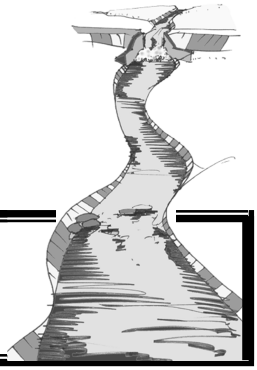
Sample lesson from
"I Think: Geography - Africa"
Correlates to Common Core Standards!!

The Longest River



Springboard:
The students should read "The Longest River" and answer the questions.

Objective: The student will be able to explain the controversy surrounding human-environmental interaction along the Nile River.

Materials:
The Longest River (Springboard handout)
Point / Counterpoint (3 page handout)
Thinking It Through (handout)

Vocabulary development always an emphasis!

Terms to know:
tributaries - rivers that flow into a larger river
headwaters - streams at or near the source of a river
silt - rich topsoil carried in rivers
levees - embankments built along a river to prevent the water from flooding the land
drought - long period with little or no rainfall
deltas - triangular silt deposits at the mouth of a river

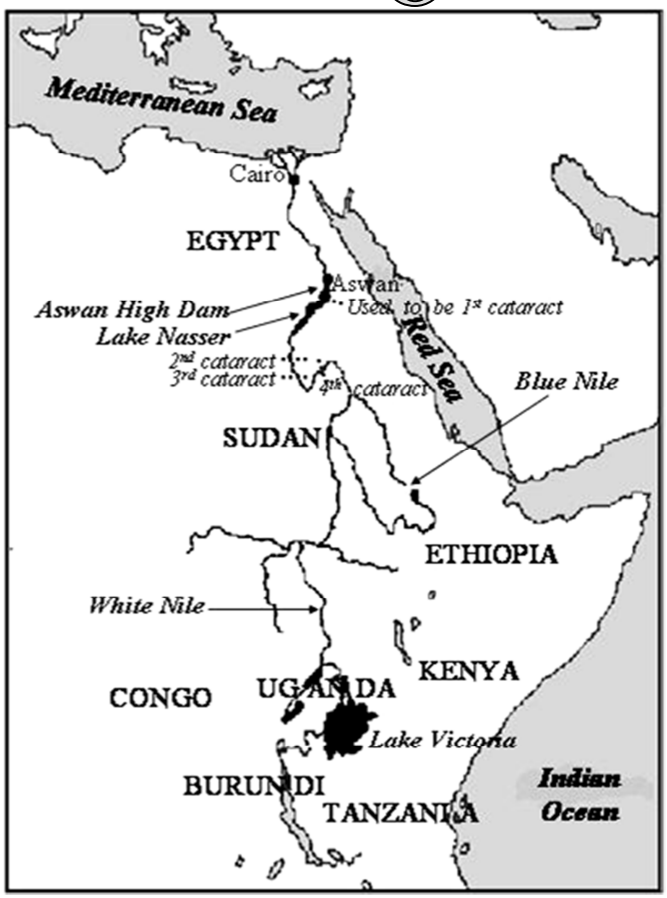
Procedure:

- While reviewing the Springboard, have the student(s) examine the map to identify the various features of the Nile: Lake Victoria, the Blue Nile, the Aswan Dam, Lake Nasser, etc. Explain that *the first modern attempt to control the flooding was a dam built at Aswan in 1889. By the middle of the 1900's, after several "close calls" when water peaked near the top of the dam, it became clear that the dam was not high enough to protect the people below, so in 1952 the Egyptian government decided to build the High Dam at Aswan, which was completed in 1970*. Go on to explain that *in this lesson the student(s) will examine one case of human-environmental interaction and the conflicts that resulted*.
- Distribute "Point/Counterpoint" and "Thinking It Through." **For individual instruction** the student should read the skit and complete the handout independently. **For full group instruction** divide students into groups of three to read the news program as a skit, and have them complete the problem solving form individually or in their groups. (**FYI:** The characters in the skit are fictional, but the information is true.)
- Have the student(s) share their responses and discuss. *(Answers may vary but should be thoughtful and be supported by lesson information.)*

Easy-to-follow directions with points to emphasize!

