

Southern & Eastern ENVIRONMENTAL ASIA'S ISSUES

Presentation, Graphic Organizers, & Activities

Monsoons

- In China, monsoon season begins in March and spreads heavy rain until August.
- Monsoons are also a mixed blessing for China.
- Farmers benefit when the Yangtze and Huang He Rivers overflow their banks because the silt provides fertile soil.
- However, when rivers too much, destruction.



SE Asia's Environmental Issues CLOZE Notes I

POLLUTION OF THE GANGES RIVER
Ganges River

- The Ganges River is the most _____ to the Indian subcontinent.
- The Ganges River basin is one of the most _____ place in the world.
- The river provides water for drinking, bathing, cooking, and for transportation for over _____ who live in the region.

Pollution

- Many of India's largest and most industrial cities are located in the Ganges River basin, and these factories _____ into the river.
- About _____ of chemical, human, and agricultural waste pours into the Ganges every day.
- Cities pour millions of gallons of _____ to villages farther south.
- The Ganges is nicknamed "Mother Ganges", and _____
- Hindus believe that they will have a peaceful journey _____ into the Ganges.
- Many are too poor for cremation, so they place _____ instead.

Effects

- The Ganges River is highly polluted with _____
- Cities along the Ganges have the highest _____ rates in drinking water) of any who live in India.
- It is estimated that about 80% of all illnesses _____ from _____
- Outbreaks of such diseases as _____ and hepatitis are common.

Solution?

- India's government started a program in 1985 _____ purpose of _____
- Indians have built many sewage and water _____
- Unfortunately, it has not proved to be enough _____ and the run-off from industrial and farm _____

Clean It Up

Brainstorm some ways that China and India can clean up their water and air pollution issues. Would it be a simple fix or would there need to be major government intervention to solve the environmental issues?

Name: _____

Design An App

Directions: Imagine that Apple has hired you to create a new application that will solve one of SE Asia's environmental issues. Design the logo for the new app, and write a description about what the app does and how it works.

Description: _____

SE Asia's First Aid Kit

Directions: Create a First Aid Kit to send to either China or India to help them solve their environmental issues. Draw at least 5 symbols of things that are included in the kit. In the text box, describe the significance of each item and how it will help with the issues.

Name: _____

STANDARDS:

SS7G10 Explain the impact of environmental issues across Southern and Eastern Asia.

- a. Explain the causes and effects of pollution on the Chang Jiang (Yangtze) and Ganges Rivers.
- b. Explain the causes and effects of air pollution and flooding in India and China.

SE Asia's Environmental Issues

CLOZE Notes 1

POLLUTION OF THE GANGES RIVER

Ganges River

- The Ganges River is the most _____ to the Indian subcontinent.
- The Ganges River basin is one of the most _____ place in the world.
- The river provides water for drinking, bathing, cooking, and for transportation for over _____ who live in the region.

Pollution

- Many of India's largest and most industrial cities are located in the Ganges River basin, and these factories _____ into the river.
- About _____ of chemical, human, and agricultural waste pours into the Ganges every day.
- Cities pour millions of gallons of _____ that is eventually carried to villages farther south.
- The Ganges is nicknamed "Mother Ganges", and it is very sacred to the _____.
- Hindus believe that they will have a peaceful journey to the next life if their _____ into the Ganges.
- Many are too poor for cremation, so they place the _____ instead.

Effects

- The Ganges River is highly polluted with _____.
- Cities along the Ganges have the highest rates of _____ (found in drinking water) of any who live in India.
- It is estimated that about 80% of all illnesses and one-third of deaths in India come from _____.
- Outbreaks of such diseases as _____, dysentery, typhoid, and hepatitis are common.

Solution?

- India's government started a program in 1985 called the Ganges Action Plan, with the purpose of _____.
- Indians have built many sewage and water _____ along the river.
- Unfortunately, it has not proved to be enough as India's _____ and the run-off from industrial and farm production continue to pollute the river.

SE Asia's Environmental Issues

CLOZE Notes 2

POLLUTION OF THE YANGTZE RIVER

Yangtze River

- The Yangtze begins in the Tibetan Plateau and flows nearly 4,000 miles _____ where 400 million people live.
- It is an extremely important water source to at _____ of China's population.
- Pumping stations along the river take water out to supply people with water for drinking, irrigation, and _____.

