**CHINA**

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| **AIR POLLUTION** | |
| What? Describe the cause(s):  -government gave people north of the river free coal to burn in the winter  -weather and emissions from coal heating | So What? Describe the effect(s):  -People die about 5.5 years sooner in northern China  -lowers life expectancy due to heart and lung problems  -closed highways, forced the cancellations of airline flights and outdoor activities  -sent people to the hospital  -government ordered factories and construction sites to close and 10 anti-pollution policies  -industries replaced outdated technologies and published pollution data |
| **WATER POLLUTION** | |
| What? Describe the cause(s):  -thousands of tons of raw sewage in a river in one day  -thirty years of fast industrial growth  -fertilizer run-offs, heavy metals, untreated sewage  -polluted sediment and the soil can leech into water  -growing demand for water  -coal production | So What? Describe the effect(s):  -quality has deteriorated significantly  -fifth of the Yangtze was unusable  -Government started war on pollution in 2014  -could jeopardize future economic development  -freshwater supplies are less than a third of world average  -nearly two thirds of underground water and a third of surface water unusable for humans  -expensive to improve water quality |

**INDIA**

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| **AIR POLLUTION** | |
| What? Describe the cause(s):  -visibility so bad  -airborne particles and toxic chemicals  -crop burning to clear fields (cheapest option)  -ancient farming technique and residues of urban (city) living  -Government has failed to control pollution sources  -particles from diesel exhaust, natural dust, wildfires  -farms burning crop stubble (rice crop to prepare the fields to plant wheat and return nutrients to the soil)  -smoke from burning outside the city mixing inside the city (construction, vehicles, and fires the poor use to cook and keep warm)  -unusually slow air currents  -north India = basin traps pollution  -Government officials don’t want to enforce pollution laws because they’re afraid of losing votes.  -burning wood or coal in traditional stoves – cheap  -People have to make demands for change.  --Prime Minister encourages citizens to stop waste and conserve  -Rural to urban migration (increased urban population = more cars, city cooking and warming fires)  -population growth and increased energy consumption | So What? Describe the effect(s):  -most polluted city on Earth (Delhi)  -canceled flights  -cars crash and pileups – trains delayed/canceled  -breathing the air = 50 cigarettes/day  -20% surge in patients at hospitals  -polluted-related illnesses  -public health emergency  -can’t see far ahead of you  -9 million premature deaths  -heart attacks, strokes, breathing difficulties, cancer  -air quality is 48 times the guidelines  -reverse migration from cities back to rural areas for cleaner air  -protests  -air clears as areas become wealthier (U.S., Japan)  -people spend more time indoors – more coal and wood fires  -strong effect on the poorest people  -launched a new national air quality monitoring index |
| **WATER POLLUTION** | |
| What? Describe the cause(s):  -increased levels of sewage  -increased population  -city and industrial waste  -vehicles burning diesel fuel | So What? Describe the effect(s):  -275 rivers polluted (more than half)  -Government wants to clean up the Ganges. |

**FLOODING IN INDIA AND CHINA**

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| What? Describe the cause(s):  -heavy rainfall  -mudslides  -hail  -rainy season  -higher water levels on the Yangtze  -heavy rains from monsoons (India only)  -large construction on flood plains and coastal areas  -storm-water drains and waterways clogged with plastic garbage  -old drainage systems | So What? Describe the effect(s):  -power plants and hydroelectric dams cut power  -delayed grain shipments on barges  -damaged farms on the Yangtze River  -high economic costs ($4 billion)  -high death toll  -damages crops  -raised prices of exported coal and corn  -dead fish for fish farmers  -destroyed schools (slows children’s education)  -stopped public transportation  -flights diverted (heavy rains)  -delayed rescue work  -hospitals evacuated  -Government action (flood shelter mapping)  -People helping other people |

**So What? Chart Checklist**

Cause and Effect boxes

Detailed, complete, accurate

(10 points each) \_\_\_\_\_ points

**TOTAL: \_\_\_\_\_\_\_/ 100**

**Sources:**

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