The Longest River

Lesson-specific warm-ups introduce students to the topic and maximize on-task time!



At more than 4,000 miles in length, the Nile is the longest river in the world. It flows from south of the equator northward to the Mediterranean Sea. Two main tributaries join to form the Nile: the Blue Nile has its headwaters in the Ethiopian Highlands; and the White Nile's source is Lake Victoria, the world's second largest freshwater lake in Uganda.

One of the most beautiful features of the Nile River is its array of cataracts where the river crashes over rocks. The downside to these areas is that they cannot be farmed, they flood easily, and the terrain is very rough, so few people live near the cataracts. In addition to problems farming around them, the cataracts are also very difficult to navigate.

Regardless, northeastern Africa has always been dependent upon the Nile River. Yearly floods would deposit tons of rich, black silt on the land. The enriched soil enabled farmers to grow crops and civilizations to form along the river's banks. Yet not all floods were helpful. At the wrong time of year, the floods could destroy farmers' crops rather than help them grow, and fast-moving floodwaters could be deadly to people in the area.

Even in ancient times efforts were made to control the flooding. Offerings were given to ancient gods to influence them to cause the river to bring the rich black silt. The Ancients even tried to dam the river. Ruins of a more than 4,000-year-old rock dam, the oldest known, were found 19 miles southeast of Cairo, and Egyptian writings note efforts at building levees to protect the land.

The Blue Nile is a ___ of the Nile, while Lake Victoria is a ___.

A. river ... destination
B. source ... waterway
C. tributary ... source
D. headwater ... flood

According to information in the passage, cataracts are similar to

A. lakes.
B. rapids.
C. basins.
D. mountains.

___ floodwaters brought fertile soil for ___.

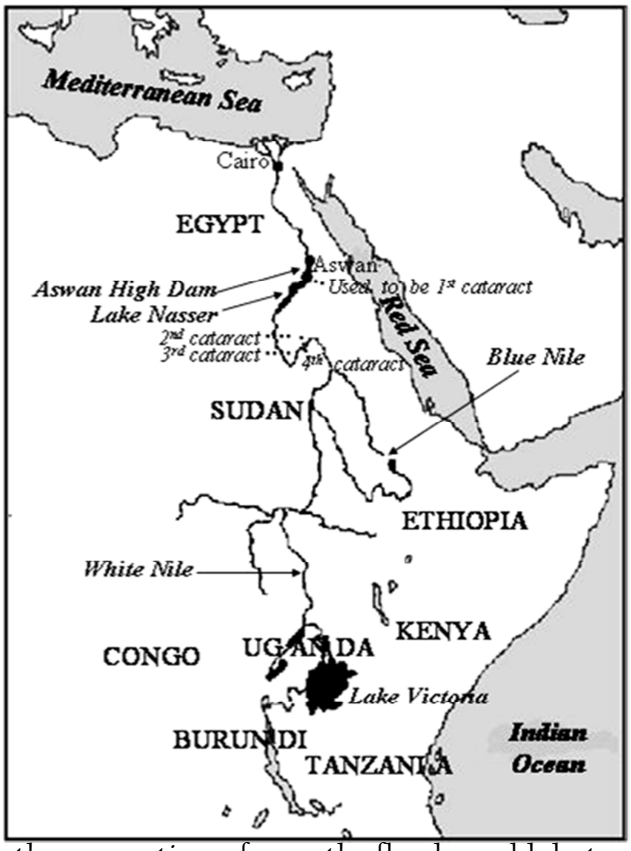
A. beneficial ... agriculture
B. fast-moving ... civilizations
C. destructive ... farmers
D. well-timed ... headwaters

Which of these ancient works was <u>NOT</u> to control the flooding?

A. offerings
B. ruins
C. rock dam
D. levees

Questions require critical reading for test preparation within the context of the lesson!

The Longest River - Answers & Explanations



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Regardless, northeastern Africa has always been dependent upon the Nile River. Yearly floods would deposit tons of rich, black silt on the land. The enriched soil enabled farmers to grow crops and civilizations to form along the river's banks. Yet not all floods were helpful. At the wrong time of year, the floods could destroy farmers' crops rather than help them grow, and fast-moving floodwaters could be deadly to people in the area.

