Goals:
The students will be able to identify, locate, and describe different parts of the world by using the features of Nasa World Wind.

Objectives:
The students will be able to locate and compare different areas of the earth. They should also be able to determine the distance between one place and another by using the features of Nasa World Wind.

PA Standards:

Geography Standards
7.1.3 Basic Geographic Literacy
7.2.3 The Basis Characteristics of Places and Regions

Math Standards
2.3.3 Measurement and Estimation
2.4.3 Mathematical Reasoning and Connections
**Teacher Materials:**
Nasa World Wind
Instructions
Handouts
Overhead projector
Chalk board/dry erase board
Chalk or dry erase marker
Eraser

**Student Materials:**
Nasa World Wind
Instructions
Nasa Worksheet
Nasa Answersheet
Pencil
Eraser

**Prerequisite Skills:**

1. The students should be familiar with maps, globes, diagrams, etc.

2. The students should be able to clearly differentiate between the characteristics of maps and globes.

3. The students should know some of the basic math skills such as measuring, adding, subtracting, etc.
**Procedures:**

**Motivation:**
1. The teacher should begin the lesson by introducing the students to Nasa World Wind and its many features.
2. He or she should pass out instructions and go through each step with the students while showing the instructions on the overhead. He or she may want to use the chalkboard or whiteboard as well.
3. The teacher should then walk around to assist the students in using Nasa World Wind and make sure everyone understands the steps.

**Development:**
1. Once the teacher has gone over the instructions for using Nasa World Wind and the students seem to have the feel of how to use it, the next step would be for the teacher to pass out the worksheets along with the answersheets.
2. Next the teacher should go over the directions and have the students start on their worksheets.
3. The teacher should walk around and check on the students in case they need any help.
4. The students should be given one class period to work on this.

**Conclusion:**

Once the students are all finished, the papers can be collected and ready for grading. The teacher should then pass out the permission slip for a field trip to the Carnegie Science Center in Pittsburgh. He or she will then explain that all permission slips will be due in exactly 2 weeks from that day and that “parents must sign” in order for the students to go.
**Extension:**

The students will go on their field trip to the Science Center in 4 weeks and the teacher will have them go into the Omniax Theater. After returning from the trip, the teacher will make up a worksheet based on the film that they saw and have them complete it in class for bonus points.

**Evaluation and Reflection:**

**Teacher Feedback:**

**Assessment:**
1. Double click on Nasa World Wind to open the program.

2. Check to see if the “ZoomIt! Data” icon is turned on. If not, left click on it to turn it on. To tell if an icon is turned on, there will be a little black arrow above it. When an icon is turned off, there is no arrow.

3. Spin the earth by clicking the left mouse button while moving the mouse around.

4. Now, find North America. Once you are there, look at the top of the screen and click the left mouse button on “Layer Manager.”

5. Go to where it says “Landmark Catalog” and click the left mouse button. You will then see where certain sites are. To make the sites go away, click the left mouse button again to turn it off.

6. Next, turn on “Position Information” by clicking the left mouse button. This will tell you the latitude, longitude, and altitude.

7. Then left click on “Nasa Blue Marble.” Change the month by moving the bar to January. Do you see the difference in snow cover? Now, change the month to September. Can you see a difference in the two months?
8. To see North, West, East, and South, click on the compass at the top of the screen.

9. If you click on the last icon at the top of the screen, you can see the names of places on the globe. To take them off, left click on the icon again. You can also zoom in and out by spinning the wheel on your mouse. To get closer, scroll the wheel away from you. To get farther, scroll the wheel toward you.

10. To see boundaries, left click on the “Boundaries” icon. This will show you state and national boundaries.

_Nasa Worksheet_

Name: ____________________    Date: ______________

1. Can you name all 7 continents? Can you find them on the globe?

2. What are the names of the two major oceans located on each side of the United States? Can you find them on the globe?

3. What two states are surrounded by water and are not connected to the rest of the states?
4. Can you name the 5 great lakes in the U.S.? Can you find them on the globe?

5. Find Japan on the globe. What continent is it in?

6. Find Antarctica on the globe. Is it in the North, South, East, or West?

7. Can you find Seattle, Washington on the globe? How many miles is it from Honolulu, Hawaii?

8. Where are the Appalachian Mountains located? Are they in the North, South, East, or West of the United States?

9. What state is Mount Rushmore in? Can you find it on the globe?

10. Can you find Rome, Italy? How far is it from Philadelphia, Pennsylvania?

Nasa Answer Sheet

Name: _____________________    Date: ______________

1. _________________________
1. North America, South America, Europe, Asia, Antarctica, Africa, Australia

2. The Pacific Ocean and the Atlantic Ocean

3. Alaska and Hawaii

4. Lake Erie, Lake Michigan, Lake Ontario, Lake Superior, Lake Huron

5. Asia

6. South

7. 4,308 kilometers

8. East

9. South Dakota

10. 7,041 kilometers