Pollution

- Many of China's most densely _____ are located along the river.
- _____ of chemicals and waste from agriculture, industry, and humans pour into the river each year.
- Nitrogen from _____ (poisonous chemical) from industrial uses are the leading pollutants.

Effects

- The pollution puts all of the cities along its banks _____.
- Lakes and _____ have also been contaminated.
- Hundreds of millions of Chinese villagers do not have _____ because of the pollution.
- Many species of plants and _____.
- Nitrates from farm run-off has caused algae in the water to multiply and is contaminating and _____.
- Chinese people are eating the sick fish, which has led to many _____.

Solution?

- The Chinese government is building more _____ along the Yangtze's banks.
- It is encouraging cities to build _____ for garbage rather than dumping it into the river.
- The government is spending billions of dollars to start cleaning up the Yangtze River, but it will take a _____ to solve the pollution problem.

SE Asia's Environmental Issues

CLOZE Notes 3

FLOODING IN INDIA

Monsoons

- In India, monsoon season begins in June and spreads _____ until September.
- Monsoons are both a _____ for India.
- Farmers rely on the rain to grow crops and it's also used to _____.
- Unfortunately, monsoons also cause heavy floods where the rivers overflow and cause _____ and spread water-borne diseases.

Flooding

- When monsoon flooding is too severe, the rivers _____ and water sweeps over the land.
- This can cause airports to close, _____, power lines to fall, water-borne illnesses to spread, and animals and humans to possibly drown.

FLOODING IN CHINA

Monsoons

- In China, _____ begins in March and spreads heavy rain until August.
- Monsoons are also a _____ for China.
- Farmers benefit when the Yangtze and Huang He Rivers overflow their banks because the silt and algae left behind provides _____.
- However, when monsoon rains swell the rivers too much, it leads to _____.

Flooding

- Loggers have cut down _____ that used to contain the rivers' flooding.
- Farmers downstream have also _____ that used to act as sponges during floods.
- _____ have multiplied the effects of the storm water runoff and it now takes much less water to cause a flood.

Effects

- Monsoons usually cause floods every _____ years in China.
- When the river floods, homes and crops are buried and _____.
- Flooding from China's Huang He River has caused more deaths than _____ in the world.
- Because of this, the river is often called _____.

SE Asia's Environmental Issues

CLOZE Notes 4

Solutions?

- The Chinese have _____ to control the rivers.
- Unfortunately, when the dams burst during monsoon season, the flooding problem actually becomes _____.

AIR POLLUTION IN INDIA

Causes

- India has some of the heaviest air pollution in the world due to _____ and the development of industry.
- Many of India's industries use _____ their factories.
- When coal burns, it releases _____ and pollutants into the atmosphere.

Causes

- _____ is also a growing problem in India.
- In rural areas, many families cook _____, using wood, livestock dung, or coal as fuel.
- These fuel sources emit carbon monoxide, soot, and other _____ into the air.

Effects

- Because of India's rapidly _____, more and more Indians are exposed to pollution every year.
- Indians living in cities have some of the highest rates of _____ in the world.
- Air pollution is now the _____ cause of death in India.
- The Taj Mahal, a sacred site and popular tourist destination, is _____ from high levels of air pollution.
- Some scientists believe that Indian smog could potentially _____ patterns in North America.

Solution?

- It has been very difficult for India's government to enforce laws on industry and transportation to clean up the air because it would _____.
- A large part of India's population is very poor and does _____ to slow down economic growth.
- India has been investing money in clean up efforts, but it has not proved _____.

SE Asia's Environmental Issues

CLOZE Notes 5

AIR POLLUTION IN CHINA

China

- China's cities have experienced _____ in population and industry in the past few decades.
- 16 of the world's 20 most polluted cities can be _____!
- China alone _____ of the entire world's total pollutants into the atmosphere.

Causes

- Much of China's energy is provided by burning coal, a process that sends soot, ash, and _____.
- Chinese citizens also _____ to heat their homes, which adds to the pollution problem.
- Millions of Chinese people now drive _____, whose exhaust is also a major source of air pollution.

Effects

- The leading causes of death in China are heart and _____ related to overexposure to air pollution.
- It is estimated that only 1% of people who live in China's cities _____.
- Air pollution has also _____ in China, a problem for at least a third of the country's agricultural areas.
- Unfortunately, air pollution created in Chinese cities is _____ inside the country.
- _____ the contaminated air and rain to Korea, Japan, and other parts of Asia as well.
- Scientists have even discovered Chinese-created air pollutants over the _____.

