Geo-Inquiry with ArcGIS Online **MEMORANDUM**

Practical 2 (10 marks) Name

Before we get started…

- How are you feeling about GIS? 

ACTIVITY ONE: See Your World **1 Mark**

Please complete the table below.

Place	Latitude (DMS)	Longitude (DMS)	Geographical importance?
Robben Island	-33°48'20.6"	18°22'5.9"	Island off the coast of Cape Town with historical and political importance
Machu Picchu	-13°9'44.22"	-72°32'45.85"	Ancient Inca citadel on a mountain ridge in Peru
Dar es Salaam	-6°64'10"	39°16'15"	Former capital as well as the most populous city in Tanzania and a regionally important economic centre
Greenwich Park (London)	51°28'40"	0°0'0"	Park located on the Greenwich meridian. London is the capital and largest city of both England and the United Kingdom

ACTIVITY TWO: Measure and Mark Your World

1. ***How far*** is it from Seattle, USA to Astana, Kazakhstan **½ mark** 8,864.9 (km) 5,508.4 (miles)

2. ***What is the distance*** from the northern tip of Alaska to the southern tip of Africa? **½ mark** 15,932.8 (km) 9,900.2 (miles)

3. ***Describe*** the shape of the line that you used to measure the distance from Alaska to South Africa. ***Explain*** the shape of the line. **½ mark**

   The line is in the shape of an arch. This is due to the spherical shape of the earth. The distance measured is the shortest distance between the two points following the curvature of the earth.

4. What are the coordinates of your school? Which coordinates are positive? Which are negative? ***Explain*** why. **½ mark**

   Negative lattitude between -25° and -27° (Southern hemisphere)

   Positive longitude between 27° and 29° (Eastern hemisphere)

   (More or less the extent of Gauteng)

5. ***Describe*** how you could use "Map Notes" to teach geography. **2 Marks**

   Map notes places location markers (points) in a new layer on the map. Students can be tasked with finding interesting places around the world, adding them to map notes and then different analyses can be done including measurements and map overlay analyses. Points can be edited and new features can added to the layer.

ACTIVITY THREE: Explore Your World

6. ***Write*** two questions that can be answered by using Predominate Religions maps. **1 Mark**

   1) What is the most common religion in South Africa?

   2) What is the predominant religion in Northern Africa?

ACTIVITY FOUR: Expand Your World: Open a Saved Map

7. ***Write*** one question that can be answered by the Earthquake application and ***write*** one question that can be answered by the World Population scene application. **1 Mark**

   1) Describe the spatial distribution of earthquakes around the world in the last 30 days.

   2) What does the World Population scene application tell you about the distribution of large cities in South Africa?

ACTIVITY FIVE: ArcGIS Online Map Applications (Apps) Designed for a Specific Purpose

8. ***Describe*** how you might use the Terrain profile application (http://esriurl.com/elevation) to teach geography. **1 Mark**

   The Terrain profile application shows contour lines, spot heights and other elevation related features on the earth's surface. The Elevation Profile Maker is an excellent tool that can draw cross-sections to use for exercises. A cross-section can be used to teach geomorphological, hydrological and other physical geography related concepts.

9. ***Describe*** how you might use the Urban Observatory application **1 Mark**
   http://www.urbanobservatory.org/compare/

   The Urban Observatory application can be used to compare major cities around the world.

   Comparisons can be made in terms of people, movement, work, public and systems data.

10. Story Maps Gallery: ***Explore*** a topic http://storymaps.arcgis.com/en/gallery/ . List three topics you explored. **1 Mark**

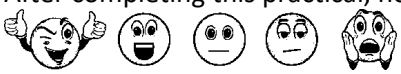
Wetlands

Mars

Heat Maps

In conclusion…

After completing this practical, how are ***you feeling*** about ArcGIS Online?



You are told that you have to introduce your students to ArcGIS Online ***next week***. How would you react?