7th Grade Geography Inquiry

How should South Asia respond to a growing population?

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Supporting Questions

1. How has South Asia's population changed over time?
2. What are the causes of population growth?
3. What are the effects of population growth?
4. What can be done to accommodate population growth?

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How should South Asia respond to a growing population?

Arkansas Social Studies Standards	**WST.4.7.2-** Analyze the influence of geography on current events, issues, and in planning for the future using a variety of sources including geographic representations and available geospatial technology.
Staging the Compelling Question	Conduct a 4-Corners activity where students migrate from one of the four corners labeled "Strongly Agree, Agree, Disagree, Strongly Disagree." Students must move from one corner to the next depending on their stance on the statements given by the teacher. Statements document (page 2)

Supporting Question 1	Supporting Question 2	Supporting Question 3	Supporting Question 4
How has South Asia's population changed over time?	What are the causes of this population growth?	What are the greatest consequences of population growth?	What can be done to accommodate population growth?
Formative Performance Task	**Formative Performance Task**	**Formative Performance Task**	**Formative Performance Task**
Create a line graph of the total population of South Asia since 1960 to the present.	Create a chart showing the infant mortality rate, birth rate, and life expectancy of South Asian countries. Explain how the data shows population growth in the region.	Create a list of the top five effects of population growth and rank order them. Justify your ranking.	Create a claim and use supporting evidence to argue the best solution to population growth.
Featured Sources	**Featured Sources**	**Featured Sources**	**Featured Sources**
Source A: World Bank: chart of South Asia population since 1960 (source below)	**Source A:** CIA World Factbook: Infant mortality rate by country **Source B:** CIA World Factbook: Birth rate by country **Source C:** Wall Street Journal: Indians Are Living Longer	**Source A:** The Guardian: How India's cities came to drown in sewage and waste **Source B:** Youth Ki Awaaz: In Just 10 Years, India is Going to Face A Massive Water Crisis **Source C**: The Independent: India's population rise puts it on course for rapid growth **Source D:** Sociology Discussion: 12 Main Consequences of Population Growth	**Source A:** Fortune.com: How tech can stop the looming food crisis **Source B:** YouTube: Bill Gates on Overpopulation and Global Poverty **Source C:** UK Independent: 'Educate girls to stop population soaring' **Source D:** The Guardian: India set to start massive project to divert Ganges and Brahmaputra rivers

Summative Performance Task	**ARGUMENT** How should South Asia respond to a growing population? Construct an argument (e.g., poster, graphic organizer, etc.) that discusses your position on the best way to respond to a growing population using specific claims and relevant evidence from relevant sources while acknowledging competing views.
Taking Informed Action	**UNDERSTAND** Find articles or plans that discuss the effects of the population growth in your community (i.e. new residential or commercial developments, roadway expansions or traffic patterns, business openings or closures, etc.). Create a graph or write a description showing how the population has changed over time in your community. **ASSESS** Create a plan of action to help address the issue of population change in your city or neighborhood. **ACT** Propose changes to the city that would accommodate the population change and write a letter to city leaders citing your proposed changes.

Featured sources are suggested and links are provided. IF any of these links are broken, we apologize in advance for the inconvenience.

Overview

Inquiry Description

This inquiry leads students through an investigation of population growth and expansion in South Asia. By investigating the compelling question "How should South Asia respond to a growing population?" students evaluate the best solutions for accommodating a growing population. The formative performance tasks build on knowledge and skills through the course of the inquiry and help students understand the scope of South Asia's population growth, recognize the causes and effects of the growth, and determine possible solutions to deal with population growth consequences. Students create an evidence-based argument about the best way for South Asia to go about handling its population growth issues.

In addition to the standards listed previously, this inquiry highlights the following standard:

- **WST.4.7.2-** Analyze the influence of geography on current events, issues, and in planning for the future using a variety of sources including geographic representations and available geospatial technology.

Note: This inquiry is expected to take six or seven 40-minute class periods. The inquiry time frame could expand if teachers think their students need additional instructional experiences (i.e., supporting questions, formative performance tasks, and featured sources). Teachers are encouraged to adapt the inquiries in order to meet the needs and interests of their particular students. Resources can also be modified as necessary to meet individualized education programs (IEPs) or Section 504 Plans for students with disabilities.

Structure of the Inquiry

In addressing the compelling question "How should South Asia respond to a growing population?" students work through a series of supporting questions, formative performance tasks, and featured sources in order to construct an argument supported by evidence while acknowledging competing perspectives.

Staging the Compelling Question

In staging the compelling question, "How should South Asia respond to a growing population?" teachers may prompt students with a four corners activity, in which the teacher posts four signs in the four corners of the classroom—Strongly Agree, Agree, Disagree, Strongly Disagree—and reads statements from page 2 of the Statements document which discuss certain population issues. Students walk / line up in the corner of the room that most aligns with their viewpoint.