Solution?

- China's government pledged to work on the quality of the city's air before the _____.
- Automobile traffic was greatly reduced and many factories were _____.
- _____ were cut by as much as 45%.
- Many people enjoyed the cleaner air and petitioned the government to find _____ to clean it up.

Asia's Environmental Issues

Pollution of the Yangtze and Ganges Rivers &
Air Pollution and Flooding in India and China

Pollution of the Ganges River



Ganges River

- The Ganges River is the most important river to the Indian subcontinent.
- The Ganges River basin is one of the most densely populated place in the world.
- The river provides water for drinking, bathing, cooking, and for transportation for over 400 million people who live in the region.



Pollution

- Many of India's largest and most industrial cities are located in the Ganges River basin, and these factories dump their wastes into the river.
- About two million tons of chemical, human, and agricultural waste pours into the Ganges every day.
- Cities pour millions of gallons of sewage into the river that is eventually carried to villages farther south.



Pollution

- The Ganges is nicknamed “Mother Ganges”, and it is very sacred to the Hindu religion.
- Hindus believe that they will have a peaceful journey to the next life if their ashes are scattered into the Ganges.
- Many are too poor for cremation, so they place the bodies in the water instead.



Effects

- The Ganges River is highly polluted with dangerous bacteria.
- Cities along the Ganges have the highest rates of water-borne diseases (found in drinking water) of any who live in India.



Effects

- It is estimated that about 80% of all illnesses and one-third of deaths in India come from drinking contaminated water.
- Outbreaks of such diseases as cholera, dysentery, typhoid, and hepatitis are common.



Solution?

- India's government started a program in 1985 called the Ganges Action Plan, with the purpose of cleaning up the river.
- Indians have built many sewage and water treatment plants along the river.
- Unfortunately, it has not proved to be enough as India's growing population and the run-off from industrial and farm production continue to pollute the river.

Pollution of the Yangtze River



RUSSIA

KAZAKHSTAN

MONGOLIA

CHINA

Yangtze R.

East
China
Sea

INDIA

MYANMAR

TAIWAN

South
China
Sea

Yangtze River

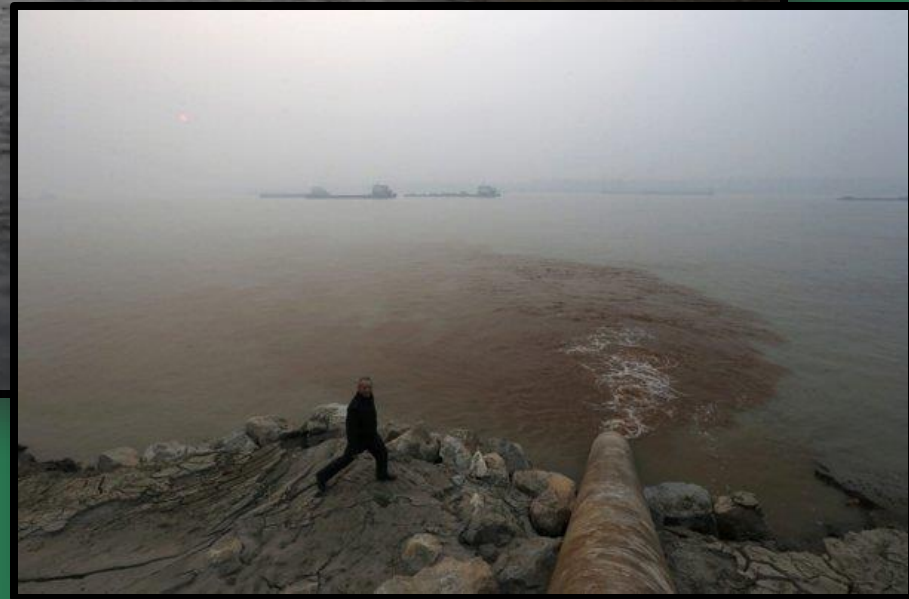
- The Yangtze begins in the Tibetan Plateau and flows nearly 4,000 miles through 185 towns where 400 million people live.
- It is an extremely important water source to at least one-third of China's population.
- Pumping stations along the river take water out to supply people with water for drinking, irrigation, and industrial uses.

