think Mercator knew that his map had limitations?

What was the purpose of the Peters map?

How can you be sure?

What is the purpose of the Toronto-centered map?

Would it be possible to make a map with your city or town in the center?

If so, why hasn't it been done yet?

What was the purpose of the illustration of the face?

Do you agree that all four images can be of the same face?

Who has taken a class on drawing or photography?

What can you tell us about perspective, and how that impacts your subject?

Does every map have some distortion?

If so, why?

Can you identify a particular distortion in one of the maps you saw?

Why did the mapmaker allow the distortion?

What is an equal area map?

Why do you think they have not been very popular?

Why is an equal area map important?

What unique perspective did the space shot of 1972 provide?

Have you heard any stories about how "the view from space" had an impact on the astronauts?

Do you think that if *you* were an astronaut, seeing of the view of the earth that they did, that it would change how you feel about the world?

Which map did President Carter take with him when he accepted the Nobel Prize?

Why did he choose this one?

What are two of the positive characteristics of the Hobo-Dyer projection?

What are two of the distortions on the Hobo-Dyer projection?

State two important things you have learned about map projections from this video.

THE NEXT SERIES OF OBJECTIVES EMPHASIZES either a personal growth focus, a focus on geography, or a systemic analysis of how we see the world. Many require a level of sophistication and ability to be self-reflective that may be beyond some junior high students.

To emphasize the personal growth of your students you may wish to ask:

Why is it important to learn to see things from other points of view?

Have you ever had a fight or argument and not been able to understand someone else's point of view? What was the result?

Have you ever felt that your views have been expanded by meeting someone whose background or culture was very different from yours? How did that make you feel?

Do boys see things differently from girls? Why or why not?

What does it feel like when you are the only boy (or girl) in a group of all girls (or all boys)?

Do you believe that reality (as it shows up in individual situations, as well as when looking at "the world") *can* be seen from many perspectives? *Should* it be?

Is there any reason why not?

If you agree that "seeing the world" from many different perspectives is a valuable approach to understanding, why is it so hard?

Do you believe that one person's voice can make a difference?

Can you think of other situations in politics, science or sports where one person's voice did make a difference?

Do you believe that there is only one "best way" to attack a problem?

Why might it be useful to try different approaches for solving a problem?

How do a person's visions (or dreams) have an impact on the world?

You heard about Paul Hoffman's dream that resulted in the creation of earth stickers.

You learned of others in the film who were passionate about some aspect of seeing the world. Why is passion important?

What are you passionate about?

If you believed you could really change the world, how would you begin?

If you knew the president of the US would read a letter you wrote, what would you say?

Buckminster Fuller's map was ignored from 1927 until 1943 (when it appeared in *LIFE*).

Why do you think he was ignored for sixteen years?

Do you know of other people who stick with their passion, even if they don't get appreciated very much for it?

Name some examples from history or current events.

Stuart McArthur's teacher criticized him. How do you think that made him feel?

Have you ever been criticized by your parent or teacher, even though you felt you were right? How did that make you feel?

Do you believe Stuart really thinks that Australia should be "Ruler of the universe"?

Do you think that Stuart's use of humor on his map made people more interested in his map?

Tom Van Sant came up with his vision for a map after being in a state of meditation for ten days. Do you know anyone that meditates?

Van Sant, an artist, dreamed up his image of earth from space, but it also required a cartographer (Arthur Robinson) to provide a mathematical projection to assemble the image and an earth scientist (Lloyd Warren, from the Jet Propulsion Laboratory) to refine and complete this work. Do you think collaborations between artists and scientists are a good idea? Can you imagine some difficulties that might arise?

Paul Breiding's population map looks so different.

How does that map influence how you think about the world?

Does the size of China and India worry you? Why or why not?

What does each square on the population map represent?

Why is Greenland not on the map? Or Iceland?

When Martin Luz wrote his email to Terry Hardaker at Oxford Cartographers, do you think he imagined he could make a difference? Why or why not?

Do you think that showing the disputed border of Tibet is important? Why or why not?

What would you like to change about the world?

To emphasize geographical knowledge of your students, in addition to the objectives listed on pages 1 & 2, you may wish to ask:

Describe how one translates the round globe into a flat map.

Make an argument for the position that flat maps are superior to globes.

Make an argument for the position that globes are superior to flat maps.

Is there a compromise position?

Define the following terms:

Cylindrical Projection

Azimuthal Projection (Az – im – **muth-** al)

Conical Projection

Equal Area Projection

Compromise Projection

Why do you think that compromise projections have been the most widely used?

Why does selecting a certain projection depend upon your needs?

Can you give examples of why you would want one projection over another?

Make a distinction between a “map” and the “projection” the map uses.

The “*What's Up? South!*” Map uses a Van der Grinten projection. The film producer tried to find a picture of Van der Grinten, but could not. Do you want to try?

The Van der Grinten projection was used by the National Geographic Society for 66 years.

Why do you think they changed in 1988?

Why does reversing the poles on the Van der Grinten make it look so unusual?

How can you explain it to someone who thinks it is “just wrong.”

The complete set of Learning Objectives for the companion book, SEEING THROUGH MAPS, that the DVD was based upon, can be found at www.diversophy.com/tr.htm

Here are some larger, bolder, systemic questions that can be used with older students:

How do maps impact how we think about the world?

