FOR TEACHERS ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

VOLUME 2 OF 2 DBQ

GLOBAL HISTORY AND GEOGRAPHY

Tuesday, January 28, 2014 — 9:15 a.m. to 12:15 p.m., only

RATING GUIDE FOR PART III A AND PART III B (DOCUMENT-BASED QUESTION)

Updated information regarding the rating of this examination may be posted on the New York State Education Department's web site during the rating period. Visit the site at: http://www.p12.nysed.gov/assessment/ and select the link "Scoring Information" for any recently posted information regarding this examination. This site should be checked before the rating process for this examination begins and several times throughout the Regents Examination period.

Contents of the Rating Guide

For **Part III A** Scaffold (open-ended) questions:
- A question-specific rubric

For **Part III B** (DBQ) essay:
- A content-specific rubric
- Prescored answer papers. Score levels 5 and 1 have two papers each, and score levels 4, 3, and 2 have three papers each. They are ordered by score level from high to low.
- Commentary explaining the specific score awarded to each paper
- Five prescored practice papers

General:
- Test Specifications
- Web addresses for the test-specific conversion chart and teacher evaluation forms

Mechanics of Rating

The procedures on page 2 are to be used in rating papers for this examination. More detailed directions for the organization of the rating process and procedures for rating the examination are included in the *Information Booklet for Scoring the Regents Examination in Global History and Geography and United States History and Government.*

Rating the Essay Question

(1) Follow your school's procedures for training raters. This process should include:

Introduction to the task—
- Raters read the task
- Raters identify the answers to the task
- Raters discuss possible answers and summarize expectations for student responses

Introduction to the rubric and anchor papers—
- Trainer leads review of specific rubric with reference to the task
- Trainer reviews procedures for assigning holistic scores, i.e., by matching evidence from the response to the rubric
- Trainer leads review of each anchor paper and commentary

Practice scoring individually—
- Raters score a set of five papers independently without looking at the scores and commentaries provided
- Trainer records scores and leads discussion until the raters feel confident enough to move on to actual rating

(2) When actual rating begins, each rater should record his or her individual rating for a student's essay on the rating sheet provided, *not* directly on the student's essay or answer sheet. The rater should *not* correct the student's work by making insertions or changes of any kind.

(3) Each essay must be rated by at least two raters; a third rater will be necessary to resolve scores that differ by more than one point.

Rating the Scaffold (open-ended) Questions

(1) Follow a similar procedure for training raters.
(2) The scaffold questions are to be scored by one rater.
(3) The scores for each scaffold question must be recorded in the student's examination booklet and on the student's answer sheet. The letter identifying the rater must also be recorded on the answer sheet.
(4) Record the total Part III A score if the space is provided on the student's Part I answer sheet.

Schools are not permitted to rescore any of the open-ended questions (scaffold questions, thematic essay, DBQ essay) on this exam after each question has been rated the required number of times as specified in the rating guides, regardless of the final exam score. Schools are required to ensure that the raw scores have been added correctly and that the resulting scale score has been determined accurately. Teachers may not score their own students' answer papers.

The scoring coordinator will be responsible for organizing the movement of papers, calculating a final score for each student's essay, recording that score on the student's Part I answer sheet, and determining the student's final examination score. The conversion chart for this examination is located at http://www.p12.nysed.gov/assessment/ and must be used for determining the final examination score.

Global History and Geography
Content Specific Rubric
Document Based Essay
January 2014

Document 1

> The first successful efforts to control the flow of water were made in Mesopotamia and Egypt, where the remains of the prehistoric irrigation works still exist. In ancient Egypt, the construction of canals was a major endeavor of the pharaohs and their servants, beginning in Scorpio's time. One of the first duties of provincial governors was the digging and repair of canals, which were used to flood large tracts of land while the Nile was flowing high. The land was checkerboarded with small basins, defined by a system of dikes. Problems regarding the uncertainty of the flow of the Nile were recognized. During very high flows, the dikes were washed away and villages flooded, drowning thousands. During low flows, the land did not receive water, and no crops could grow. In many places where fields were too high to receive water from the canals, water was drawn from the canals or the Nile directly by a swape or a shaduf. These consisted of a bucket on the end of a cord that hung from the long end of a pivoted boom, counterweighted at the short end. The building of canals continued in Egypt throughout the centuries.…

Source: Larry W. Mays, "Irrigation Systems, Ancient," *Water Encyclopedia* online (adapted)

1 Based on this document, state *two* problems ancient Egyptians faced as a result of the uncertain flow of the Nile.

Score of 2 or 1:

- Award 1 credit (up to a maximum of 2 credits) for each *different* problem ancient Egyptians faced as a result of the uncertain flow of the Nile based on this document
  Examples: villages flooded; dikes washed away when there were very high flows; thousands drowned when villages flooded; crops could not grow when there was not enough water/during low flow; no crops could grow; during low flow some land did not receive water

Note: To receive maximum credit, two ***different*** problems ancient Egyptians faced as a result of the uncertain flow of the Nile must be stated. For example, *crops could not grow when there was not enough water* and *during low flow no crops could grow* is the same problem expressed in different words. In this and similar cases, award only ***one*** credit for this question.

Score of 0:

- Incorrect response
  Examples: fields were too high; a system of dikes was used; they used a swape/shaduf to draw water; canal building continued for centuries
- Vague response
  Examples: it was a major endeavor; it was high and low; efforts were successful
- No response

Document 2a

This frieze, or architectural adornment, on an ancient temple portrays Egyptians using shadufs, devices that enabled them to transfer water from the Nile to their fields.

Source: James Barter, *The Nile*, Lucent Books

Document 2b

After the death of Alexander the Great, a series of three pharaohs named Ptolemy ruled Egypt. The culture of Egypt during that period was primarily Greek.

> … In the Ptolemaic period, Greek temple records presented each region as an economic unit, and referred to the name of the canal which irrigates the region, the cultivated region which is located on the river's banks and is directly irrigated with its water, and the lands located on the region's border that could be reclaimed. The beds irrigation system allowed cultivating one winter crop; while in summer, the only lands that could be cultivated were the high lands away from the flood. Thus, when the Egyptians invented tools to lift water, such as the shaduf, they were able to cultivate two crops per year, which was considered a great advance in the field of irrigation. The shaduf was invented in the Amarna period and is a simple tool which needs two to four men to operate. The shaduf consists of a long, suspended pole weighted at one end and a bucket tied at the other end. It can lift about 100 cubic meters (100,000 liters) in 12 hours, which is enough for irrigating a little over a third of an acre.…

Source: Agriculture – Part I, Ancient Egypt History, EgyptHistory.com

2 Based on these documents, what was *one* effect the invention of the shaduf had on the Egyptians?

Score of 1:

- States an effect the invention of the shaduf had on the Egyptians based on these documents
  Examples: water from the Nile could be transferred to their fields; they were able to cultivate two crops per year/they were able to grow more crops per year; laborers were needed to make the shaduf work/two to four men were needed to operate it; they could lift water to irrigate; they were able to irrigate a little over a third of an acre in 12 hours; they could reclaim border lands; allowed them to grow a winter crop; dry lands could receive water; more food could be produced

Score of 0:

- Incorrect response
  Examples: regions were economic units; a canal irrigated the region; it was invented in the Amarna period; it consists of a long, suspended pole weighted on one end and a bucket tied to the other end; it was a simple tool
- Vague response
  Examples: there were Greek temple records; location on the river's banks; it was a great advancement; it lifted 100 cubic meters in 12 hours
- No response

Document 3

> … The water laws of ancient Egypt were primarily concerned with ensuring that each farmer along the river had fair access to the waters during the floods and that no farmers were denied their fair share of irrigated water. If a farmer, for example, farmed many miles from the river, those owning land close to the river had to allow him to have access to a water canal running through their land.
>
> Water laws also prohibited the taking of water from canals by farmers not contributing to the labor of filling the canal with water. How much water one was entitled to take from a canal depended on how much time one spent filling that canal. If, for example, ten farmers contributed ten hours of labor filling irrigation canals with water, any one of them who took more than one hour's worth of water could be put to death.…

Source: James Barter, *The Nile,* Lucent Books

3 According to James Barter, in what way did the government ensure that farmers had fair access to water?

Score of 1:

- States a way the government ensured that farmers had fair access to water according to James Barter

  Examples: passed water laws; said that no farmers could be denied their fair share of irrigated water; if a farmer farmed many miles from the river, those owning land close to the river had to allow him to have access to a water canal running through their land; prohibited taking of water from canals by farmers not contributing to the labor of filling the canal; regulated how much water one was entitled to take from a canal depending on how much time one spent filling that canal; any one who took more water than allowed could be put to death

Score of 0:

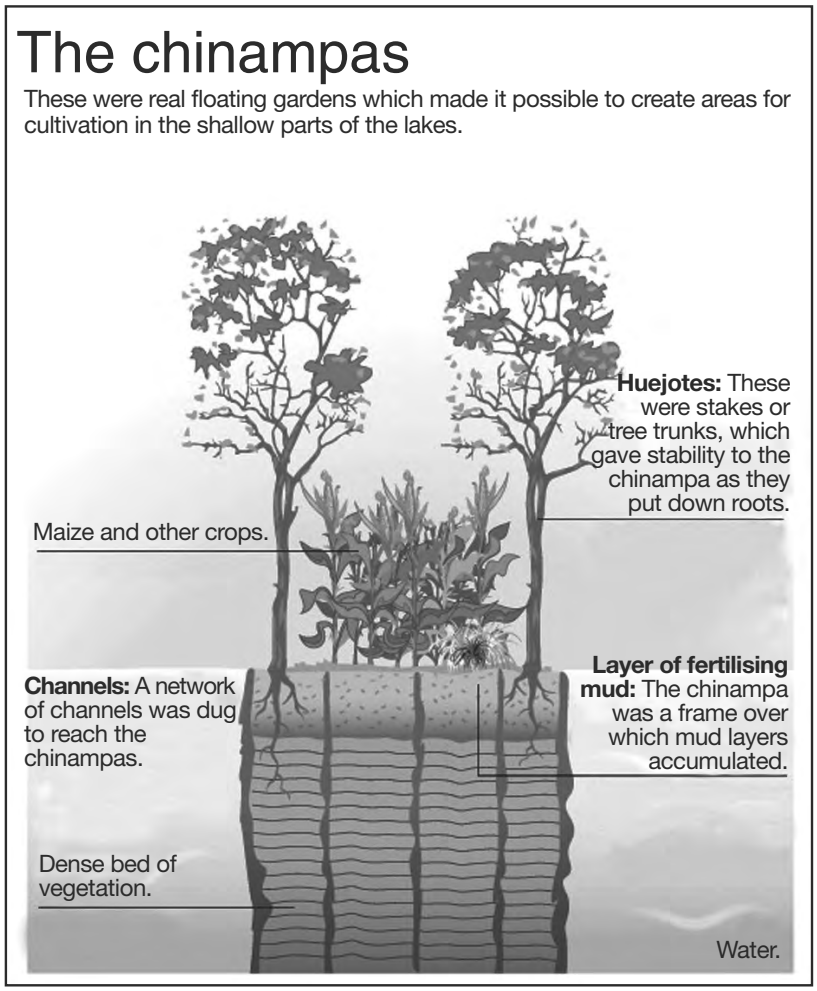
- Incorrect response

  Examples: required them to work ten hours; they had to farm land close to the river; they could only have one hour's worth of water
- Vague response