Yangtze in Shanghai



Pollution

- Many of China's most densely populated and industrial cities are located along the river.
- Billions of tons of chemicals and waste from agriculture, industry, and humans pour into the river each year.
- Nitrogen from fertilizers and arsenic (poisonous chemical) from industrial uses are the leading pollutants in the river.



Effects

- The pollution puts all of the cities along its banks at risk.
- Lakes and underground aquifers have also been contaminated.
- Hundreds of millions of Chinese villagers do not have safe drinking water because of the pollution.



Effects

- Many species of plants and animals are dying.
- Nitrates from farm run-off has caused algae in the water to multiply and is contaminating and killing the fish.
- Chinese people are eating the sick fish, which has led to many health problems.



Solution?

- The Chinese government is building more water treatment facilities along the Yangtze's banks.
- It is encouraging cities to build sanitary landfills for garbage rather than dumping it into the river.
- The government is spending billions of dollars to start cleaning up the Yangtze River, but it will take a long time to solve the pollution problem.



Flooding in
INDIA

Monsoons

- In India, monsoon season begins in June and spreads heavy rain until September.
- Monsoons are both a blessing and a curse for India.
- Farmers rely on the rain to grow crops and it's also used to generate electricity.
- Unfortunately, monsoons also cause heavy floods where the rivers overflow and cause mass destruction and spread water-borne diseases.



Flooding

- When monsoon flooding is too severe, the rivers overflow their banks and water sweeps over the land.
- This can cause airports to close, buildings to collapse, power lines to fall, water-borne illnesses to spread, and animals and humans to possibly drown.







Flooding in
CHINA

Monsoons

- In China, monsoon season begins in March and spreads heavy rain until August.
- Monsoons are also a mixed blessing for China.
- Farmers benefit when the Yangtze and Huang He Rivers overflow their banks because the silt and algae left behind provides fertile soil.
- However, when monsoon rains swell the rivers too much, it leads to terrible destruction.



Flooding

- Loggers have cut down many of the trees that used to contain the rivers' flooding.
- Farmers downstream have also drained wetlands that used to act as sponges during floods.
- Deforestation and draining have multiplied the effects of the storm water runoff and it now takes much less water to cause a flood.



Effects

- Monsoons usually cause floods every two or three years in China.
- When the river floods, homes and crops are buried and lives are lost.
- Flooding from China's Huang He River has caused more deaths than any other river in the world.
- Because of this, the river is often called "China's Sorrow".



Solutions?

- The Chinese have built dams to control the rivers.
- Unfortunately, when the dams burst during monsoon season, the flooding problem actually becomes much worse.

Air Pollution in **INDIA**

Causes

- India has some of the heaviest air pollution in the world due to automobile emissions and the development of industry.
- Many of India's industries use coal to power their factories.
- When coal burns, it releases harmful gases and pollutants into the atmosphere.



Causes

- Indoor air pollution is also a growing problem in India.
- In rural areas, many families cook over open fires, using wood, livestock dung, or coal as fuel.
- These fuel sources emit carbon monoxide, soot, and other toxic fumes into the air.



“Cooking fuel in rural India is prepared from a wet mix of dried grass, fuelwood pieces, hay, leaves and mostly cow/livestock dung. This mix is patted down into disc-shaped cakes, dried, and then used as fuel in stoves. When it burns, it produces smoke and numerous indoor air pollutants at concentrations 5 times higher than coal.”

Effects

- Because of India's rapidly growing population, more and more Indians are exposed to pollution every year.
- Indians living in cities have some of the highest rates of respiratory disease in the world.
- Air pollution is now the fifth leading cause of death in India.



Effects

- The Taj Mahal, a sacred site and popular tourist destination, is growing yellow from high levels of air pollution.
- Some scientists believe that Indian smog could potentially change weather patterns in North America.



Solution?

- It has been very difficult for India's government to enforce laws on industry and transportation to clean up the air because it would impact the economy.
 - A large part of India's population is very poor and does not want anything to slow down economic growth.
- India has been investing money in clean up efforts, but it has not proved to be enough.



Air Pollution in
CHINA

China

- China's cities have experienced tremendous growth in population and industry in the past few decades.
- 16 of the world's 20 most polluted cities can be found in China!
- China alone pumps 1/3rd of the entire world's total pollutants into the atmosphere.