What is the political impact of seeing different world maps?

Louis XIV of France was presented with a new and more accurate map of his country. An earlier map of France (drawn in 1679) was set down, and a new map (based on astronomical tables and published in 1693) was superimposed upon it. The “new” country was 20 percent smaller! What a shock! Which prompted Louis to complain that he had lost more territory to his mapmakers than he ever had to his enemies!

(See chapter 6 in SEEING THROUGH MAPS.)

Do you think that Mercator’s map was Eurocentric?

Make an argument to defend the map.

Do you think the map’s bias was deliberate?

Was Mercator a racist?

Why do you think some people still prefer a Mercator map?

Can you suggest some ways to encourage changing their preference?

Do you think most people realize that the equator is 2/3 the way down the map on most Mercator world map images?

Why or why not?

The presenter said that, “every map, in order to show the truth, also has to lie.”

Do you agree or disagree?

Can you think of other examples that only show one side of an issue?

After Apollo 17, what did it mean for humans to see the earth without the boundary lines of countries?

Do you think some people believe you can see the country boundaries from space?

What does “Gaia consciousness” mean? Where does it come from?

How is it related to Earth Day or the environmental movement?

[See footnote on last page for more details]

Do the various directions for NORTH on the Fuller map present a problem for you?

Why or why not?

Which map do you think is most fair to all people: the Peters or the Population map?

Why are nation states represented, and not people?

What would a map of Iraq look like based on religious/ethnic affiliation?

Do you like Leonardo daVinci’s map? Why or why not?

See the activity at www.odt.org/hdp/hdpactivities.htm which involves slicing the Hobo-Dyer map in half to show centering effects.

Why didn’t the presenter, map publisher Bob Abramms, handle the complaint about the Tibet border personally?

What changed the cartographer’s mind about including the border?

Does “the squeaky wheel get the grease”? Or is some other rule at play?

How often should a map be updated? Check the dates on the maps in your classroom.

Lastly here are some benefits from watching the video and other ways to think about issues that are brought up by the process or delivery of the message (these are quite a bit “fuzzier” than objectives):

How are you impacted by the movement – of the images on screen; of the narrator?
Comment on the enthusiasm of narrator;

Note there is no claim to know everything; the use of humor, and his admission of feelings of omnipotence. This makes the narrator seem human, not cardboard or scripted.
How does this style impact the message of the film?

There is a linking of mapmakers to maps through photos – e.g. Mercator, Da Vinci, McArthur, Breiding, Van Sant, etc.

Does this make the cartographers more real?

If so, why?

How can you use visual examples to support arguments you want to make?

The film used practical examples to illustrate points – e.g., light bulb, peeling the orange; these had universal appeal and were easy to understand. Try to guess how many times the presenter gave the exact same speech before taping the session seen on the film?

(ANSWER: 66 times over a 10 week period in 7 cities).

How does the use of examples throughout the film reinforce the points made?

- e.g. shape of Australia in the Toronto-centered map;
- face drawn according to several projections.

Replay the section of Martin Luz’s letter to Terry Hardaker. Watch the visuals.

These images were selected out of hundreds of photos.

They were designed to influence you to be favorable towards Tibetan rights .

Did they work? Why? How?

Ending with the story of how one person can change things reinforces the message on maps. Maps make a difference, and you can make a difference too!

See if you can lead students to think of ways they can be more powerful in their lives.

Teachers and trainers are invited to submit additional objectives and lesson plans. We welcome your contributions. Email them to: Babramms@aol.com.

Footnote on Gaia (courtesy of <http://www.oceansonline.com/gaiaho.htm>):

"Gaia" is from the Greek.

What is Gaia?

The Gaia Hypothesis proposes that our planet functions as a single organism that maintains conditions necessary for its survival. Formulated by James Lovelock in the mid-1960s and published in a book in 1979, this controversial idea has spawned several interesting theories and many new areas of research. While this hypothesis is by no means substantiated, it provides many useful lessons about the interaction of physical, chemical, geological, and biological processes on Earth.

Throughout history, the concept of Mother Earth has been a part of human culture in one form or another. Everyone has heard of Mother Earth, but have you ever stopped to think who (or what) Mother Earth is? Consider these explanations.

The Hopi name for Mother Earth is Tapuat (meaning mother and child), symbolized by a form of concentric circles or squares. These forms symbolize the cycle of life, the rebirth of the spirit, its earthly path, and, possibly, its return to the spiritual domain. The lines and passages within the "maze" represent the universal plan of the Creator and the path that a person must follow to seek enlightenment.

A more imposing definition of Mother Earth might be found in the Hindu goddess Kali. She is the Cosmic Power, representing all of the good and all of the bad in the Universe, combining the absolute power of destruction with the precious motherly gift of creation. It is said that Kali creates, preserves, destroys. Also known as the Black One, her name means "The Ferry across the Ocean of Existence."

The ancient Greeks called their Earth goddess Ge or Gaia. Gaia embodies the idea of a Mother Earth, the source of the living and non-living entities that make up the Earth. Like Kali, Gaia was gentle, feminine and nurturing, but also ruthlessly cruel to any who crossed her. Note that the prefix "ge" in the words geology and geography is taken from the Greek root for Earth.

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