

## INTERPRETING AERIAL PHOTOGRAPHS

### Performance Standard 17A.F

Interpret a satellite image of major land and water features on Earth accordingly:

- *Knowledge*: Identify and describe major land and water features, states, cities, directionality, atmospheric conditions, and other features on an aerial photographic image of Lake Michigan and the surrounding area.
- *Reasoning*: Explain what an aerial photograph can tell you that a physical map cannot.
- *Communication*: Write an explanation that is well-focused, well-organized and well-detailed; express all ideas in a way that provides evidence of knowledge and reasoning processes.

### Procedures

1. *In order to understand, locate, describe and explain places, regions and features on the Earth (17A)*, students should experience sufficient learning opportunities to develop the following skill:
  - Interpret aerial photographs or satellite-produced images to locate and identify physical and human features (e.g., mountain ranges, rivers, vegetation regions, cities, dams, and reservoirs).
2. Have students review and discuss the assessment task and how the rubric will be used to evaluate their work.
3. Ask students to study the satellite image and do the following:
  - Indicate North with an arrow (toward the upper right-hand corner).
  - Label the atmospheric processes that have formed the white/light colored objects in the lower portion of the image (clouds) therefore the atmospheric process is condensation.
  - Label the body of water in the center of the image (Lake Michigan).
  - Label three states that are visible in the image (Illinois, Wisconsin, Michigan, Indiana, Ohio)
  - Locate an urban area in the center of the photograph and label it (Chicago, Gary, and Milwaukee).
  - Indicate a peninsula by circling it or labeling it (Door County or lower Michigan).
  - Locate and draw a line along a river valley (Illinois River and Wabash River).
4. Ask students to write a one-page essay addressing the following questions:
  - What can an aerial photograph tell you that a physical map cannot?
5. Evaluate each student's work using the Social Science Rubric as follows and add the scores to determine the performance level:
  - *Knowledge*: All 7 features on the photograph were correctly identified and labeled:  
4 = 7 correct; 3 = 6 correct; 2 = 4 or 5 correct; 1 = 1 to 3 correct.
  - *Reasoning*: Explanations in the essay were thorough and accurate.
  - *Communication*: The map labeling was well-organized and well-detailed and the written explanations were well-focused and well-detailed; the knowledge and reasoning were completely and effectively communicated.

### Examples of Student Work follow

### Resources

- A copy of the satellite aerial photograph
- Paper and a red or blue pen
- Social Science Rubric