Causes

- Much of China's energy is provided by burning coal, a process that sends soot, ash, and chemicals into the air.
- Chinese citizens also burn coal to heat their homes, which adds to the pollution problem.
- Millions of Chinese people now drive automobiles, whose exhaust is also a major source of air pollution.



Effects

- The leading causes of death in China are heart and respiratory conditions related to overexposure to air pollution.
- It is estimated that only 1% of people who live in China's cities breathe safe air.
- Air pollution has also created acid rain in China, a problem for at least a third of the country's agricultural areas.



Effects

- Unfortunately, air pollution created in Chinese cities is not confined inside the country.
- Winds carry the contaminated air and rain to Korea, Japan, and other parts of Asia as well.
- Scientists have even discovered Chinese-created air pollutants over the west coast of the US.

Solution?

- China's government pledged to work on the quality of the city's air before the 2008 Olympics.
- Automobile traffic was greatly reduced and many factories were temporarily closed.
- Air pollutants were cut by as much as 45%.
- Many people enjoyed the cleaner air and petitioned the government to find long-term ways to clean it up.

India's Environmental Issues

Directions: Complete the chart below with information that you learn during the presentation. If time allows, color your illustrations.

	Causes	Effects	Illustration
Pollution of Ganges River			
Flooding in India			
Air Pollution in India			

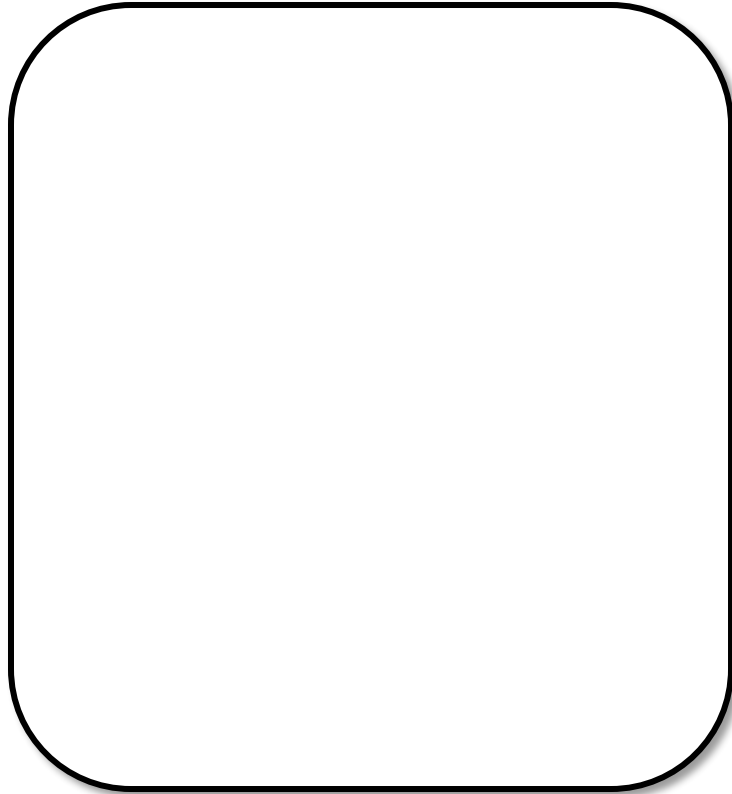
China's Environmental Issues

Directions: Complete the chart below with information that you learn during the presentation. If time allows, color your illustrations.

	Causes	Effects	Illustration
Pollution of Chang Jiang (Yangtze) River			
Flooding in China			
Air Pollution in China			

Design An App

Directions: Imagine that Apple has hired you to create a new application that will solve one of SE Asia's environmental issues. Design the logo for the new app, and write a description about what the app does and how it works.



Description:

A large rectangular box with a black border, intended for the user to write a description of the app.

App Title: _____

Creator: _____



Rating



Design An App

Directions: Imagine that Apple has hired you to create a new application that will solve one of SE Asia's environmental issues. Design the logo for the new app, and write a description about what the app does and how it works.

Logo Sketch

Description:

- Describe the environmental issue.
- What does the App do?
- How does the App work?
- How will it fix the issue?
- What are the App's special features/functions?

