

Teacher's Guide: Rivers and Civilizations - Too Cold, Too Hot, and Just Right

Overview: Students examine a map of major world rivers and try to classify them into groups:

- cold rivers, where the growing season is too short for farming,
- hot rivers, where weeds and insects would be a major problem,
- rivers without floodplains, in mountainous terrain, and
- rivers where conditions might favor development of agriculture.

By doing this, they also learn the names of some important rivers!

- Grade: 7 Related Discipline: History, Earth Sci Standard: 6G322, 7W121-4 Time: ½ to 1 class periods
- **Setup:** Ask students what conditions might persuade a tribe of hunters decide to try to make a living by farming. This question is more difficult than might sound to some students, because the answer depends on a fairly sophisticated understanding of environmental conditions in different places, and the kinds of technology available to early humans.
- **Procedure:** Hand out the map and explain the goal to classify rivers into three or four groups too cold, too hot, possibly too hilly, and possibly good for farming.

The presentation can help with the explanation. It also provides a way to do what an activity like this often requires, namely to model several correct answers. This can help students understand the level of complexity they should seek in their reasoning and explanations. Emphasize that they should answer the obvious ones first and think about the less obvious ones as they work their way through the list.

Answers: 1. The floodplains of the Yenisei (F) and Lena (G) are the only ones that are obviously too cold for farming. In early history, however, before people had learned how to build tight shelters with good heaters, the lower floodplains of the Columbia (A), Danube (D), Volga (E), and Amur (H) rivers would have been considered less desirable, especially in winter. The Columbia, moreover, flows between high mountains near its end, and as a result its floodplain is very small.

2. The floodplains of the Amazon (C) and Congo (Q) are hot and rainy every month of the year. Diseases like malaria, yellow fever, and trypanosomiasis are serious problems for both humans and animals. Some students might put the lower Mekong (P) into this category. Students might also decide that the two rivers in the dry-winter savanna regions of Africa, the Niger (K) and Zambezi (S), could be viewed as less desirable by early humans. The Niger River valley did become an important location for large African empires, but they rose several thousands of years later than the Nile and other early civilizations. Moreover, as noted on the activity page, the Parana-Rio de la Plata (D) and Murray-Darling (R) are in the southern hemisphere, far from the origins of human population and therefore likely to have low population until relatively late in human history.

3. All of the remaining seven rivers did indeed support early "cradles of civilization." The pyramids along the Nile (L), the Mesopotamian cities along the Euphrates (M), and the Harappan cities of the Indus Valley (N) are most frequently mentioned in history textbooks, but the mound builders of the Mississippi Valley (B) are early examples in the western hemisphere, and the Ganges (O), Yangtze (J), and Huang He (I) valleys also supported early civilizations.

- **Debrief:** EMPHASIZE: This is really just a first rough classification, but it can still illustrate a kind of geographic thinking that can help us see where people are likely to have started sedentary farming and early urban civilizations.
- **Vocabulary:** civilization floodplain disease frost-free season nomadism sedentary agriculture
- **Extension:** Individuals or groups could do research on these river valleys and describe them more completely. Later, all will discuss how a favorable environment could allow farmers to produce a food surplus that in turn could support other jobs, in industry, trade, government, and religion.

Students could also compare world maps of cold, dry, and hot conditions. This comparison can help students refine their mental maps of environmental conditions around the world.