Exploring ArcGIS Online

Practical 1 (10 marks for completion)

==key assessment items, "engines" of learning, "action verbs," skills and knowledge==

Before we get started…

- How are you ==feeling about GIS==?   👍 😃 😐 🙄 😱 ✅ ✅

- ==Two words== that describe your ==GIS feelings==. 1. _____   2. _____

- Top right of the "Explore" handout. What is this **https://arcg.is/1mTvvD** and what can you do with it?
  The bold text is a website address. It is a "hyperlink" which means if you click on it with the mouse, it will launch an Internet browser such as Chrome or Explorer.

1

==**Describe**== what happened to the map when you searched for your house.

The map "zoomed" to the location. The scale of the map changed – less area displayed, more detail.

2

What does it look like where you live? In other words, ==*describe*== the geography of your neighborhood.

Answers will vary – Examples: Lots of large houses; agricultural fields, straight two-lane streets; forested; near large shopping center; next to an active mine; curved narrow streets; near plot of trees

==**Describe**== what happens to the map when you zoom in and out.

Zoom in – less area, more detail, resolution increases (see small features clearly)
Zoom out – more area, less detail, resolution decreases (cannot see small features clearly)

3

Where, ==exactly==, are the Pyramids of Giza? In other words, ==*locate*== the Pyramids of Giza.

Latitude: (+) 29.98 Longitude: (+) 31.13   OR   29.98°N, 31.13°E

OR   29° 58' 48"N, 31° 7' 48"E)

4

==**Calculate**== the area of the pyramid's base (in square meters).   *Approximately 50,000 square meters.*
  How much error is acceptable?

==**Compare**== the pyramid's base area to the area of your school campus.

Answers will vary. Calculate pyramid area, calculate school area, compare areas

==**Describe**== the process of using the measurement (area) tool.

The tool "traces" the perimeter of area through a series of mouse clicks on each corner of the shape. The tool allows users to select the units of measurement.

5

==**Describe**== the geographic data displayed in the "oceans" basemap. What do the ==numbers indicate==?

The oceans basemap displays place names, ocean trenches, basins, plateaus, seamounts, facture zones, etc. The map displays ocean depths at a particular location in meters. The darker the blue, the deeper the water.

6

Describe what happens to the map when you click on the "Central Indian Ridge" bookmark.

The map zooms in to a pre-determined location in the Indian Ocean.

Describe the pattern of faults (fractures) on the seafloor around the Central (Mid) Indian Ridge.

Faults associated with the Mid-Indian Ridge run NE-SW. Faults are parallel to each other. Faults, in general, run perpendicular to ridges

7

Where does your electricity come from? In other words, *locate* the power plant closest to your house.

Answers will vary. How do you solve this spatial problem? Which tool(s) did you use?

Describe the power plant closest to your house.   *Name, type, generating capacity, near…, next to…,*

Describe the spatial distribution (patterns) of power plants in South Africa.

Solar power plants in Northern Cape, Coal in southern Mpumalanga, Wind along the southern Indian Ocean coast (SE of Port Elizabeth) and along the Atlantic Coast (N of Cape Town), Limited Oil in a few southern coastal cities (East London, Mosselbaai, Cape Town), few scattered waste and gas plants

Contrast (differences) and *Compare* (similarities) the energy geography of South Africa to a neighboring county.

Solar power plants in Northern Cape, Coal in southern Mpumalanga, Wind along the southern Indian Ocean coast (SE of Port Elizabeth) and along the Atlantic Coast (N of Cape Town), Limited Oil in a few southern coastal cities (East London, Mosselbaai, Cape Town), a few scattered waste and gas plants

8

Explore the remaining bookmarks and layers. *List* and *describe* 3 "discoveries."

1. *Answers will vary.*

   Empower learners to be curious. Use tools.

2. *Observe the map.*

   Communicate observations.

3. *Collaborate, share.*

In conclusion…

- After completing this practical, how are you feeling about GIS?

- How would you feel about working through this activity with your students?

Want to explore more of the ArcGIS Online world? Navigate to: *https://learn.arcgis.com/en/arcgis-book/*