  Examples: they spent time; they contributed; they were prohibited; it was granted
- No response

Document 4

Aztec Farming Method



Source: www.icarito.cl (adapted)

4 Based on the information provided by this diagram, why did the Aztecs build chinampas?

Score of 1:

- States a reason the Aztecs built chinampas based on this diagram

  Examples: to create areas for cultivation in the shallow parts of the lakes; increase farm production; create land for farming; it was their method of farming; to grow maize and other crops; because they didn't have enough farm land

Score of 0:

- Incorrect response

  Examples: to reach the channels; to increase the size of the lake; so gardens could float; to create a bed of vegetation

- Vague response

  Examples: to create; the shallow parts of the lake; it was a method; because they had lots of lakes

- No response

Document 5

> … Chinampas added both living and agricultural space to the island. Houses could be built on chinampas after they were firmly in place, and the plots were used to grow a great variety of products, from maize and beans to tomatoes and flowers. The Mexica [Aztec] built chinampas all around Tenochtitlan, like their neighbors in the freshwater lakes to the south. They were, however, constantly faced with the danger of flooding, which brought salty water across the chinampas and ruined the land and crops. Lake Texcoco accumulated minerals from the river water running into it, which caused the water to be brackish [mix of fresh and salt water]. In the mid-15th century, this problem was solved; a dike was built, separating the western section of the lake where Tenochtitlan was located and protecting the city from salty water and some flooding.…

Source: Frances F. Berdan, *The Aztecs,* Chelsea House Publishers

5a According to Frances F. Berdan, what was *one* way the chinampas benefited the Aztecs?

Score of 1:

- States a way the chinampas benefited the Aztecs according to Frances F. Berdan
  Examples: added living/agricultural space to the island; houses could be built on chinampas; plots were used to grow a great variety of products/maize/beans/tomatoes/flowers

Score of 0:

- Incorrect response
  Examples: they were firmly in place; Lake Texcoco accumulated minerals; there were freshwater lakes to the south
- Vague response
  Examples: solved problems; plots were used; they added; the Mexica built chinampas all around
- No response

5b According to Frances F. Berdan, what was *one* problem that farmers on the chinampas faced?

Score of 1:

- States a problem that farmers on the chinampas faced according to Frances F. Berdan
  Examples: flooding/danger of flooding; floods brought salty water that ruined the land/crops; mineral accumulation from river water running into Lake Texcoco led to a build up of brackish water; brackish water; mineral accumulation

Score of 0:

- Incorrect response
  Examples: a dike was built; the western section of the lake was separated; the city was protected
- Vague response
  Examples: they were constant; it accumulated; it was solved
- No response

Document 6

> … The capital city, which may have had a population as high as 200,000 to 300,000 in the early sixteenth century, was a superb example of planned growth. By building out into the lake, the Aztecs consolidated and enlarged the original two islands which in turn were linked to the mainland by three large causeways. Fresh water was brought to the city from the mainland by aqueduct….

Source: Jeremy A. Sabloff, *The Cities of Ancient Mexico: Reconstructing a Lost World,* Thames and Hudson

6 According to Jeremy A. Sabloff, what was *one* way building out into the lake benefited the Aztec Empire and its capital city of Tenochtitlán?

Score of 1:

- States a way building out into the lake benefited the Aztec Empire and its capital city of Tenochtitlán according to Jeremy A. Sabloff
  Examples: a population as high as 200,000 to 300,000 could be supported/a large population could be supported; allowed for planned growth; Aztecs were able to consolidate/enlarge the original two islands

Score of 0:

- Incorrect response
  Examples: three large causeways were built; the size of the original islands was decreased; aqueducts moved water; linked to the mainland by three causeways
- Vague response
  Examples: it was a superb example; there were two islands; fresh water; it added
- No response

Document 7a

> … The shortage of wood was very serious. Wood was the main fuel used for cooking. It was essential for ship-building, and charcoal was needed to smelt [process] iron ore. A new source of energy was urgently required. This was supplied by coal.
>
> Already coal had replaced wood for cooking and heating in any place that could be reached by sea or by navigable river. Iron was being imported, although there was plenty of iron ore in Britain. Coal was growing harder to mine, as seams near the surface were exhausted, and deeper seams needed pumps to drain them [water from the mines].…

Source: Diana Knox, *The Industrial Revolution,* Greenhaven Press

7a According to Diana Knox, why was coal needed?

Score of 1:

- States why coal was needed according to Diana Knox

  Examples: to replace wood for cooking/heating; there was a serious shortage of wood; to provide energy; to allow more iron to be smelted

Score of 0:

- Incorrect response

  Examples: charcoal was needed to smelt iron ore; wood was the main fuel used for cooking; there was plenty of iron ore in Britain; coal was found in areas that could be reached by sea/navigable rivers; iron was being imported

- Vague response

  Examples: it was very serious; it was supplied; it was a source; as a replacement

- No response

Document 7b

> … At first, coal was dug from open pits, but gradually the mines had to go deeper. Shafts were sunk down, and galleries [underground rooms] were dug sideways into coal seams. As the shafts went lower, they began to fill with water. Some miners had to work all day with their legs in water. It was not until steam pumps were introduced in the early 1700s that the water could be drained.…

Source: Andrew Langley, *The Industrial Revolution,* Viking

7b According to Andrew Langley, what was *one* way people modified the environment to obtain coal?

Score of 1:

- States a way people modified the environment to obtain coal according to Andrew Langley
  Examples: coal was dug from open pits; deep mines were dug; shafts were sunk down/shafts went lower; rooms/galleries were built underground; rooms/galleries were dug sideways into coal seams; they drained water from the mines/pits/galleries using steam pumps

Score of 0:

- Incorrect response
  Examples: shafts were filled with water; they worked all day with their legs in water; open pits were closed
- Vague response
  Examples: rooms/galleries; they filled; steam pumps
- No response

Document 8

Prior to the use of coal, water was the primary source of power for factories and machines in Great Britain. Water sources that could fuel these factories were limited. Therefore industries were not able to grow and factories were often remotely located.

> … With the shift to coal, the pattern was reversed, reflecting the difference in the power source. Coal spawned [generated] much larger and ever more mechanized factories because the power available from underground was so much greater than that supplied by a waterwheel. And, because its energy had already been handily condensed over millions of years, coal concentrated the factories and workforces in urban areas instead of dispersing them throughout the countryside. In short, coal allowed the industrialization of Britain to gain a momentum that was nothing short of revolutionary.…

Source: Barbara Freese, *Coal: A Human History,* Perseus Publishing

8 According to Barbara Freese, what was *one* effect the shift from water power to the use of coal as a source of power had on Great Britain?

Score of 1:

- States an effect the shift from water power to the use of coal as a source of power had on Great Britain according to Barbara Freese

  Examples: factories became larger/more mechanized; factories/workforces became concentrated in urban areas; industrialization of Britain gained revolutionary momentum/industrialization expanded/grew; led to factories being moved from the countryside to urban areas; growth of urban areas; it changed where factories were located

Score of 0:

- Incorrect response

  Examples: factories were smaller; industries were not able to grow; factories were often located in the countryside
- Vague response

  Examples: the pattern was reversed; differences were reflected; it allowed momentum
- No response

Document 9

A Rainton Mine Disaster in Durham, Great Britain on December 18, 1817

> An explosion claimed twenty seven lives, eleven men and sixteen boys. The blast occurred before all the men had descended [into the mine]. Had it occurred later there would have been 160 men and boys in the pit. Early reports of the total number of lives lost amounted to twenty six, and those principally boys. The explosion took place at 3 o'clock in the morning, before the hewers [men who cut coal from the seam] had descended the pit and from this circumstance about 160 lives have been preserved. Every exertion was made to render assistance to those in the mine and two men fell having been suffocated by the impure state of the air. The viewers and agents were extremely active and had nearly shared the same fate. The pit in which this accident occurred, was always considered to be quite free from explosive matter and in consequence of this supposed security the safety lamps had never been introduced into it the miners continuing to work by the light of candles.

Source: The Coalmining History Resource Centre online, UK

9 According to this document, what were *two* dangers workers faced in the Rainton coal mine?

Score of 2 or 1:

- Award 1 credit (up to a maximum of 2 credits) for each ***different*** danger workers faced in the Rainton coal mine according to this document
  Examples: death/injuries/accidents; explosions/blasts; impure air/suffocation; working by candlelight could cause an explosion; unsafe working conditions/poor lighting; the lack of safety lamps could cause accidents

Note: To receive maximum credit, two ***different*** dangers workers faced in the Rainton coal mine must be stated. For example, *explosions* and *blasts* is the same problem expressed in different words. In this and similar cases, award only ***one*** credit for this question.

Score of 0:

- Incorrect response
  Examples: the hewers had descended into the pit; viewers and agents were extremely active; the mine was free from explosive matter; 160 lives were preserved/saved
- Vague response
  Examples: it was considered free from matter; the reports were early; there were circumstances; air; lighting
- No response

Global History and Geography
Content Specific Rubric
Document Based Essay
January 2014

Historical Context:

Throughout history, people have changed their environments to meet their needs. These changes have had both positive and negative effects on people, societies, and regions. Examples include the ***development of irrigation in ancient Egypt,*** the ***construction of chinampas by the Aztecs,*** and the ***mining of coal in Great Britain during the Industrial Revolution***.

Task: Select ***two*** changes people have made to their environment mentioned in the historical context and for ***each***

- Explain why this change to their environment was needed
- Discuss how this change affected people, a society, and/or a region

Scoring Notes*:*

1. This document-based question has a minimum of ***four*** components (explaining why ***each*** of ***two*** changes people have made to their environment was needed and discussing how ***each*** change affected people, a society, and/or a region).
2. The discussion of how the change affected people, a society, and/or a region can include one or more effects.
3. Effects of the change may be on people, a society, a region, or any combination.
4. Effects of the change may be immediate or long term.
5. The people, society, and/or region need not be specifically identified as long as it is implied in the discussion.
6. The effect of a change can be on a group mentioned in the explanation of why the change to the environment was needed or on a different group affected by the environmental change, e.g., the effect of coal mining and industrialization in Great Britain on India.
7. The response may discuss why a change people have made to their environment was needed from a variety of perspectives as long as the position taken is supported by accurate historical facts and examples.
8. Only two examples of a change people made to their environment should be chosen from the historical context. If three examples of changes are addressed, only the first two can be rated.
9. For the purposes of meeting the criteria of using *at least* ***four*** documents in the response, documents 2a, 2b, 7a, and 7b may be considered as separate documents ***if*** the response uses separate specific facts from ***each*** document.

All sample student essays in this rating guide are presented in the same cursive font while preserving actual student work, including errors. This will ensure that the sample essays are easier for raters to read and use as scoring aids.

Raters should continue to disregard the quality of a student's handwriting in scoring examination papers and focus on how well the student has accomplished the task. The content-specific rubric should be applied holistically in determining the level of a student's response.