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The Blue Nile is a __ of the Nile, while Lake Victoria is a __.

A. river ... destination
C. tributary ... source *
B. source ... waterway
D. headwater ... flood

(C is the only choice where both words make sense if inserted in the sentence.)

According to information in the passage, cataracts are similar to

A. lakes. B. rapids. * C. basins. D. mountains.

(Even if students are unfamiliar with "rapids," other choices don't make sense.)

___ floodwaters brought fertile soil for ___.

A. beneficial … agriculture *
C. destructive … farmers
B. fast-moving … civilizations
D. well-timed … headwaters

(The point is related to farming, so A is the best answer.)

Which of these ancient works was <u>NOT</u> to control the flooding?

A. offerings B. ruins * C. rock dam D. levees

(The last paragraph identifies these. The ruins were of the rock dam.)

Teacher answers model critical thinking and test-taking strategies!

POINT COUNTERPOINT

Reader's Theater is just one of a multitude of ways InspirEd lessons get content across!

Thea / Theo Newsman - Host of POINT/COUNTERPOINT
Ishpi Guod - Egyptian Minister of Public Works and Water Power
Carey Land - from Environment Aware

Newsman - Ladies and gentlemen, I'd like to welcome all of you to this edition of POINT/COUNTERPOINT. Our topic for today is the Aswan High Dam in Egypt in North Africa. Ever since the Egyptian government first proposed the dam in 1952, the project has been a subject of debate. Many people in the region favored the building of the massive structure and would say they have benefited from the dam. Others, on the other hand, have opposed the project from the beginning and still do.

Today we will, as we always do on our show, examine both sides of the issue. Our guests today are Ishpi Guod, the Egyptian Minister of Public Works and Water Power, and Carey Land from the organization Environment Aware. Why don't we begin with the Egyptian government's representative, Mr./Ms. Guod?

Guod - I'd like to begin by giving your viewers a little background on the project. As you've heard, the dam was first proposed in 1952. Egypt's president and other leaders in the region believed a dam was absolutely necessary to meet the needs for food and water for the rapidly-growing population in the region. The first Aswan Dam, built downstream in 1889, had been a lifesaver for the people along the banks of the Nile. It ended the uncontrolled flooding that often destroyed crops and homes and resulted in loss of life, and it protected the people from the frequent droughts that could starve them to death. There were, however, several situations when the water nearly overflowed the smaller dam, so Egypt knew that a higher one was needed.

Land - Could I respond to that, please?

Newsman - Of course, go ahead.

Land - I must say that most environmental groups would question the NEED for any dam on the Nile, but especially one as large as the Aswan High Dam. The dam, which at its peak is over 12,000 feet, holds nearly 6 trillion cubic feet of water and silt. This water and silt would have been deposited on farmers' fields all along the Nile. The silt provided natural fertilizer for thousands of years, but it no longer reaches the fields. Instead it builds up behind the dam in Lake Nasser and farmers use a million tons of chemical fertilizers per year instead.

We believe chemicals are a poor substitute for the silt that used to be deposited yearly. Who knows what the long-term environmental effects of all those chemicals will have on the people of the region?

Newsman - Thank you for that point, Mr./Ms. Land. I'd like to give Mr./Ms. Guod a chance to offer a counterpoint.

Guod - I appreciate that. It is true that chemical fertilizers have replaced silt, but the effects are very positive. When farmers relied upon silt to fertilize their fields, they had to hope the floods came at exactly the right time and in the right amount. Too little water and their crops

were killed by drought; too much and they were washed away. At best farmers could bring in one crop.

Now that the water is controlled, farmers can plant year-round and have two to three harvests each year. They can also grow a greater variety of fruits and vegetables. Another positive effect is that irrigation made possible by the dam has allowed an additional 2 million acres of land to be planted. This land, which had been desert before, is now green with plants and trees that give off oxygen into the atmosphere. The dam has been good for the environment.