Supporting Question 1

The first supporting question—"How has South Asia's population changed over time?"—has students looking at the way in which population has expanded in South Asia. The formative performance task asks students to use the data table (provided at the end of this inquiry document) to create a line graph showing the population growth of

South Asia. The teacher may find it useful to have students draw a line graph of U.S. population growth from the same period of time as a reference point. The featured source for this question is a chart of population growth in South Asia every five years from 1960 to 2015. Featured Source A is World Bank chart of South Asia population since 1960, and it is merely a data table from which students can create a simple line graph.

Source A: World Bank: chart of South Asia population since 1960 (source is at bottom of this document)

Supporting Question 2

For the second supporting question—"What are the causes of this population growth?"—students are analyzing the causes of the population growth in South Asia by creating a chart that reveals the infant mortality rate, birth rate, and life expectancy rate of certain South Asian countries. In addition to the resources from the previous supporting question, the featured sources provide students with additional materials that allow them to extract specific data. Featured Source A is list of infant mortality rates by country provided by CIA World Factbook. Featured Source B is a list of birth rates by country also provided by CIA World Factbook. Finally, featured Source C is an article from the Wall Street Journal that gives life expectancy data of several South Asian countries within the article.

Source A: CIA World Factbook: Infant mortality rate by country

Source B: CIA World Factbook: Birth rate by country

Source C: Wall Street Journal: Indians Are Living Longer

Supporting Question 3

The third supporting question—"What are the greatest consequences of population growth?"—asks students to create a list of the top five effects of population growth and rank them in order from most significant to least significant with a brief explaining justifying their answer. In addition to the previous featured sources, the first three sources for this task provide important information on several key impacts this population growth has had or is going to have on the region, with each article going into depth on those impacts. *Since the task is simply for students to rank the effects from most significant to least significant, teachers may find it helpful to shorten Featured Sources A, B, and C by providing students with only the first 3-5 paragraphs of each article.* Alternatively, Featured Source D provides a comprehensive, yet succinct, list of 12 consequences of population growth around the world, which the teacher can have students read, annotate, and rank within one class period.

Featured Source A is an article from The Guardian describing India's pollution problems. Featured Source B is from Youth Ki Awaaz (an Indian news agency), and it describes future water shortage issues India will face within ten years. Featured Source C comes from the UK Independent and shows a more positive side of population growth by explaining the economic growth that can result. Featured Source D is an article (and list) from Sociologydiscussion.com, and it showcases twelve consequences of world population growth.

Source A: The Guardian: How India's cities came to drown in sewage and waste

Source B: Youth Ki Awaaz: In Just 10 Years, India is Going to Face A Massive Water Crisis

Source C: The Independent: India's population rise puts it on course for rapid growth

Source D: Sociology Discussion: 12 Main Consequences of Population Growth

Supporting Question 4

For the fourth supporting question—"What can be done to accommodate population growth?"—students prepare their main argument stems by writing what they claim to be the best solution to population growth in general. In addition to the resources from the previous supporting question, the featured sources provide students with additional materials that allow them to consider various ways humans are tackling the effects of overpopulation. Featured Source A originates from Fortune Magazine and discusses how technology can assist with the food crisis associated with overpopulation. Featured Source B is a YouTube video featuring Bill Gates, who discusses how improving health can reduce overpopulated areas. Featured Source C is an article from The Guardian, and it gives information and data showing how girls' education can prevent exponential population growth. Finally, Featured Source D, an article from The Guardian, explains a new infrastructure and resource project India is currently undergoing to help better manager its water supply. As with the task in Supporting Question 3, teachers may choose to provide annotated or shortened versions of these sources for ease of student comprehension. An alternative method is the jigsaw, in which each student in a group of four studies a different article and then teaches that article to his/her group so that the group understands the main ideas of each article.

Source A: Fortune.com: How tech can stop the looming food crisis

Source B: YouTube: Bill Gates on Overpopulation and Global Poverty

Source C: UK Independent: 'Educate girls to stop population soaring'

Source D: The Guardian: India set to start massive project to divert Ganges and Brahmaputra rivers

Summative Performance Task

At this point in the inquiry, students have examined the current growth rate of South Asia, read about and analyzed the causes and effects of this growth, and created claims on the best ways to accommodate this population growth.

Students should be expected to demonstrate the breadth of their understandings and their abilities to use evidence from multiple sources to support their claims. In this task, students construct an evidence-based argument using multiple sources to answer the compelling question "How should South Asia respond to a growing population?" It is important to note that students' arguments could take a variety of forms, including a detailed outline, poster, or essay.

Students' arguments will likely vary, but could include any of the following:

- *South Asia should respond to a growing population by providing more education to its people.*
- *South Asia should respond to a growing population by encouraging innovation and new technologies to deal with the population increase.*
- *South Asia should respond to a growing population by providing more medical services.*
- *South Asia should respond to a growing population by developing its infrastructure and resource use.*

Students have the opportunity to Take Informed Action by drawing on their understandings of the impact population growth can have on a society. To *understand,* students can think of examples of population change in their own community and ways their community has been forced to deal with these population changes. To *assess* the issue, students can create a plan of action to help their community address the population change. To *act*, students can propose these changes in a letter to city or county government, create a map of proposed or desired changes, or complete a written or visual report of the impacts of population change in their area.