Score of 5:

- Thoroughly develops ***all*** aspects of the task evenly and in depth by explaining why ***each*** of ***two*** changes people have made to their environment was needed **and** discussing how ***each*** change affected people, a society, and/or a region
- Is more analytical than descriptive (analyzes, evaluates, and/or creates* information), e.g. *irrigation in ancient Egypt:* connects the need to moderate and direct the flow of the Nile in maximizing agricultural production to the development of the shaduf and to the development and growth of an advanced civilization with numerous achievements; *coal mining in Great Britain:* connects the need to replace scarce supplies of wood with coal to the growth of industrialization in urban centers and to the dangers and difficulties encountered by workers and urban dwellers
- Incorporates relevant information from *at least* ***four*** documents (see Key Ideas Chart)
- Incorporates substantial relevant outside information related to environmental changes (see Outside Information Chart)
- Richly supports the theme with many relevant facts, examples, and details, e.g., *irrigation in ancient Egypt:* control of flood waters with technology; role of shaduf; laws to control water usage; use of the term "Gift of the Nile"; pharaohs; development of calendars; specialization of labor; *coal mining in Great Britain:* depletion of trees; use of water power; Watt's steam engine; use in textile industry; relation to mass production; child labor; Rainton Mine Disaster; terms of Mines Act of 1842
- Demonstrates a logical and clear plan of organization; includes an introduction and a conclusion that are beyond a restatement of the theme

Score of 4:

- Develops ***all*** aspects of the task but may do so somewhat unevenly by discussing ***one*** example of a change to the environment more thoroughly than the ***second*** example *or* by developing ***one*** aspect of the task less thoroughly than the others
- Is both descriptive and analytical (applies, analyzes, evaluates, and/or creates* information), e.g., *irrigation in ancient Egypt:* discusses how the need to control flooding and increase food supply led to the construction of irrigation canals and dikes in the Nile River valley and the development of the shaduf to transfer water to fields located away from the Nile, the growing of two crops, and increased food production; *coal mining in Great Britain:* discusses how the mining of coal to replace wood as a fuel influenced the industrialization of Great Britain and led to poor working conditions experienced by laborers and the need to improve conditions
- Incorporates relevant information from *at least* ***four*** documents
- Incorporates relevant outside information
- Supports the theme with relevant facts, examples, and details
- Demonstrates a logical and clear plan of organization; includes an introduction and a conclusion that are beyond a restatement of the theme

Score of 3:

- Develops ***all*** aspects of the task with little depth *or* develops *at least* ***three*** aspects of the task in some depth
- Is more descriptive than analytical (applies, may analyze and/or evaluate information)
- Incorporates some relevant information from some of the documents
- Incorporates limited relevant outside information
- Includes some relevant facts, examples, and details; may include some minor inaccuracies
- Demonstrates a satisfactory plan of organization; includes an introduction and a conclusion that may be a restatement of the theme

Note: If ***all*** aspects of the task have been thoroughly developed evenly and in depth for ***one*** change people have made to their environment and the response meets most of the other Level 5 criteria, the overall response may be a Level 3 paper.

Score of 2:

- Minimally develops ***all*** aspects of the task *or* develops *at least* ***two*** aspects of the task in some depth
- Is primarily descriptive; may include faulty, weak, or isolated application or analysis
- Incorporates limited relevant information from the documents *or* consists primarily of relevant information copied from the documents
- Presents little or no relevant outside information
- Includes few relevant facts, examples, and details; may include some inaccuracies
- Demonstrates a general plan of organization; may lack focus; may contain digressions; may not clearly identify which aspect of the task is being addressed; may lack an introduction and/or a conclusion

Score of 1:

- Minimally develops some aspects of the task
- Is descriptive; may lack understanding, application, or analysis
- Makes vague, unclear references to the documents *or* consists primarily of relevant and irrelevant information copied from the documents
- Presents no relevant outside information
- Includes few relevant facts, examples, or details; may include inaccuracies
- May demonstrate a weakness in organization; may lack focus; may contain digressions; may not clearly identify which aspect of the task is being addressed; may lack an introduction and/or a conclusion

Score of 0:

Fails to develop the task or may only refer to the theme in a general way; *OR* includes no relevant facts, examples, or details; *OR* includes only the historical context and/or task as copied from the test booklet; *OR* includes only entire documents copied from the test booklet; *OR* is illegible; *OR* is a blank paper

*The term *create* as used by Anderson/Krathwohl et al. in their 2001 revision of Bloom's *Taxonomy of Educational Objectives* refers to the highest level of the cognitive domain. This usage of create is similar to Bloom's use of the term *synthesis*. Creating implies an insightful reorganization of information into a new pattern or whole. While a Level 5 paper will contain analysis and/or evaluation of information, a very strong paper may also include examples of creating information as defined by Anderson and Krathwohl.

Irrigation in Ancient Egypt

Key Ideas from Documents 1–3

Why Change Needed	Effect of Change
Doc 1—To control the flow of water To redirect flood waters when the Nile was flowing high To draw water from the canals or the Nile during low flows To prevent dikes from being washed away, villages from being flooded, and people from drowning **Doc 2—**To transfer water from the Nile to Egyptian fields	**Doc 1**—Canals and irrigation works constructed Flood waters redirected when the Nile was high High fields watered using a swape or shaduf Checkerboard pattern on the land created as a result of building a dike system Flow of the Nile somewhat controlled **Doc 2**—Water transferred from the Nile to Egyptian fields Need for 2 to 4 men to operate shaduf Two crops per year cultivated using new inventions Irrigation of over a third of an acre in 12 hours using shaduf **Doc 3—**Development of water laws to ensure access to those contributing to filling of irrigation canals Violators of water laws punished, sometimes by death

Relevant Outside Information

(This list is not all-inclusive.)

Why Change Needed	Effect of Change
To increase food production because of increased population in Egypt	Population growth as a result of increased food Development and growth of Egyptian civilization Development of cities along the banks of the Nile due to increased food production (Memphis, Thebes) Development of governments to maintain order and supervise the building and repair of canals Development of mathematics and a calendar to calculate time of flooding Development of job specialization Use of Egypt as a breadbasket for Roman Empire Inability to control flooding and flow of water during droughts linked to failure of regimes

Chinampas of the Aztecs

Key Ideas from Documents 4–6

Why Change Needed	Effect of Change
Doc 4—To create areas of cultivation in shallow parts of lakes **Doc 5**—To add living and agricultural space to the island **Doc 6—**To consolidate and enlarge the original two islands	**Doc 4**—Maize and other crops grown Network of channels built to reach chinampas **Doc 5**—Houses built on chinampas Plots used to grow a great variety of products (maize, beans, tomatoes, flowers) Lake Texcoco brackish as a result of accumulation of minerals from river water City protected from salt water and some flooding by the building of dikes **Doc 6—**Population of 200,000 to 300,000 supported Islands linked with mainland by causeways and aqueduct

Relevant Outside Information

(This list is not all-inclusive.)

Why Change Needed	Effect of Change
To increase food production to feed increasing population	Development of Aztec civilization and an empire Expansion and increase in power of Tenochtitlán Development of year-round agriculture as irrigation below the surface resists frost Achievements in art, architecture, and trade supported from profits from agricultural productivity Protection against enemies offered by location of Tenochtitlán on an island Governmental organization/job specialization highly developed Development of social class structure as a result of job specialization Peasants and defeated peoples used as laborers in constructing dikes Use of dikes built to protect the chinampas and causeways provided invasion routes for the Spanish to conquer the Aztecs

Coal Mining in Great Britain

Key Ideas from Documents 7–9

Why Change Needed	Effect of Change
Doc 7—To overcome a shortage of wood	**Doc 7**—Coal used for cooking and heating
To develop an alternate source of energy so wood could be used for things like shipbuilding	Harder to mine coal as surface seams exhausted
To expand sources of coal to be used for cooking and heating	Need for shafts to be sunk down and galleries to be dug sideways into coal seams to obtain coal
To develop a different means of accessing coal as surface availability grew scarce	Work for some miners meant their legs in water all day
Doc 8—Water sources that could fuel factories limited	Pumps required to drain water from deeper seams in mines
	Doc 8—Increase in size and number of mechanized factories
	Factories and workforces concentrated in urban areas
	Momentum added to the industrialization of Britain
	Doc 9—Lives of eleven men and sixteen boys claimed in explosion at coal mine in Durham
	Suffocation as a result of impure state of air in the mines
	Accidents as a result of failure to use safety devices (safety lamps)
	Explosions and injuries as a result of working by candlelight

Relevant Outside Information

(This list is not all-inclusive.)

Why Change Needed	Effect of Change
Increase in price of wood because of its scarcity	Increase in use of coal with use of coke (coal without impurities) to produce iron instead of charcoal
Increased demand for goods as a result of population growth	Iron production made cheaper by using coke
	Helped save forests that were left
	Modifications to steam engine by Watt influencing development of factory system and mass production
	Migration of labor from rural areas resulting in overcrowding in cities
	Air and water pollution as a result of industrialization
	Spread of disease in cities
	Poor working conditions as result of industrialization (long working hours, low wages, dangerous conditions)
	Development of "factory towns"
	Development of diseases as a result of working in mines (black lung, trench rot)
	Influence of Factory Acts (prohibited use of children under 9 in textile mills, regulated hours)
	Influence of Mines Act of 1842 (no women or boys under 10 in mines)

Throughout history people have adapted to their environment and changed their environment. These changes had positive and negative impacts on the people of these regions. An example of this is coal mining in Britain, which brought high industrialization and the rise of the British Raj in India, but also led to the death of mine workers in accidents and air pollution. Another example is the development of irrigation in the Nile River Valley, which allowed for more reliable crop cultivation, but did not completely prevent floods.

During the Industrial Revolution, Britain used coal as a source of fuel to power factories and to replace wood, which was becoming very scarce because it was also needed as a building material. Before the Industrial Revolution, Britain experienced a shortage of wood, and as a result began to mine coal to use for a heat source and for cooking (Doc. 8). After the steam engine was invented and then later improved by James Watt, coal was used in factories and on ships to power machines and engines, which led to the expansion of industry. The use of coal and the steam engine powered profits and economic growth in Britain. Despite this positive impact, a negative impact was that the expanding use of coal caused tremendous environmental problems, including poor air quality. Industrial cities became known for the black smoke rising from smokestacks. Another negative impact of coal mining was that workers were forced to dig deeper and deeper when there was no more coal near the surface. (Doc. 7). This sometimes led to instability in the mines and increased the risk to workers. There was the risk of explosions, caused by methane gas which is highly explosive, when candles used for light ignited the gas. This situation could kill hundreds of workers (Doc. 9).

The British Raj in India became important to the British Empire during the Industrial Revolution. As Great Britain rapidly industrialized, it mass-produced goods and exported them throughout its empire. Britain needed colonies to obtain cheap raw materials such as cotton and iron (Doc 7a), as well as for markets to sell its products. India was directly taken over and its people were forced by British landlords to grow cash crops. Indian markets were flooded with British-made goods. They also colonized parts of Africa, attempting to control from Cape Town to Cairo by building a railroad powered by coal. With the help of inventions such as the steam engine, steamship, and railroads that were fueled by coal, the British and other Europeans became imperialistic powers.

