Session 1: Evaluating the Location of Ancient River Valley Civilizations

Materials
- Attachment A: Early River Valley Civilizations Outline Map
- Attachment B: Early River Valley Civilizations Map in Color
- Attachment C: Early River Valley Civilizations Map Key with Rivers Labeled
- Attachment D: Mesopotamian Civilization: Tigris and Euphrates River Valleys (Southwest Asia)
- Attachment E: Egyptian Civilization: Nile River Valley and Nile Delta (Africa)
- Attachment F: Indian Civilization: Indus River Valley (South Asia)
- Attachment G: Chinese Civilization: Huang He Valley (East Asia)
- Attachment H: Physical Environment of Early River Valley Civilizations Map Analysis
- Attachment I: Cradles of Civilization*
- Attachment J: Cradles of Civilization Key*
- Attachment K: Huang He River Valley Dry Areas
- Attachment L: Indus River Valley Dry Areas
- Attachment M: Nile River Valley Dry Areas
- Attachment N: Tigris and Euphrates River Valleys Dry Areas
- Attachment O: Using Layered Portable Document Files (pdfs)

Instructional Activities
1. Introduction to lesson:
   In this lesson students examine the physical environment of the early river valley civilizations. In addition to identifying the locations of the ancient civilizations, students complete a feature analysis to assist them in comparing the physical environments and determining how it afforded protection to the civilizations. Throughout the lesson focus student attention on the following questions:
   - Why was a river valley a good place for a settlement?
   - What was the significance of these river valley civilizations?

2. Have students locate and label the bodies of water important to the ancient river valley civilizations on Attachment A: Early River Valley Civilizations Outline Map. Project Attachment C: Map Key for student reference in labeling the following bodies of water.
   - Tigris and Euphrates rivers flow into the Persian Gulf
   - Nile River (Blue Nile and White Nile) flow into the Mediterranean Sea
   - Indus River flow into the Arabian Sea
   - Huang He River flow into the Yellow Sea

3. Have students use a textbook to locate and shade in the following civilizations: Mesopotamian (Southwest Asia), Egyptian (Africa), Indian (South Asia) and Chinese (East Asia). Attachment I: Cradles of Civilization map may also serve as a source for this information.

4. Have teams of students examine Attachments D through G and complete Attachment H: Physical Environment of Early River Valley Civilizations Map Analysis. This segment of the learning activity provides students with the opportunity to examine maps of the area and determine the type of barriers presented by the physical environment that protected the early river civilizations. Students also analyze the shapes of the modern-day river mouths for evidence of siltation and a clear delta shape.

Teachers may choose to facilitate the completion of the exercise by projecting the large format Dry Areas maps in the order listed on the left-hand column of Attachment H. Complete the analysis as a whole-class activity.
5. In the discussion that follows the completion of the exercise, pose the following questions:

- What climate characteristics were shared by all of the early river valley civilizations? (For the most part, desert and semi-arid areas with limited rainfall were characteristic of the early river valley civilizations.)
- What do all of the rivers have in common? (The rivers are located in the eastern hemisphere between 15 and 45 degrees North. The civilizations border the rivers. All of the rivers have a source in the mountains. Each has built a delta at their mouths.)
- Why would early people have settled in those areas? (Early people settled here because of the protection from invasion provided by mountains and deserts. Fertile and renewable soils were enriched by sedimentation. In addition, the rivers provided water for irrigation in these dry climatic areas.)