### Time Requirements

- One to two class periods



Satellite Photo Courtesy of  
NASA  
Johnson Space Center

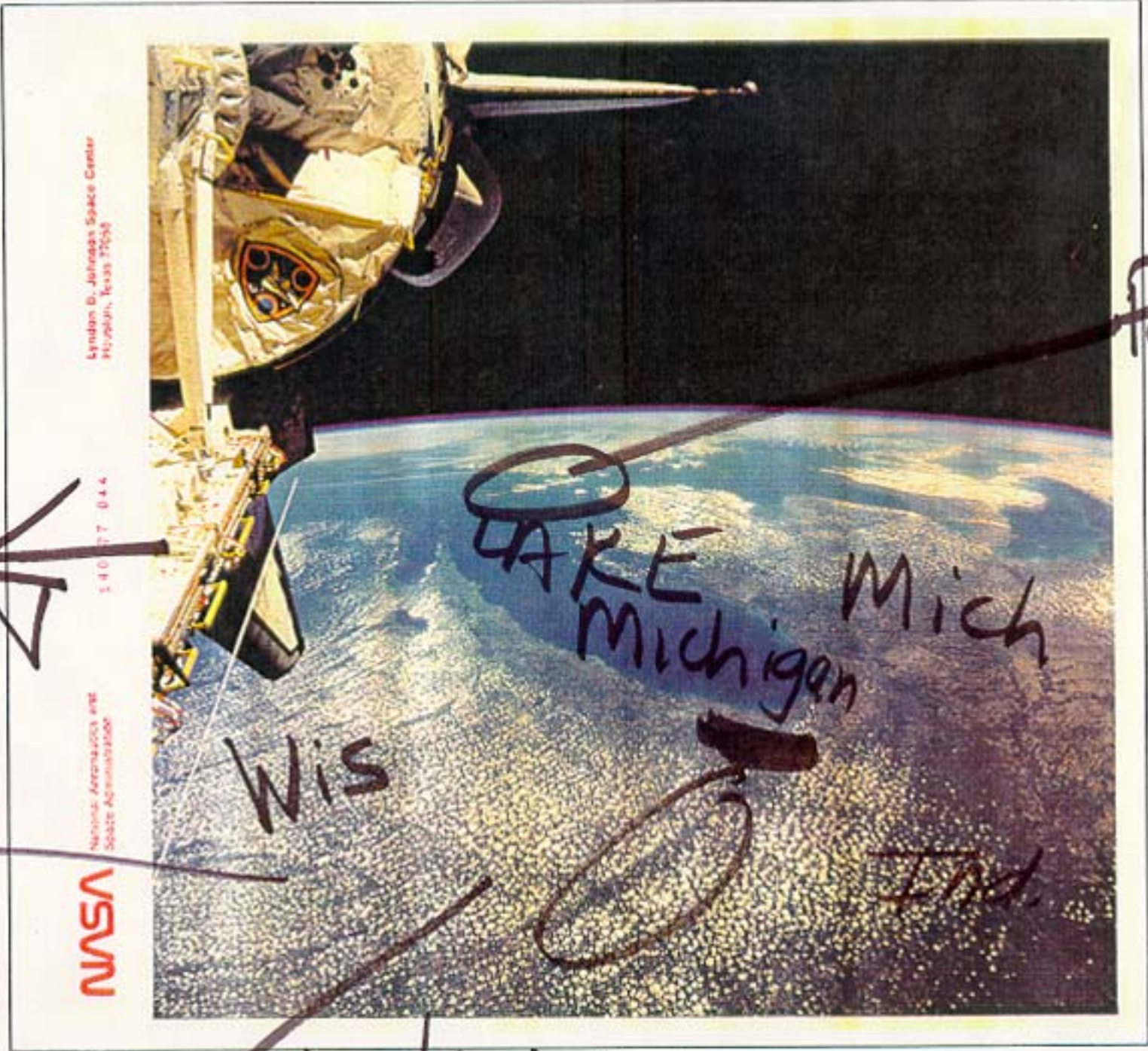
# Why Are Aerial Maps Better Than Physical Maps?

Like many other people I think that Aerial maps are better than Physical maps. We think this because Aerial maps show 3 dimensional views of the earth rather than physical maps, which only show limited views of the earth or perspective. In Aerial maps people are also able to see how the cities, lakes and mountains look and are really shaped. People are also able to take realistic photographs of the earth, which would have more details on it.

Although, Physical maps show features of a large broad area and show whole regions at once, they still don't have as much details as the Aerial maps have, because they are similar to a photograph.

So in conclusion I think that Aerial maps are better than Physical maps because people would be able to study and understand the earth in a better way.

E



Peninsula

S

N

Wis

Lake Michigan Mich

Ind.

clouds W

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## What's Better? ADVANTAGES OF MAPS

I believe that the Aerial map is OK, just because it is an exact picture. But, drawing maps are great because they are easy to read and can tell you a lot of information about parts of the world.

Aerial maps are OK, because they show exactly how the Earth looks. But, these maps are hard to read and make out. You usually need to have another map to understand an Aerial map.

Drawn maps are not perfect, and may not always be 100% accurate. But, they are very close. These maps can show climate, population, geography, rainfall, names of places, and many other important things. These maps are made so that they are easy to use and understand.

Because of the differences between these maps, you can see, if you want a good picture of Earth, use an Aerial map. If you want to find information out about the world, use a drawn map!

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Peninsula

III

Chicago

S

clouds

WATER  
VAPOR