Early occupants of Egypt relied on the Nile as a life source due to the desert conditions of the area. These occupants lived near the river and relied on it depositing fertile silt along the banks, and at its delta. This improved the soil and enabled them to grow crops for food. Despite the Nile's usefulness and the general reliability of its flooding, the Nile sometimes overflowed causing drowning and destruction. The Egyptians created an irrigation system with canals and dikes to control water flow and to prevent disasters (Doc. 1). One positive impact of this was that the Egyptians had far greater control over water flow. A negative impact was that during extremely high flows, canals and dikes were damaged and lives were lost because of the flooding. Another change the Egyptians made to their environment was the use of a shadufe to raise water out of the Nile and its irrigation canals (Doc. 2). This system was put into place to allow Egyptians to farm higher lands further away from the banks of the

Nile and to allow them to cultivate a winter and a summer crop when flow levels were low (Doc. 2b). The shadufe is seen as being a positive impact on Egypt because it allowed more food to be grown. As food production increased, the population grew. As the population grew so did the need to have a strong government that would store food that could be used in the future if shortages and famines occurred. The farmers paid their taxes in grain and it was stored by the government for when it was needed. The people who worked for the government on building projects such as building pyramids received food for their work. The Egyptians also made laws regulating how much water a farmer could use based on how much work he put into filling the canal (Doc. 3). This could positively impact farming because it ensured that all farmers could have access to the water in a fair and just way.

Over time humans have made changes to their environment to improve their lives. This has been shown to have both positive and negative impacts. An example of this was the mining of coal in Great Britain where coal was used to power factories due to a scarcity of wood. This allowed Britain's industries to grow and for them to become wealthier and more powerful through a policy of imperialism. This policy led them to rely on India and parts of Africa for raw materials. Another example of environmental change would be Egypt's use of irrigation to control the water level of the Nile. A positive impact of this was that it allowed the growing of a winter and a summer crop which meant more food for a growing population. A negative impact of this is that when the system failed sometimes towns were destroyed or farmer's crops died from inadequate water.

Anchor Level 5-A

The response:

- Thoroughly develops all aspects of the task evenly and in depth for coal mining in Great Britain during the Industrial Revolution and the development of irrigation in ancient Egypt
- Is more analytical than descriptive (*coal mining:* coal was used in factories and on ships to power machines and engines which led to the expansion of industry; use of coal and the steam engine powered profits and economic growth in Britain; with the help of inventions such as the steam engine, steamship, and railroads that were fueled by coal, the British and other Europeans became imperialistic powers; *irrigation:* people living near the Nile relied on it depositing fertile silt along the banks and its delta to improve the soil enabling them to grow crops; despite the general reliability of its flooding, the Nile sometimes overflowed causing drowning and destruction; shadufs allowed Egyptians to farm higher lands further away from the Nile and cultivate a winter and a summer crop when flow levels were low; laws ensured that farmers could have access to water in a fair and just way)
- Incorporates relevant information from documents 1, 2, 3, 7, 8, and 9
- Incorporates substantial relevant outside information (*coal mining:* expanding use of coal caused tremendous environmental problems including poor air quality; risk of an explosion caused by methane gas; rapid industrialization led to mass-produced goods being exported throughout Great Britain's empire; Great Britain needed colonies to obtain cheap raw materials as well as markets to sell its products; the British Raj in India became important to the British Empire during the Industrial Revolution; they colonized parts of Africa, attempting to control from Cape Town to Cairo by building a railroad powered by coal; *irrigation:* early occupants of Egypt relied on the Nile as a life source due to desert conditions; as food production increased, the population grew as did the need for a strong government that would store food that could be used if shortages or famines occurred; people who worked for the government on building projects such as the pyramids received food for work)
- Richly supports the theme with many relevant facts, examples, and details (*coal mining:* coal used for a heat source and cooking; *irrigation:* canals and dikes created to control water flow; shaduf used to raise water out of Nile and its irrigation canals; taxes paid in grain)
- Demonstrates a logical and clear plan of organization; includes an introduction that is a restatement of the theme and a conclusion that includes positive and negative effects of irrigation in ancient Egypt and coal mining in Great Britain during the Industrial Revolution

Conclusion: Overall, the response fits the criteria for Level 5. Analytic statements are woven throughout the response in a thorough treatment of the task. A comparative discussion evaluates both the positive and negative aspects of coal mining in Great Britain during the Industrial Revolution and irrigation in ancient Egypt.

In the past, humanity has always believed that anything in nature is theirs for the taking. Man has known how to manipulate their environment from prehistory to fit their needs. These changes have proven to be very effective in pushing mankind into the future, and overall helping societies development. Some examples include the development of irrigation systems in Ancient Egypt and the mining of coal in Great Britain. These developments have influenced the growth of ancient civilizations as well as modern states.

Egypt was one of the first great River-Valley Civilizations, and one can plainly see why they prospered. Their governmental organization helped them build and maintain irrigation canals and dikes. As document 1 states, the Egyptians were one of the first civilizations to be able to control water flow. The pharaohs created a bureaucracy under which canals were dug by the order of local governors in order to get water beyond the banks of the Nile River. Egypt's geography is dominated by desert and without physically moving water to the more arid places the people could not produce enough food to sustain their society. Their irrigation systems allowed a surplus of food to be produced which led to population increases and later to a division of labor. No longer were all the people required to be farmers. The irrigation systems also gave the government more revenue through taxes so that they could build massive projects. With their advanced technology, the Egyptians built many palaces and the pyramids. These colossal structures still exist today. Irrigation benefited the society a great deal. As stated in document 2b, the process of irrigation, along with the use of the shaduf, allowed for crop production to double, and fields could now be planted twice during the

year as opposed to once. In addition, the canals and dikes helped control the annual flooding of the Nile by diverting the water at the peak of the flood. Besides helping with the flooding, this change to the environment by the ancient Egyptian people aided their economy and made them prosperous. Irrigation in Egypt today is different because of the Aswan Dam. Under the new system, the soil is saturated and salt deposits have built up, leaving some areas less fertile.

England was the parent country of the industrial revolution, they were the ones who started it all, but they couldn't have continued it without the use of, and efficiency of coal. As stated in document 8, coal was much more efficient than water power to allow factories to work properly. It also meant factories did not have to be located along a fast flowing water source. Coal was abundant in England, especially in comparison to wood, which was becoming increasingly scarce. Initially, coal could be found near the surface and was easy to mine but once this was dug up, people started digging deeper underground to find it, as stated in document 7b. Mining still exists today in Great Britain, but coal mining continues to be one of the most dangerous jobs in the world. As stated in document 9, miners fell victim to spontaneous explosions. Bad air conditions very often caused coal miners to get diseases such as black lung. The general conditions for coal workers were terrible. Many of them worked in water all day and had to pull and push coal-filled cars by hand up narrow shafts which were often in danger of collapsing. Coal allowed for the Industrial Revolution to expand. Once the steam engine was developed, new factories with machines run on steam were built. This expansion of industry made some of Britain's people very rich.

However, the burning of coal led to air pollution, darkening the skies with thick, smelly fogs in places like Manchester and London. To further expand industry and increase revenues, British manufacturers relied on resources from colonies located all over the world. In India, the British forced Indians to grow raw materials such as cotton. The cotton was exported to England, made into finished textiles, and then sent back to India to be sold in Indian markets. Without coal and steam power, the British Industrial Revolution and Imperial Age might not have happened.

So in conclusion, nature has always provided man with the things he wants and needs, but he often abuses it, leading to unintended outcomes. Salt deposits can cause the land to be infertile and burning coal can pollute the air. Man has used the environment to advance himself, but sometimes the advances have negative results.

Anchor Level 5-B

The response:

- Thoroughly develops all aspects of the task evenly and in depth for the development of irrigation in ancient Egypt and coal mining in Great Britain during the Industrial Revolution
- Is more analytical than descriptive (*irrigation:* pharaoh created a bureaucracy under which canals were dug by order of local governors to get water beyond the banks of the Nile; irrigation systems allowed a surplus of food to be produced which led to population increases and later to a division of labor; irrigation along with the use of the shaduf allowed for crop production to double; *coal mining:* coal was more efficient than waterpower; wood was becoming increasingly scarce; initially coal could be found near the surface and was easier to mine but once this was dug up people started digging deeper underground to find it; bad air conditions caused coal miners to get diseases such as black lung; coal allowed the Industrial Revolution to expand; without coal and steam power the British Industrial Revolution and Imperial Age might not have happened)
- Incorporates relevant information from documents 1, 2, 7, 8, and 9
- Incorporates substantial relevant outside information (*irrigation:* Egypt's geography is dominated by desert and without physically moving water to more arid places people could not produce enough food to sustain their society; no longer were all the people required to be farmers; the irrigation systems gave the government more revenue through taxes so they could build massive projects; irrigation in Egypt today is different because of the Aswan Dam; *coal mining:* England was the parent country of the Industrial Revolution; coal miners had to pull and push coal-filled cars by hand up narrow shafts which were often in danger of collapsing; the burning of coal led to air pollution, darkening skies with thick smelly fog; expansion of industry made some of Britain's people very rich; to further expand industry and increase revenues British manufacturing relied on resources from colonies located all over the world; the British forced Indians to grow raw materials which were exported to England, made into finished textiles, and then sent back to India to be sold in Indian markets)
- Richly supports the theme with many relevant facts, examples, and details (*irrigation:* fields could be planted twice during the year as opposed to once; pyramids; palaces; salt deposits; *coal mining:* coal abundant in England; many coal miners worked in water all day; Manchester; London)
- Demonstrates a logical and clear plan of organization; includes an introduction that discusses that changes in the environment have proven to be very effective in pushing mankind into the future and helping the development of society overall and a conclusion that states nature has always been there to give us the things we want and need but we often abuse it leading to unintended outcomes

Conclusion: Overall, the response fits the criteria for Level 5. Analytic statements are integrated into a strong discussion demonstrating a good understanding of the task. Immediate and long-term effects of irrigation systems in Egypt and coal mining in Great Britain focus on positive as well as negative outcomes that enhance this discussion.

Throughout history, people have needed to alter their environment for their continued survival. Although there were usually great benefits, there were sometimes hurtful aspects to the changes as well. Two such examples of these alterations were the building of chinampas in the Aztec Empire from the 1300s to the 1500s and switching to coal as their main power source for manufacturing in Britain during the early nineteenth century. Both societies benefited from these environmental accomplishments.

During the Aztec Empire reign from about the 1300s to about the 1500s, chinampas were extensively used to grow maize, tomatoes, and flowers. They provided much needed farmland for the Aztecs. They were also used to provide land for housing. In fact, Tenochtitlan, the Aztec capital, was constructed on a swampy island in the center of Lake Texcoco. In order to provide food for their population, chinampas or "floating gardens" were constructed by forming manmade islands. According to document 5, the Aztecs built dikes to protect Tenochtitlan and their chinampas from flooding with salty water because salt water could destroy their crops. These chinampas were vital because they provided for Tenochtitlan's large and growing population. Document 6 explains how building out into the lake was used to expand the city and how building causeways connected the city to the mainland. Causeways made it easier for people to move between the city and the mainland and canals made it easier to move between the city and the chinampas. The canals were important for transporting tribute and for getting crops and other goods to markets. The wealth from the markets supported the building of pyramids for worship and wars against their neighbors. When the Spanish conquistadors

arrived in the early sixteenth century, they were invited to enter Tenochtitlan. With access to the city, the Spanish used the canals and causeways to attack the Aztec capital and destroy it. The chinampas developed by the Aztec increased their food supply and living space and influenced population growth.