App Title: _____

Creator: _____



Rating

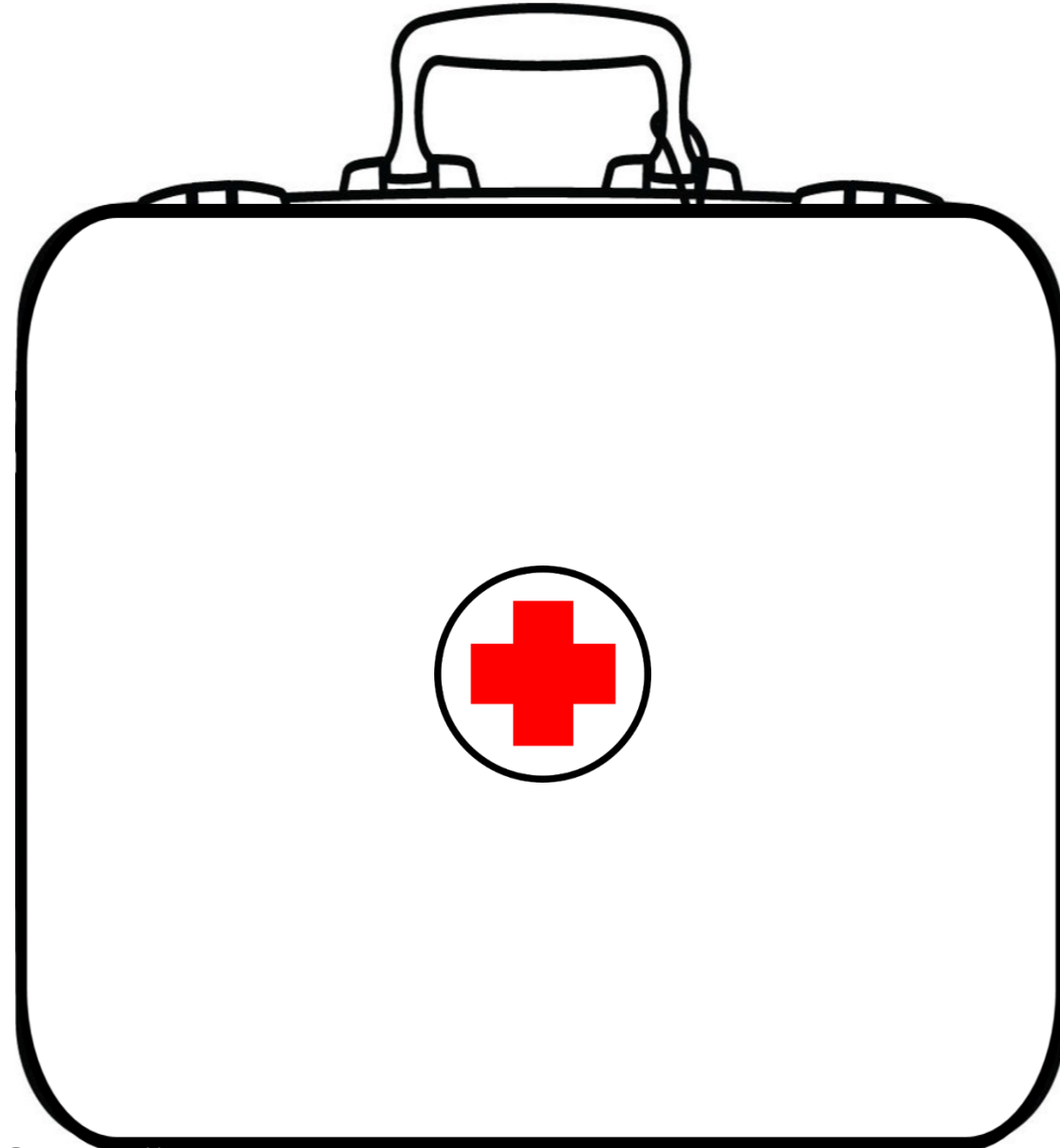
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- Students will imagine they are news reporters in Asia. They will write a news broadcast story about one of the environmental issues discussed as if they are right there living through it.

- The students will create a First Aid kit to send to either China or India to help them solve their environmental issues.
- They will draw at least 5 symbols of things that are included in the kit.
- In the textbox, they will describe the significance of each item and how it will help with the issues.

SE Asia's First Aid Kit

Directions: Create a First Aid kit to send to either China or India to help them solve their environmental issues. Draw at least 5 symbols of things that are included in the kit. In the textbox, describe the significance of each item and how it will help with the issues.

A large, empty rectangular box for drawing and text. It is outlined in black and occupies the right half of the page.