1B – Geographic Tools/Techniques

GLCEs: 6G122 maps of the same place can vary; 6G123 how to interpret maps; 6G125 how to use GIS;
6G432 analyze patterns of human settlement; G213 describe patterns of world climate

1. Review how we thought about choosing a location for a town in Part 1A. When we look at a map that shows cities, we should appreciate that <u>someone</u> went through exactly that same process in deciding where to put the settlements that grew to become cities. Today (in Part 1B), we will look at a map of ancient cities and see if we can figure out the logic that those people might have used.
(5-10 minutes, depending on whether you project the map and discuss the process, or just mention it.)

2. Activity: A map-based inquiry about the locations of ancient cities (using a clickable map)
(20-40 minutes, depending on how many time periods students analyze, how many environmental variables they consider, and whether they make a written response (Common Core ELA))

Why did people build cities where they did? It may be more useful to flip the question around – what are some reasons why people did <u>not</u> build cities in certain parts of the world? Can you describe the pattern on this map and make some hypotheses? How can a simple map of average temperatures help us test these hypotheses? What other information might be relevant?

6th 1B Ancient Cities in 430 BCE	6th 1B Ancient Cities clickable map
6th 1B Ancient Cities in 100 and 500 CE	
6th 1B Ancient Cities Temperature	temperature layers on the Ancient Cities clickable map
6th 1B Ancient Cities Region	region layer on the Ancient Cities clickable map

3. Scaffolding or Summarizing Activity: How does my brain think about maps?
(10-20 minutes, when you think it will work best – before, during, or after doing Part 2 above).

Students can use several different spatial-thinking skills to look at the map of ancient cities – they should be able to "see" that the geographic arrangement of cities could be described as a:

- **region** (we can draw a box around all the cities, and the box is just a small part of the world),

- **pattern** (the cities are in almost a straight east-west line just north of the Tropic of Cancer),

- **association** (all the cities are associated with water, located next to coastlines or major rivers), or

- **transition** (they are located between hot equatorial/tropical places and cold polar/arctic places).

We do not recommend making the memorization of these terms a major goal this early in a class – we suggest "quietly infusing" the terms into the discussion, and simply suggesting that the human brain is structured to organize geographic information in a number of different ways, and one goal of our entire class is to improve our ability to use those brain networks.

For background in using this "spatial vocabulary," we mention several documents and presentations that will form the basis for Parts 1C and 1D. Here are their names:

6th 1C1 WakeUp Call presentation	6th 1C2 Books on 9 Tables presentation
6th 1D Basic Spatial Reasoning - Brain Networks	6th 1C4 Spatial Reasoning presentation

Pages from MCCC

SuppMaterials.SS060103: Pages 1-3 graphic organizer, big idea page, word cards
Page 4 geographic inquiry (as review of first lesson);
Pages 11-12ff What is GIS? (for teacher background; not for students this early in the class).
SS060103.Powerpoint: The maps in the MCCC supplements and presentations are useful in many ways; e.g. as a "mystery map of the week," teaser to open discussion, examples that you can insert in other presentations, etc. CAVEAT: especially in diverse classrooms, where student experiences differ greatly, it is preferable in the first months to model a few specific inquiries rather than discuss a lot of maps abstractly or in ways that depend heavily on prior knowledge. Then, after some shared experiences, we can help them refine their grasp of inquiry techniques.

Takehome. The human eye-brain system "sees" a map through several parallel networks.
A key part of geographic education is learning techniques for using these networks more effectively.