During the Industrial Revolution in Britain, they started using coal instead of wood or water as an alternate source of energy to power machines. As stated in document 7(a) there was a shortage of wood, so they turned to coal, a more powerful and abundant energy source. The other major source of energy that was used to power the early factories was water. Coal was a far better energy source though because using water limited where the factory owner could locate the factory. Water power was produced by fast moving rivers or streams so that's where the factories had to be located. With the switch to coal, factories were located near coal mines and transportation routes. Cities grew up in these places and the number, size, and output of factories grew tremendously. However, as represented in document 9, the mining of coal could be very dangerous. Coal mines were often filled with polluted air that would kill miners if inhaled for long periods of time. Sometimes gases that could not be detected by humans filled the mine . To determine this, miners would bring canaries into the mines to test the air, with a negative result confirmed by the birds' death. Mine shafts were constantly in danger of explosions from these gases. These explosions would kill many of the miners and could effectively barricade the entrances with rubble, preventing rescuers from reaching survivors. A very recent example of this occurred in Chile, where a rock slide closed the mine shaft, trapping the workers inside. Luckily, with

modern technology, they were saved. Unfortunately this was not often the case when explosions, collapses, or rock slides occured especially during the nineteenth century. Although coal provides a great energy source, the mining of it also puts many people at risk. In fact, coal mining causes the life expectancy of miners to generally be low. Using coal as a fuel influenced technological development and probably increased the pace of the Industrial Revolution. However, with the growth of the factory system and the increased pace of the Industrial Revolution, workers were negatively affected because they were forced to deal with poor working and living conditions.

Societal development, no matter where geographically located, has been heavily affected by human manipulation of their environment. Changing the environment can have positive affects on society as can be seen in the use of chinampas in the tribute empire of the Aztecs providing more arable land and land for settlement and in the mining of coal in Britain providing a powerful source of energy that influenced the development of the Industrial Revolution. However, changing the environment can also have bad consequences such as the terrible working conditions that led to the deaths of many people in Great Britain.

Anchor Level 4-A

The response:

- Develops all aspects of the task for the construction of chinampas by the Aztecs and coal mining in Great Britain during the Industrial Revolution
- Is both descriptive and analytical (*chinampas:* provided much needed farmland for the Aztecs; Aztecs built dikes to protect Tenochtitlán and their chinampas from flooding with salty water because salt water could destroy crops; vital because they provided for Tenochtitlán's large and growing population; *coal mining:* coal was a far better energy source though because using water limited where the factory owner could locate the factory; factories were located near coal mines and transportation routes; cities grew up in these places and the number, size, and output of factories grew tremendously; mine shafts were constantly in danger of explosion from these gases; with the growth of the factory system and increased pace of the Industrial Revolution, workers were negatively affected because they were forced to deal with poor working and living conditions)
- Incorporates relevant information from documents 4, 5, 6, 7, 8, and 9
- Incorporates relevant outside information (*chinampas:* canals made it easier for Aztecs to move between the city and the chinampas; canals were important for transporting tribute and getting crops and other goods to markets; with access to the city, the Spanish used the canals and causeways to attack the Aztec capital and destroy it; *coal mining:* miners would bring canaries into the mines to test the air with a negative result confirmed by the birds' deaths; explosions could barricade entrances with rubble, preventing rescuers from reaching survivors; in Chile a rock slide closed the mine shaft trapping workers inside but they were saved with modern technology; often miners were not able to be saved when explosions, collapses, or rock slides occurred especially during the 19th century; mining caused the life expectancy of miners to be low)
- Supports the theme with relevant facts, examples, and details (*chinampas:* used to grow maize, tomatoes, and flowers; provided land for housing; "floating gardens"; capital Tenochtitlán constructed on a swampy island in center of Lake Texcoco; dikes built to protect from flooding with salty water; *coal mining:* used as an alternate source of energy to power machines; shortage of wood; water powered early factories)
- Demonstrates a logical and clear plan of organization; includes an introduction that states people have altered their environment for continued survival and a conclusion that discusses that societal development has been heavily affected by human manipulation of the environment

Conclusion: Overall, the response fits the criteria for Level 4. The discussion of changes to the environment in both the Aztec and British societies provides good facts and details and some analytic statements to address the task. Outside information enhances the treatment of both environmental changes; however, further integration of the information into the discussion and less repetition would have strengthened the response.

Since the beginning of time, men have adapted to and changed their enviroment. Changes have been made to the enviroment by humans causing positive and negitive effects. The devolpment of irrigation in Egypt was one of these changes. Coal mining in Great Britian during the industrial revolution also had its positive and negitive effects.

The development of irrigation in Egypt was a significant change made to the enviroment. Canals and other waterways were made to redirect water from the Nile River to arid areas where it was needed most. The Sahara Desert that surrounds the Nile limited the ability of farmers to grow enough food. The government wanted to expand the farmland but these large areas of farmland required a massive amount of water. To help solve this problem, the Egyptians developed an irrigation system. The development of irrigation systems had a significant impact on the surrounding people, society, and region. The irrigation systems included digging canals and constructing dikes to move and control the flow of river water. It also included, as shown in document 2a, the use of an innovative device called a shaduf. The shaduf was an essential part of the irrigation system which enabled farmers to transfer water from the Nile and the canals to their feilds more efficeiently. Although this process was slow (doc 2b), it still worked. Farmers were able to grow larger amounts of crops as a result. They could also expand the amount of arable farmland and could even harvest two crops a year – something they could not do without irrigation. This, in turn, enabled the Egyptian population to grow and flourish because there was now enough food to sustain more people. New laws were developed as a result of this new technology. In

document 3, it is said that the government regulates water taken out of the Nile based on the amount of time contributed. This results in an increase in a centrilized governmental presence amongst the people. The stronger central government allowed for an Egyptian Golden Age which included advances in science, medicine, and mathematics. Therefore, irrigation in Egypt had a significant impact on history. Irrigation enabled the egyptians to flourish and create a central authority which took up more responsibilities allowing more achievements.

Coal mining in Great Britian during the industrial revolution was a necessity. During this time, factories began to spring up rapidly. Entrepreneurs built these factories in order to make a profit and were able to capitalize on Britain's natural resources. In document 7a, Knox states that coal was needed to replace wood because wood was becoming scarace. Coal was needed to replace wood for cooking and smelting. With the development of the steam engine and its use in the new factories, coal would become an important source of energy. The use of coal for energy concentrated factories in urban areas as opposed to the countryside (Document 8). Coal was a better energy source than water power. Early factories used to be located only along waterways because water-powered technology was one of the only ways to power the factory. With the devolpment of coal, the location of factories changed. The building of the factories in urban areas encouraged increased urbanization because people moved from the countryside to cities in search of factory jobs. Unfotunatly, the process of extracting the coal was unsafe. Document 9 speaks of a coal mine explosion — resulting in several deaths. It was not only explosions that killed

people in the coal mines. Suffocation was a common form of death because the air was impure and full of toxins and dust. Many miners devolped the so called "black lung disease". Impure air inhalation was a common form of death in coal mines. Coal mining was done by digging underground into large seams of coal (Document 7b). Coal seams were sometimes hundreds of feet deep and often galleries filled with ground water. This created problems with pyrite runoff into rivers. This will ultimatly lead to a large decrease in biodiversity in the surronding area. It was not uncommon for wastes from the mines to seep into the drinking water of the population. This can cause health problems to the surrounding society. Therefore, coal mining has a large impact on the people and enviroment.

In conclusion, people have changed the enviroment they live in throughout time. Many of these changes had a significant impact on the surrounding people and enviroment. The development of irrigation in Egypt had a significant impact on its human carrying capisity. Coal mining in Britian during the Industrial Revolution also had its positive and negitive effects.

Anchor Level 4-B

The response:

- Develops all aspects of the task for the development of irrigation in ancient Egypt and coal mining in Great Britain during the Industrial Revolution
- Is both descriptive and analytical (*irrigation:* canals and other waterways redirected water from the Nile to arid areas where it was needed most; government wanted to expand farmland but that required massive amounts of water; shaduf enabled farmers to transfer water from the Nile and canals to their fields more efficiently; using the shaduf was slow but it still worked; farmers could even harvest two crops a year, something that could not be done without irrigation; it resulted in an increased centralized governmental presence among the people; *coal mining:* coal was a better energy source than water power; building of factories in urban areas encouraged increased urbanization because people moved from countryside to cities in search of factory jobs; process of extracting coal was unsafe; suffocation was a common form of death because the air was impure and full of toxins; coal seams were hundreds of feet deep and often galleries filled with ground water)
- Incorporates relevant information from documents 1, 2, 3, 7, 8, and 9
- Incorporates relevant outside information (*irrigation:* Sahara Desert limited the ability of farmers to grow enough food; enabled Egyptian population to grow and flourish because there was enough food to sustain more people; stronger central government allowed for an Egyptian Golden Age including advances in science, medicine, and mathematics; *coal mining:* entrepreneurs built factories to make a profit and were able to capitalize on Britain's natural resources; with the development of the steam engine and its use in factories, coal would become an important source of energy; many miners developed "black lung disease"; created problems with pyrite runoff into rivers and drinking water; ultimately led to a large decrease in biodiversity in the surrounding area)
- Supports the theme with relevant facts, examples, and details (*irrigation:* systems included digging canals and constructing dikes to move and control the flow of river water; government regulated water taken out of the Nile based on amount of time contributed; *coal mining:* coal needed to replace wood which was becoming scarce; coal needed for cooking and smelting; explosions in coal mines resulted in deaths; done by digging underground into large seams of coal)
- Demonstrates a logical and clear plan of organization; includes an introduction and a conclusion that are a restatement of the theme

Conclusion: Overall, the response fits the criteria for Level 4. The integration of document information and details demonstrate a good working knowledge of the task. The discussion of irrigation along the Nile and coal mining in Great Britain features some examples of insight that would have been more effective with further development.

During the course of time, man has been faced with alot of difficult delemas. From most of these situations, man has come out strong and is able to get by but what man does not see is the negative aspects of his disitions. For every possitive there is often at least one negative.

In the river valley civilization of Egypt the people faced a problem. The problem was that every year the Nile river flooded. At times it flooded too much and destroyed peoples homes or it under flooded and there was not enough water to water the fields (doc 1). The problem couldn't be fixed by using another river or depending on rain because Egypt is mostly dessert and the Nile is the main water source. So the Egyptians had to work with what they had. The solution to this problem was by using an irragation system and inventing a device that can lift water from the river and its irragation canals to the fields.