Land - I disagree. Added green space cannot make up for the damage the dam is causing. Getting back to the issue of the silt, before the dam 40 million tons of silt was deposited onto the land each year. Not only did it fertilize fields, it also built up the riverbanks and the deltas. Now the dam traps 98% of that silt. The amount of water Lake Nasser can hold is decreasing and the riverbanks and deltas are eroding. The silt also brought nutrients to the animal life in the river. The numbers of sardines and shrimp at the mouth of the river and in the Mediterranean Sea have seriously declined.

Newsman - Why don't we allow Mr./Ms. Guod to comment?

Guod - Thank you. I have to say that the environmental community is very one-sided in its approach to dealing with this issue. They see the negatives but are not aware of government efforts to control the situation. The Office of Coastal Protection within the Public Works Ministry is completely aware of erosion that has occurred and has built levees to correct the situation. Now the fishing industry is doing much better. We do not want to destroy the environment. We want to help our country and other countries in the area develop economically, and the dam is doing just that.

Not only has farming improved but also navigation on the river both above and below the dam is better. The dam also generates an enormous amount of needed electric power, and Lake Nasser has become important to Egypt's fishing industry. Certainly there have been a few problems, but the government has handled them. The economic benefits of the dam, however, cannot be questioned.

Newsman - Thank you for that point, Mr./Ms. Guod. Now let's give Mr./Ms. Land a chance to offer a counterpoint.

Land - Economics should not be the only consideration. What about the cultural effects of the dam? The government made the decision to build the dam and create a huge lake, but the lake did not cover uninhabited land. The land the lake filled had been home to 200,000 people and numerous ancient monuments.

Guod - The people were safely relocated to newer and better settlements, and most of the monuments were moved to higher ground. Even the entire temple complex at Abu Simbel was rescued.

Land - You are not completely right. The people were relocated and some were moved to newer, more modern settlements, but conditions varied. The Egyptians were relocated to a site 28 miles from their home, but the Nubians from the Sudan were sent 370 miles from theirs. The ancient "Land of the Nubians" was completely lost under the water.

Guod - What you are not mentioning is that Nubians had lived without schools, hospitals, or electricity. Now Nubian children enjoy a higher level of education than their parents and a higher living standard as well.

Land - Again you are only considering economics. There is no way to know what treasures have been lost under Lake Nasser.

Newsman – Thank you, both, but we are running out of time. I think you have provided some excellent arguments for your differing viewpoints. Before we end our program, I would like to give each of you a chance to summarize your points. Mr./Ms. Land, it is your turn to begin.

Land - The Aswan High Dam cost over $1 billion (U.S.) to build. It has cost even more to maintain and to correct the environmental problems it caused and is continuing to cause. This is money that could have been better spent for education, technology, job training, and other programs. Those who favor the dam say it has helped people of the area, but other people were forced from their homelands where their ancestors had lived for thousands of years. I do not think this is any way to help others.

Newsman - Thank you Mr./Ms. Land. Mr./Ms. Guod?

Guod - 95% of Egypt's people and the majority of the people of the Sudan live along the Nile River and its tributaries, and the population in that region is growing. Before the Aswan Dams were built, these people were constantly exposed to the threat of floods that destroyed property and took lives, and droughts that brought starvation. They lived at the mercy of the river. Now we control the Nile so it not only provides water for crops, but it is the water supply for the entire region and provides 1/3 of the area's electrical power.

As with any project of this size, there are going to be problems and setbacks. The important thing is to recognize problems and correct them, and this has been done. The dam has been a benefit to many people and will continue to be for centuries to come.

Newsman - That is all the time we have for this edition of POINT/COUNTERPOINT. I would like to thank Ishpi Guod and Carey Land for being with us. Theirs was an interesting discussion. I also want to thank you, our audience, for joining us. I hope you will tune in again next week for POINT/COUNTERPOINT.

THINKING IT THROUGH

DIRECTIONS: Complete the analysis organizer based on lesson information

Purpose / desired outcomes of the Aswan Dam Project:

Graphic organizers help students organize and analyze what the students learn in the skit!

Positive Outcomes / Effects:

Negative Outcomes / Effects:

Students demonstrate a variety of enduring skills, such as problem-solving!

Considering all of the information, do you think the Aswan High Dam is a success or failure? Why?