### Attachments

<table>
<thead>
<tr>
<th>Attachment A: Outline Map</th>
<th>Attachment B: Map in Color</th>
<th>Attachment C: Map Key with Rivers Labeled</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Outline Map" /></td>
<td><img src="image2.png" alt="Map in Color" /></td>
<td><img src="image3.png" alt="Map Key with Rivers Labeled" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attachment D: Mesopotamian Civilization</th>
<th>Attachment E: Egyptian Civilization</th>
<th>Attachment F: Indian Civilization</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image4.png" alt="Mesopotamian Civilization" /></td>
<td><img src="image5.png" alt="Egyptian Civilization" /></td>
<td><img src="image6.png" alt="Indian Civilization" /></td>
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</table>

<table>
<thead>
<tr>
<th>Attachment G: Chinese Civilization</th>
<th>Attachment H: Civilizations Map Analysis</th>
<th>Attachment I: Cradles of Civilization</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image7.png" alt="Chinese Civilization" /></td>
<td><img src="image8.png" alt="Civilizations Map Analysis" /></td>
<td><img src="image9.png" alt="Cradles of Civilization" /></td>
</tr>
</tbody>
</table>
Click on the links above to access a full-page layered pdf of each of the maps. Maps may be customized by turning specific layers on or off before display. [Link to explanation of layered PDFs.](#)
Mesopotamia, Greek for “land between the rivers” describes the area between the Tigris and Euphrates rivers. Tributaries originating in the mountains feed the “land between the rivers.” Rain fed agriculture in the northwest part of Mesopotamia is gradually replaced by irrigation to support more intensive farming further downstream.

The two rivers and their drainage basins are almost completely within the region that has come to be known as the Fertile Crescent, an area that supported early agriculture because of the fertile river valley soils and adequate precipitation and river flow.

The rivers now meet at Basra and flow into the Persian Gulf via the Shatt al Arab waterway. In ancient times, each river had a separate mouth at the Persian Gulf, and the shore line was further north.

Definitions
An arid area or desert receives less than 10 inches of rain a year.
A semi-arid area generally receives between 10 and 20 inches of rain per year.
Framed by deserts, the northward-flowing Nile River is fed by two major tributaries, the Blue Nile and the White Nile that meet at the city of Khartoum. The Blue Nile contributes about two-thirds of the Nile’s volume and flows through narrow gorges on its way to Khartoum. The upper part of the river is characterized by rapids, waterfalls, and water that is anything but blue. The combination of mountain rain and snowmelt from the Ethiopian Highlands in the summer months resulted in erosion and transported soil to the Nile’s downriver floodplain.

The White Nile originates south of the equator at Lake Victoria. Water flow and associated silt load from its tributaries are larger than that of the Blue Nile, but much of the silt is lost in small lakes or is spread over floodplains and lowland swamps.

Sedentary agriculture along the Nile was supported by predictable seasonal flooding that deposited fertile soil for agriculture. The Egyptians are credited as being one of the first groups of people to practice agriculture on a large scale. This was possible because of the ingenuity of the Egyptians as they developed basin irrigation. Their farming practices allowed them to grow staple food crops such as wheat and barley, and “industrial” crops such as flax and papyrus.

Definitions
An arid area or desert receives less than 10 inches of rain a year. A semi-arid area generally receives between 10 and 20 inches of rain per year.
With its source in the glaciers of the Himalaya and Karakoram mountain ranges, the Indus River flows 1,980 miles to the Arabian Sea. River flow is the highest during the summer months as the snow melts and the summer monsoon arrives. About 70% of the area’s precipitation falls between July and September.

Sediment transported by the Indus has accumulated in an off-shore undersea fan, one of the largest sediment bodies on Earth. In the aerial image to the right, many tidal creeks penetrate the Indus’ delta plain along the Arabian Sea. Since ancient times irrigation has supported agriculture during the drier months. The water of the Indus and the sediment it transports and deposits have supported agriculture for over 4,000 years in an area where water is generally scarce.

Definitions
An arid or desert area receives less than 10 inches of rain a year. A semi-arid area receives between 10 and 20 inches of rain a year.
The **Huang He** (Yellow River in translation) is the second-longest river in China and the sixth-longest in the world, with an estimated length of 3,395 miles. The Huang He’s length has changed over the years because the delta on the Bohai Sea has wandered up and down several hundred miles of coastline over the past two thousand years.

At various points in time, the accumulation of silt has raised the water level above surrounding land. “China’s Sorrow,” “Yellow Fear”, and “Scourge of the Sons of Han” all refer to the many floods that have plagued the people along the lower reaches of the Huang He. A high silt load from the Loess Plateau, a low gradient across the plain, and excessive precipitation have all contributed to disastrous flooding in the past and present.