This invention was called the shaduf. It was capable of lifting enough water to plant up to 2 crops per year which was a major improvement on the irragation system which included canals and dikes. This led to an increase in food production. (Doc 2, A, B). This invention brought many positive effects which included being able to grow 2 crops per year, thus producing more food. Before this every farm had to be located at the river bank. Now because of the more effective irragation system, some farms could be located away from the river which meant that Egyptian civilization could grow and expand beyond the banks of the Nile. This was an imppportant step for Egypt to be able to expand. This expansion could create another problem because the farmers near the river had direct access to water and the ones further away did not have the same access to water, which they

needed. The solution to this problem was simple, the government passed laws called the water laws. The water laws stated that if a farmer was not directly on the water then the farmer that is near the river water must allow the other farmer to use a water canal on his land. They also stated that whatever water a farmer took from the canals had to be paid by the farmer through working on the system.

For example to take out one hour worth of water you would have to put in one hour worth of work filling that canal. If this ratio was not met then the person in violation could be killed by the government. (Doc 3). The pharaoh used local governors to make sure farmers had fair access to the waters of the Nile. The pharaoh's power and wealth depended on the harvests, and the storage of surplus food. He claimed god-like authority and built pyramids and temples to glorify his rule over Egypt. Without irrigation and a steady food supply, Egypt would not have been great.

In Britain the problem that they were faced with was not a water one but a fuel one. Wood was often the fuel of choice. It was used for heat, and cooking. This all changed when the wood source was running out (Doc 7A). The solution, was coal. At first coal was dug from open pits in the ground. That quickly ran out, the solution was to dig deep under ground pits to mine the coal that was in the seams. At times these mines were narrow and included few safety supports or other safety precautions. The advantage of under ground mining was that there was more coal to be mined. But the disadvantage was that mining under ground was very dangerous. In the mines there was little to no light, and sometimes the only light come from candels. The use of candels for light was dangerous for several reasons. First,

miners were working in little light and they could not see well leading to some accidents. Also candels sometimes caused explosions when they ignited explosive gases. The floor often had water up to miners knees, and the air was full of dust, and was very, very dirty (Doc 9). These horrible mine conditions, as well as the horrible working conditions in the factories did not improve until somewhere around the mid 1800s. Then, Parliament started to realize it had to protect the workers. People like Sadler made reports, and laws like the Mines Acts and the Reform Acts helped miners and workers.

When the Industrial Revolution began the early factories were powered by water wheels. This limited where a factory can be placed and also limited the growth of factories. This all changed when the steam engine, which was powerd by coal got introduced. Now factories can be placed in different locations. This increased the number of factories built, and increased the amount of goods produced. (Doc 8).

In conclusion people need to change there envirment in order to survive. With every change comes the balance between positive and negative. In Egypt the positive is an irrigation system even though flooding still sometimes occurred. In Britain the positive is an increase of Industry but at the cost of poor working conditions.

Anchor Level 4-C

The response:

- Develops all aspects of the task for the development of irrigation in ancient Egypt and coal mining in Great Britain during the Industrial Revolution
- Is both descriptive and analytical (*irrigation:* at times Nile flooded too much and destroyed homes or it under flooded and there was not enough water for the fields; shaduf was capable of lifting enough water to plant up to two crops per year; laws meant farmers on the Nile had to allow those not on the river to use the river; the water a farmer took had to be paid by working on the system; *coal mining:* wood was often the fuel of choice; solution to open pits running out of coal was to dig deep underground; mining underground meant there was more coal to be mined but it was dangerous; sometimes the only light came from candles; the floor often had water up to miner's knees and the air was full of dust; use of water power limited where a factory could be located and also the growth of factories; everything changed when the coal powered steam engine was introduced)
- Incorporates relevant information from documents 1, 2, 3, 7, 8, and 9
- Incorporates relevant outside information (*irrigation:* problems could not be fixed by using another river or by depending on rain because Egypt is mostly desert and the Nile is the main water source; better irrigation was essential for Egypt to expand; pharaoh used local governors to make sure farmers had fair access to water; pharaoh's power and wealth depended on harvests and storage of surplus food; without irrigation and a steady food supply, Egypt would not have been great; *coal mining:* some mines were narrow and included few safety precautions; horrible mine and working conditions did not improve until Parliament realized it had to protect workers; people such as Sadler made reports, and laws such as the Mines and Reform Acts helped miners and workers)
- Supports the theme with relevant facts, examples, and details (*irrigation:* every year Nile flooded; government passed water laws; *coal mining:* wood used for heating and cooking; wood source running out; when Industrial Revolution began early factories were powered by water wheels)
- Demonstrates a logical and clear plan of organization; includes an introduction and a conclusion that are a restatement of the theme

Conclusion: Overall, the response fits the criteria for Level 4. Document information used to frame the discussion is integrated with good outside information indicating a solid understanding of the task. Additional supporting facts and details to expand on general summary statements would have enhanced the discussion.

Throughout history, civilizations have made changes in order to adapt to their environment. These changes have brought about both positive and negative effects on the people of the civilization and their society. Both the Aztec civilization and the Egyptian civilization have met their needs by changing their environment.

The Egyptian civilization was located along the Nile River. This early river valley civilization was originally based on the delta region of the Nile called "lower Egypt". After a while upper and lower Egypt were unified allowing for a strong government to form. It was set up along the river based on the fertile land that the river provided for farming. But even though the flooding of the river was predictable based on the seasons and allowed them to develop a calendar, the levels or amount of flooding had very little certainty, and the Egyptians were unable to completely rely on the river for farming. As seen in Document 1, if the river was too high, it flooded almost all of the crops, and destroyed villages. If the levels were too low, the land became to dry, killing almost all of the crops. Because the Egyptians needed a steady food supply, they needed something that would control the uncertainty of the water flow of the river. The Egyptians modified their land by digging canals, which could monitor the water of the Nile. This adaptation by the Egyptians to their erratic environment effected the Egyptian society. The canals and the shaduf allowed for the harvesting of two steady crops, which kept the food supply of the people more consistent. As seen in Document 3, the canals also led to the introduction of new laws to the Egyptian society. Water Laws were created to regulate the amount of water used by each farmer based on how much time they were willing to spend to help fill the canals. The

laws also created an equal access for farmers to the canal, by allowing them to use a canal on a farmers land which was located close to the river. The governors made sure farmers had fair access to the water as long as they contributed to the maintenance of the irrigation system. The society of the Egyptians relied on canals along the river for a constant food supply, and with this, they were able to increase trade with other early civilizations.

The Aztec civilization located in Latin America used chinampas to adapt to the land they lived on. A chinampa was a floating garden, a frame of mud and dirt supporting various crops from trees to corn, that was anchored in a lake. As stated in document 5, these floating gardens helped the Aztecs not only to farm, but to expand their land. This was a positive for the civilization because the more land and area to farm, the more crops. One negative effect of the chinampas was that they relied on the quality of the water. If the Lake water was salty, it destroyed the crops, and the Aztec civilization had a rapid decrease in food supply. The society of the Aztecs was benefitted by the chinampas because it not only increased food supply, it allowed their capital city Tenochtitlan to become strong. Tenochtitlan grew in population due to the increase in food production and grew in importance. The Aztec were then able to conquer surrounding areas and form an empire. This capital city and its causeways made it possible for everyone to access the center of trade. Seen in Document 6, this city was so accesible because the canals and causeways linked all of the seperate islands of the capital to the mainland. These gardens eventually went on to becoming property for homes to be built on as well.

The changes that civilizations have made to their environment has

affected their societies and brought about both positive and negative results. The Egyptians canals and shaduf allowed for an increase in harvesting and new laws to the society. The chinampas of the Aztecs expanded the land of the empire, while also allowing increased food supply. Both changes have helped their early civilization to better succeed.

Anchor Level 3-A

The response:

- Develops all aspects of the task with little depth for the development of irrigation in ancient Egypt and the construction of chinampas by the Aztecs
- Is more descriptive than analytical (*irrigation:* early civilization was set up along the river because of the fertile land; if the river was too high it flooded almost all of the crops and destroyed villages; if the levels were too low land became too dry killing almost all of the crops; the Egyptians needed something that would control the uncertainty of the water flow of the river; land was modified by digging canals which could monitor the Nile; canals and the shaduf allowed for the harvesting of two steady crops which kept the food supply more consistent; the amount of water a farmer could use was based on how much time they were willing to spend helping fill the canals; *chinampas:* they helped the Aztec not only to farm but to expand their land; more land and area meant more crops; they relied on the quality of the water; if the lake water was salty it destroyed the crops and the Aztec civilization had a rapid decrease in the food supply)
- Incorporates some relevant information from documents 1, 2, 3, 4, 5, and 6
- Incorporates relevant outside information (*irrigation:* flooding was predictable based on the seasons and allowed them to develop a calendar; governors made sure everyone had fair access to the water as long as they contributed to the maintenance of the irrigation system; it helped them to increase trade with other early civilizations; *chinampas:* Aztec benefited because they not only increased food supply but allowed their capital city to become strong)
- Includes some relevant facts, examples, and details (*irrigation:* Egyptian civilization located along the Nile; new laws introduced to Egyptian society as result of canals; laws created equal access for farmers to canals by allowing them to use a canal on a farmer's land located near the river; *chinampas:* it was a floating garden, a frame of mud and dirt supporting various crops anchored in a lake)
- Demonstrates a satisfactory plan of organization; includes an introduction that is a restatement of the theme and a conclusion that states changes made by the Egyptians and Aztecs to their environment helped them to better succeed

Conclusion: Overall, the response fits the criteria for Level 3. Explanation of document information is employed as the basis of the discussion and demonstrates an understanding of the task. Recognition that while development of irrigation in ancient Egypt and construction of the chinampas by the Aztec had some negative effects, the positive effects helped both civilizations better succeed is thoughtful but lacks sufficient supporting facts, details, and explanation to prove that thesis.

Throughout history, many civilizations/regions changed their environment in order to meet their needs. Although this lead to positive effects, there were also many negative effects. Two places for example are the chinampas, created by the Aztecs, and the coal mining in Britain during the Industrial Revolution.

The Aztecs were limited in the amount of land they had for shelter and for agriculture. The Aztecs capital was seperated into a few regions because of the lake and the mainland areas. They had started their society on an island in Lake Texcoco where the Aztecs, according to legend saw an eagle sitting on a cactus eating a snake. (01) Luckily for the Aztecs, they used the invention of the chinampas which were floating gardens to help them expand their land and grow food. The crops were grown in Lake Texcoco on the chinampas which were formed by a layer of fertilizing mud over a frame. They were given stability by the growth of the roots from tree trunks that were planted. (Doc. 4) These chinampas had benefits: they added both living and agricultural space for the Aztecs. After awhile the chinampas were stable enough for houses to be made. Plots were used to grow crops such as maize, beans, tomatoes, and sometimes flowers. However, farmers were faced with the danger of losing their crops due to the flooding of their chinampas. To farmers who depended on these crops for food to support their families or to pay their taxes, this was devastating to them. They even had to worry about there being salty water moving into the chinampas which would cause their crops to die. Luckily, a dike was built by the Aztec government to protect crops from being flooded or drowned with salt water. This improved the economy and the amount of crops produced. (Doc. 5 & 01) One of the most important

results from the chinampas being built was that they consolidated Aztec land and even enlarged the 2 main islands of Aztec. Fresh water was even brought out to the capital city using an aqueduct. (Doc. 6) Eventually the Aztecs grew beyond the islands and conquered a lot of land and societies in the middle of present day Mexico. They were an empire based on war and the practice of human sacrifice. They were able to grow in power and wealth because of the food grown on the chinampas. (01) The chinampas brought benefits but the wealth gained from the chinampas was used to conquer the Aztec's neighbors.

