

Sample in-class Exercise from Geographic Information Science

In small groups, students were given one of 5 maps to work with. They were each asked to identify spatially explicit layers within the map and decide whether those layers would be best represented as raster or vector data. The purpose of this exercise is to get the students comfortable looking at maps, and help them understand the difference between raster and vector data, as well as how data can be represented in both forms. Each group gave a short presentation of the answers to their questions.

Prudence Island

1. Identify at least 5 raster and/or vector datasets shown on your map.
1. The Navy is looking for the best location to build a new shipping yard. How would you use the raster and/or vector data available on this map to solve this problem?
2. What would your output look like? (Point? Line? Polygon? Raster? All of the above?)
3. Think of another problem you could solve with these data.

Dead Horse Flat

1. Identify at least 5 raster and/or vector datasets shown on your map.
2. Rock type information has been lost for a neighboring quadrangle, but all other spatial data available on this map are preserved. You want to find examples of the Trail Ridge Member in the neighboring quad. How would you use the raster and/or vector data available on this map to solve this problem?
3. What would your output look like? (Point? Line? Polygon? Raster? All of the above?)
4. Think of another problem you could solve with these data.

Bahia de Manta

1. Identify at least 5 raster and/or vector datasets shown on your map.
2. The government of Ecuador wants to put in a new oil derrick to supply the increasing U.S. demand. How would you use the raster and/or vector data available on this map to solve this problem?
3. What would your output look like? (Point? Line? Polygon? Raster? All of the above?)
4. Think of another problem you could solve with these data.

Brazos River, Texas

1. Identify at least 5 raster and/or vector datasets shown on your map.

2. An insurance company wants to know how much to charge land owners in south Texas. How would you use the raster and/or vector data available on this map to solve this problem? (What would you say to landowners in the southwest corner of this scene?)
3. What would your output look like? (Point? Line? Polygon? Raster? All of the above?)
4. Think of another problem you could solve with these data.

Pilotage map of southeast Asia

1. Identify at least 5 raster and/or vector datasets shown on your map.
2. You are a 1960's spy trying to get from Da Nang, Vietnam (northeast corner) to the Peam Bang safe house on the Tonle Sap Lake (southwest corner) as quickly as possible. How would you use the raster and/or vector data available on this map to solve this problem?
3. What would your output look like? (Point? Line? Polygon? Raster? All of the above?)
4. Think of another problem you could solve with these data.