**Definitions**
- An arid area or desert receives less than 10 inches of rain a year.
- A semi-arid area generally receives between 10 and 20 inches of rain per year.
- Loess is a fine silt material carried by wind, probably originating from the Gobi Desert.
Attachment H: Physical Environment of Early River Valley Civilizations Map

Analysis

Directions: The four civilizations being studied are listed down the left side of the chart. Geographic features of these civilizations are listed across the top. Examine the placards for each of the Early River Valley Civilizations (Attachments D to G) and the Cradles of Civilization map to the right.

For the first four columns, determine if a barrier is present, then the direction in which the barrier is located. Underline the correct answer.

For the other columns, place a plus sign (+) in the box if the criterion is met or place a zero (0) in the box if it is absent.

After you complete the chart below, answer the question that follows.

<table>
<thead>
<tr>
<th>Civilization</th>
<th>Mountain Barrier</th>
<th>Desert Barrier</th>
<th>Semiarid Barrier</th>
<th>River Mouth</th>
<th>Between 15° and 30° North</th>
<th>Between 30° and 45° North</th>
<th>Sedimentation at River Mouth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huang He</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
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<tr>
<td>Indus</td>
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<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
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<tr>
<td>Nile</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
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<td>north east south west</td>
<td>north east south west</td>
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</tr>
<tr>
<td>Tigris-Euphrates</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
<td>north east south west</td>
</tr>
</tbody>
</table>

What evidence do you have that ancient river valley civilizations were protected by the physical environment?
## Attachment H: Physical Environment of Early River Valley Civilizations Map Analysis Key

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Huang He</td>
<td>north east</td>
<td>north east</td>
<td>north east</td>
<td>north east</td>
<td>0</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>south west</td>
<td>south west</td>
<td>south west</td>
<td>south west</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indus</td>
<td>north east south</td>
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<td>Nile</td>
<td>north east south</td>
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<td>Tigris-Euphrates</td>
<td>north east south</td>
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<td>west</td>
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</tr>
</tbody>
</table>
Cradles of Civilization (ANSWER KEY)
Huang He River Valley

Climate
- Semi arid
- Deserts

0 210 420 Miles
A layered pdf provides teachers with the opportunity to turn off and on layers during a presentation. In addition, the layered pdf format gives students access to layers of a geographic information system (GIS) without the use of additional software. As students investigate the maps they can provide responses to a variety of teacher-constructed questions.

1. Download the map from the source.
2. Open the map in Adobe Reader.
3. If the navigation panel, shown on the left, is not visible, right click on the map and select View Navigation Panel.
4. Use the third icon, the stack of papers to access the layers contained within the pdf.
5. Click on the plus sign next to the folder named Layers. There may be a separate folder for Labels. (There is not for this example.)
6. Once the folder is open, click on the eye to the left of the layer’s name and the layer disappears. To turn it back on, click in the box again.
7. If you click on the eye next to the folder, the entire map disappears.

The map on the left has all of the layers turned on. This is its initial state when opened. With the various layers turned off students can predict the location of the deserts and semiarid areas.

This map illustrates the effect of having the various layers turned off.

Consider the type of questions that can be asked of this map.
- What is the likely path of the Huang He River?
- What types of physical barriers did the inhabitants of this early river valley civilization encounter?

Zooming into a selected area of the map
1. Right click on the map.
2. From the menu that opens select Marquee Zoom. A check box will appear to its left. A new icon will appear on the top menu bar—the magnifying glass with the dotted box around it.
3. Click on the icon and while holding the left mouse key down draw a square around the area of interest. The map zooms to that area. Note: when the map contains an image as the base map it may pixelate if you zoom in too far.
4. To return to the original map display change the percent back to 100.
5. Use the hand tool to move the zoomed-in area to the center of the display. (If the hand tool is not visible, right click on the map and select it. It will then appear on the top menu.)