During the Industrial Revolution, one of Britain's main energy sources, wood, was already depleted. Factory owners needed a new source of energy. This was furfilled by the burning of coal. However, the coal mined from open pits was soon used up and they needed to mine deeper in order to get more. They began to put shafts and galleries into the mines. (Doc. 7) Coal mining brought benefits to Europe: It allowed the industrialization of Britain to gain momentum. Without the use of coal, Britain probably would not have been able to continue to industrialize as thoroughly (Doc 8). Industrialization brought new machines and more modern technology. It also made Britain one of the most important and powerful countries in the world. (01) (Doc. 8) Although coal mining brought many benefits, there were also major disadvantages. Coal mining is very dangerous. Before the use of safe lamps in the coal mines, miners had to use candles to see. However, one small gas leak around the candles could lead to an explosion, killing many people. Also, the air in mines was very dirty and unclean for people to breathe

for a long time so people got health issues especially in the lungs. Because coal mining was a "dirty job" that high class people wouldn't do, many low class families did this to earn money. Child labor was used because it's cheap labor so some families sent their children there because they needed money. (Doc. 9 & 01) The children worked long hours in dangerous conditions and sometimes died. (01). Coal mining brought many positive but also negative aspects to Britain.

Since areas throughout the world face problems, there are many different ways to solve them. However the changes they make to the environment aren't always for the best, they may have negative aspects too.

Anchor Level 3-B

The response:

- Develops all aspects of the task with little depth for the construction of chinampas by the Aztecs and coal mining in Great Britain during the Industrial Revolution
- Is more descriptive than analytical (*chinampas:* Aztecs were limited in the amount of land they had for shelter and agriculture; farmers had to worry about salty water killing crops when they flooded; they consolidated their land and enlarged the main islands; it helped the Aztecs to grow in power and wealth; *coal mining:* during the Industrial Revolution one of Britain's main energy sources, wood, was already depleted; burning coal gave factory owners a new source of energy; coal mined from open pits was soon used up and mines were dug deeper; without the use of coal Britain probably would not have been able to continue to industrialize as thoroughly; before the use of safe lamps, miners had to use candles; one small gas leak around the candles could lead to an explosion and kill many people)
- Incorporates some relevant information from documents 4, 5, 6, 7, 8, and 9
- Incorporates relevant outside information (*chinampas:* Aztecs had started their society on an island in Lake Texcoco; the wealth gained from them was used to conquer Aztec neighbors; eventually Aztecs grew beyond the islands and conquered land and societies in present-day Mexico; *coal mining:* industrialization brought new machines and more modern technology; it made Britain one of the most powerful countries in the world; air in the mines was very dirty leading to health issues especially in the lungs; child labor was used because it was cheap)
- Includes some relevant facts, examples, and details (*chinampas:* Aztec capital was separated into a few regions because of the lakes and the mainland areas; crops grown on a layer of fertilizing mud over a frame; given stability by growth of roots from tree trunks; maize, beans, tomatoes, and sometimes flowers grown on them; fresh water brought out to capital city by aqueduct; *coal mining:* shafts and galleries put into mines; long hours)
- Demonstrates a satisfactory plan of organization; includes an introduction that is a restatement of the theme and a weak conclusion

Conclusion: Overall, the response fits the criteria for Level 3. Document information is used to frame the discussion and is supported with some outside information to demonstrate an understanding of the task. Additional supporting facts, details, and explanations would have helped to substantiate generalizations.

Throughout the past, and certainly today, people/cities have changed their environment for specific needs, including economic stability. The Industrial Revolution and Irrigation in Egypt both played major roles in changin the environment to meet the regions needs. Both changes have good and bad affects on the people, place or economy. The Industrial Revolution made a huge change in England.

In England in the early 1800s, the nation was going through a huge environmental change, for not only new energy sources but economic growth. As seen in document 7a, in England there was a wood shortage. Wood was the primary source of energy for cooking and making charcoal to smelt iron. And waterpower was inadequate for the growing needs of England and its factories. Soon, coal became the newly needed energy source. Not long after, coal mines were built deep under the ground to find coal because surface coal was harder to find. Agriculture was once the most important focus of the English economy, but times were changing and England soon made the switch to factories which decreased the number of farmers needed. Eventually almost all the factories ran on steam made from burning coal. The first textile factories were built along Englands fast, flowing streams, which used waterwheels as a power source for factories. Once steam engines came about, waterwheels were seen as to slow compared to coal's large generation of power as seen in document 8.

In Egypt, the normal environment is hot and dry because it is located primarily in the Sahara desert. Most crops need large abundances of water to survive. As seen in document 1, Egypt used its natural resources of the Nile River and developed an irrigation system. The Nile's irrigation system did have its problems though

especially during high flows. In addition to the irrigation systems, shadufs were designed as seen in document 2a. The shaduf's job was to take water from the Nile to irrigate the land, giving a larger production of yearly crops, as seen in document 2b. As part of the irrigation system, canals were built and dikes as well. These changes of the environment had strong affects on society.

The Industrial Revolution relied on child labor. Children ages 5 to 18 could work in not only factories, but mines as well. Many children did not receive an education, became physically disabled and lost limbs, or bled to death. Another affect was the mines/factories were not very clean nor safe. Mines not only had crawl spaces, bad air quality, as seen in document 9, but also sometimes involved working up to the knees in water, as seen in document 7b. Mines were very scary for young children. In factories, machines were not only un-safe, but the air, and surroundings were bad. Girls with aprons or long hair got caught in machines causing either death or loss of limbs. Positive affects of the Industrial Revolution included economical growth in England. Also, mothers/daughters worked in these places under bad conditions.

In Egypt, the affects were for the most part positive. Irrigation led to improved crops, and more crops produced in a year. Also, people did not have to live near the Nile. They had the ability to move away from the Nile River and its flood plain and farm more distant land using canals and shadufs for irrigation, as seen in document 3. The Nile also let the Egyptians have new means of transportation. The river allowed, by boat, travelers to move to other towns for trade ect. Pyramids soon were built after the irrigation systems. Pyramids were

tombs in Egypt, that were built right along the Nile, and its tributaries. The last effect in Egypt, was the establishment of a strong government and laws under an all-powerful pharaoh.

In closing, certain circumstances cause people in regions to make environmental changes. In both the Industrial Revolution, and the Egyptian's use of irrigation, both changed to meet their environmental needs and improve their economy. Everyday an environment is altered for the needs of others, especially the present. These alterations of the past, lead to future changes as well.

Anchor Level 3-C

The response:

- Develops all aspects of the task with little depth for coal mining in Great Britain during the Industrial Revolution and the development of irrigation in ancient Egypt
- Is more descriptive than analytical (*coal mining:* waterpower was inadequate for the growing needs of England and its factories; coal became the newly needed energy source; once steam engines came about, waterwheels were too slow compared to coal's large generation of power; factories were not very clean or safe; mines not only had crawl spaces and bad air quality, but also sometimes involved working up to the knees in water; *irrigation:* most crops needed a large abundance of water to survive; Egypt used the Nile to start an irrigation system; it did have its problems especially during high flows; shaduf took water from the Nile to irrigate the land giving a larger production of yearly crops; people no longer had to live near the Nile and could farm more distant lands); includes faulty application (*irrigation:* the river allowed travelers to move to other towns and trade)
- Incorporates some relevant information from documents 1, 2, 3, 7, 8, and 9
- Incorporates relevant outside information (*coal mining:* children could work not only in factories but also in mines; many children did not receive an education, became physically disabled and lost limbs, or bled to death; Industrial Revolution brought economic growth to England; mothers and daughters worked in these places under bad conditions; *irrigation:* in Egypt the normal environment is hot and dry because it is located primarily in the Sahara Desert)
- Includes some relevant facts, examples, and details (*coal mining:* wood shortage; wood primary source of energy for cooking and making charcoal to smelt iron; waterwheels source of power for factories; *irrigation:* canals and dikes built as part of irrigation system)
- Demonstrates a satisfactory plan of organization; includes an introduction that states people have changed their environment to meet needs such as economic stability and a conclusion that mentions past alterations to the environment lead to future changes as well

Conclusion: Overall, the response fits the criteria for Level 3. Specific facts and details along with some relevant outside information demonstrate a working knowledge of the task. Some statements about the effects of irrigation in ancient Egypt and coal mining relate directly to the task. Other statements do not logically follow and are not integrated into the task particularly some of the details focused on the Industrial Revolution that are not connected to changes brought from mining coal, weakening the response.

The Egyptians and the British both modified their environments to meet their needs, irrigation in Egypt allowed farmers to bring water to their fields; coal mining in Great Britain allowed factories to grow. The Egyptians needed to use irrigation to control the Nile. The British needed a new energy source to replace wood.

The main source of water in Egypt is the Nile river. The uncontrolable nature of the Nile makes it difficult to utilize. When the Nile is flowing high it can flood villages killing many people. When the Nile is low the land cannot recieve water and crops cannot grow. Before irrigation crops needed to be grown near the Nile in order to recieve water. If a field was placed too far away from the Nile it could not recieve water and crops could not be grown.

The Egyptians used irrigation to control the Nile. Canals were built in order to transport water farther away. Farmers also used devices called shadufs to transport water. This allowed for more crops to be grown. Using those tools Egyptians were able to lift water to higher places during the summer to avoid flooding. This allowed Egyptians to produce two crops a year. Water laws were put in place to ensure every farmer recieved their fare share of water from the irrigation system.

Wood was the main source of fuel in Great Britain before coal. It was used for cooking, heating, and for smelting. A shortage of wood brought demand for a new energy source. Coal was a readily available fuel source in Great Britain. Before the use of coal water was the main energy source for most factories. This limited the factories in size, amount, and location.

Coal was a much more efficient energy source – than wood or water. Mines were dug to supply Great Britain with enough coal. The mine

consisted of a shaft that was dug deep into the ground with galleries dug sideways into the coal seam. Mining coal could be dangerous however. The inpurity of the air in some mines caused minors to suffocate. Explosive substances were sometimes found in mines and they could be ignited by candles that minors used for light. Coal allowed factories to grow much larger and become more mechanized. They were no longer limited by water so factories began moving into urban areas.

In order to overcome hardships the Egyptians and British had to modify their environment. The Egyptians used their irrigation techniques to avoid flooding and increase the amount of crops they could produce. The British found coal as their new energy source and used it to replace wood and water.

Anchor Level 2-A

The response:

- Minimally develops all aspects of the task for the development of irrigation in ancient Egypt and coal mining in Great Britain during the Industrial Revolution
- Is primarily descriptive (*irrigation:* when Nile is flooding high it can flood villages killing many people; when Nile is low or a field is placed too far away it could not receive water and crops would not be able to grow; canals were built in order to transport water; shadufs allowed farmers to bring water to their fields; laws put in place to insure farmers received their fair share of water; *coal mining:* shortage of wood brought demand for a new energy source; coal was a readily available fuel source in Great Britain; before coal, water was the main energy source for most factories; coal was a more efficient energy source; impurity of air in some mines caused miners to suffocate; explosive substances sometimes found in mines and could be ignited by candles used for light; it allowed factories to become larger and more mechanized; since factories were no longer limited by water they began moving into urban areas); includes faulty application (*irrigation:* with the use of shadufs Egyptians were able to lift water to higher places during the summer to avoid flooding)
- Incorporates limited relevant information from documents 1, 2, 3, 7, 8, and 9
- Presents little relevant outside information (*irrigation:* Nile is the main source of water in Egypt)
- Includes few relevant facts, examples, and details (*irrigation:* used by Egyptians to control Nile; shadufs allowed Egyptians to produce two crops a year; *coal mining:* wood main source of fuel in Great Britain before coal; wood used for cooking, heating, and smelting; mines dug to supply coal; galleries dug sideways into coal seams)
- Demonstrates a general plan of organization; includes an introduction and a conclusion that state how and why the Egyptians and British modified their environment

Conclusion: Overall, the response fits the criteria for Level 2. The response is characterized by a summary of document information that is used as evidence to support all aspects of the task. Lack of development and some repetition especially in the treatment of irrigation in ancient Egypt weakens the response.

Throughout history, people have made changes to their environments to meet their needs. These changes have been both positive and negative on the people, their societies, and their region. The coal mining in Great Britain during the Industrial Revolution impacted it's people and region with the new use of coal, and the mining of coal.

The use of coal became needed when their was a shortage of wood, a new source of energy was required (Doc. 7a) and coal was it. Coal replaced wood for most everything such as (Doc. 7a) cooking, heating and it became the power for trains as well (outside info). Coal generated more power than the waterwheel, (Doc. 8) which was the main source before, and coal became the main source of energy. Coal allowed the industrialization (Doc. 8) of Britian to gain momentum. (Doc. 7b) People modified the environment to obtain coal by galleries being dug sideways into coal seems, sometimes the shafts would begin to fill with water, and in the 1700's the steam pump was introduced and the water could be drained so the workers would not have to be in water up to their knees. (outside info) The use of coal became very popular and the main source of energy.

People faced many dangers working in coal mines, but they took the risk of working in them anyway. (Doc. 9) Workers faced the dangers of explosions and many died from explosions. (Doc. 9) People working in the mines were killed by suffication due to the impurity of the air and working conditions. Coal affected people in which they recieved jobs mining.

Coal mining in Great Britain during the Industrial revolution was possitive and negative. Possitive in that it became the main source of

energy, negative in which people in the mines were being killed by poor working conditions. Coal mining impacted Great Britain largely/greatly by replacing wood as an everyday use for cooking and heating and many other things that are used.

Anchor Level 2-B

The response:

- Develops all aspects of the task in some depth for coal mining in Great Britain during the Industrial Revolution
- Is primarily descriptive (*coal mining:* it became needed due to a shortage of wood; a new source of energy was required and coal was it; coal generated more power than the waterwheel which was the main source before coal; allowed the industrialization of Great Britain to gain momentum; steam pump allowed water to be drained so workers would not have to be in water up to their knees; people faced many dangers working in mines; it was positive in that coal became the main source of energy)
- Incorporates limited relevant information from documents 7, 8, and 9
- Presents little relevant outside information (*coal mining:* coal became the power for trains)
- Includes few relevant facts, examples, and details (*coal mining:* replaced wood for cooking and heating; galleries dug sideways into coal seams; in 1700s steam pump introduced; workers faced dangers of explosions; people working in mines killed by suffocation due to impurity of air)
- Demonstrates a general plan of organization; includes an introduction that is a restatement of the theme and a conclusion that summarizes the positive and negative effects of coal mining in Great Britain

Conclusion: Overall, the response fits the criteria for Level 2. Although only coal mining in Great Britain during the Industrial Revolution is discussed, the information that is presented demonstrates a clear understanding of the task. Good facts are included but lack of explanation leads to unsupported conclusions. Repetition of facts weakens the response.

Changing a society's environment is sometimes necessary to meet the needs of the people. Even though these changes seem positive they came with negative effects as well. Two examples of these changes are the irrigation systems in Egypt and coal mining in Great Britain.

The development of irrigation in Egypt came with both positive and negative effects. For the Egyptians this changed seemed essential to the growth of their agriculture. This is so, because their source of water, the Nile River, was very unpredictable. The River experienced very high flow, which led to the flooding of villages and drownings of thousands. And the River also consisted of very low flow, which caused the land to not recieve water and no crops to be able to grow. (Document 1) This unpredictable river led to the change of agriculture among Egyptians. The Development of irrigation had some positive effects. In Document, 2B, it talks about the positive impact of the irrigation systems. The main impact was that because of it, Egyptians were able to cultivate 2 crops every year. This had a huge impact on Egyptian agriculture. However, there were some negative effects, which are talked about in document 3. The government punishments were harsh for not following the law. If a farmer took too much water than allowed, he could be put to death. These harsh punishments impacted the lives of many.

Coal mining in Great Britian seemed necessary to the people as well. In Document 7A, it talks about why. At the time wood was Britain's main source of energy. But, the supply of wood was decreasing dramatically. So, the need for coal was important for cooking and heating in many places. Because of this increase in coal mining, Britain started to become more industrial. (Document 8)

Anchor Paper – Document-Based Essay—Level 2 – C

Factories and machinery began to grow and become more condensed. This made the people move to more urban areas, instead of being in the rural countryside. But along with an increase in industry came the working conditions of factory workers throughout Britain. Such conditions are mentioned in Document 9. These coal mines were very dangerous to work in. They contained explosive matter which killed many workers. As well as impure air, which affected the health of the workers. With these conditions, workers died from being in the coal mines.

The development of irrigation systems in Egypt and the start of coal mining in Great Britain were necessary changes in society. These changes impacted the lives of society in many ways, both positive and negative. But, changes like these changed the lives of the people forever.

Anchor Level 2-C

The response:

- Minimally develops all aspects of the task for the development of irrigation in ancient Egypt and coal mining in Great Britain during the Industrial Revolution
- Is primarily descriptive (*irrigation:* essential to the growth of agriculture; Nile River experienced very high flows which led to flooding of villages and drowning of thousands; low flows of Nile led to land not receiving water; government punishment was harsh for not following the law; if a farmer took too much water, he could be put to death; *coal mining:* coal was important for cooking and heating in many places; as a result of the increase in coal mining, Great Britain started to become more industrial; made people move to urban areas instead of staying in the rural countryside; impure air in mines affected the health of workers); includes faulty and weak application (*irrigation:* Egyptians were able to cultivate two crops every year)
- Incorporates limited relevant information from documents 1, 2, 3, 7, 8, and 9
- Presents no relevant outside information
- Includes few relevant facts, examples, and details (*irrigation:* Nile as source of water was unpredictable; *coal mining:* wood was main source of Great Britain's energy but supply was decreasing; mines very dangerous; explosive matter killed many workers)
- Demonstrates a general plan of organization; includes an introduction and a conclusion that are a restatement of the theme

Conclusion: Overall, the response fits the criteria for Level 2. Evidence from documents is strung together in a basic way to address the task. Literal interpretation of the documents and lack of explanation weaken the response.

Thoughout history, many diverse groups of people around the world have altered their enviorment in some way, shape or form to meet their needs. Two of these groups of people include the Aztecs and the Ancient Egyptains.

The Aztecs invented something calls chinampas. As stated in document four, they are, "floating gardens which make it possiable to create areas for cultivation in shallow parts of lakes. In document six, it states, "by building out into a lake, the Aztecs consoildated and enlarged the original two islands." This means that by using chinampas, the Aztecs had more living and farming space.

The Ancient Egyptains also altered there enviorment to suit there needs. The ancient Egyptains built and developed as system of irrigation on the Nile River. As stated in document one, canals were built to flood large tracts of land along the Nile while it was flow higher. This create fertile soil and make more space for agriculture. Also as stated in documents 2a and 2b, the ancient Egyptains invented shadufs which were, "devices that enabled them to transfer water from the Nile to the feids. This made this farming much more effective. The inventions and development of both the irrigation systems along the Nile River in Egypt and the Chinampas in South America by the Aztecs affected them in many ways. First both of these inventions greatly changed the way of farming. Both methods gave them more space to farming. Also both methods made farming more efficent.

In conclusion both the Ancient Egyptains and Aztecs, along with many other divirse groups of people thoughout the world and history have changed there in enviorment to meet there needs.

Anchor Level 1-A

The response:

- Minimally addresses some aspects of the task for the construction of chinampas by the Aztecs and the development of irrigation in ancient Egypt
- Is descriptive (*chinampas:* make it possible to create areas for cultivation in shallow parts of lakes; helped the Aztecs consolidate and enlarge the original two islands; their use gave the Aztecs more living and farming space; *irrigation:* Egyptians built and developed a system of irrigation on the Nile River; shadufs enabled the Egyptians to transfer water from the Nile to the fields making farming more effective)
- Includes minimal information from documents 1, 2, 4, 5, and 6
- Presents little relevant outside information (*irrigation:* flooding created fertile soil)
- Includes few relevant facts, examples, and details (*chinampas:* floating gardens; *irrigation:* canals used to flood large tracts of land along Nile when it flowed high); includes an inaccuracy (*chinampas:* were in South America)
- Demonstrates a general plan of organization; includes an introduction and a conclusion that are a restatement of the theme

Conclusion: Overall, the response fits the criteria for Level 1. Although the first aspect of the task is not directly addressed and quotations from documents dominate the response, a limited understanding of the task is demonstrated. Lack of supporting facts and details detract from the comparative statements about the Aztec construction of chinampas and irrigation of the Nile.

Throughout history, people have changed their enviroments to meet their needs. These changes had both positive and negative effects on people, societies, and regions. Examples include the development of irrigation in ancient Egypt, The construction of chinampas by the Aztecs, and coal mining in Great Britain during the Industrial Revolution.

The construction of chinampas by the Aztecs had both positive and negative affect. The chinampas were real floating gardens which made it possibly to create areas for cultivation in the shallow parts of the lakes. A positive effect was that the chinampas added both living and agricultural space to the island. A negative was that flooding, which brought salty water across the chinampas ruined the land and crops. (Document 4 and 5)

Coal mining in Great Britain during the Industrial Revolution also had positive and negatives. Coal allowed the industrialization of Britain to gain momentum that was nothing short of revolutionary. Negatives of the mining were the many dangers people had to face, like the explosions from all the explosive matter, and being trapped without any light because there was no safety lights. (documents 8 and 9)

Anchor Level 1-B

The response:

- Minimally addresses some aspects of the task for the construction of chinampas by the Aztecs and coal mining in Great Britain during the Industrial Revolution
- Is descriptive (*chinampas:* made it possible to create areas for cultivation in the shallow parts of lakes; they added both agricultural and living space to the island; *coal mining:* allowed the industrialization of Great Britain to gain momentum which was revolutionary; people could be trapped without any light because there were no safety lights)
- Includes minimal information from documents 4, 5, 8, and 9
- Presents no relevant outside information
- Includes few relevant facts, examples, and details (*chinampas:* floating gardens; flooding brought salty water which ruined land and crops; *coal mining:* people had to face many dangers such as explosions)
- Demonstrates a general plan of organization; includes an introduction that is a restatement of the theme and lacks a conclusion

Conclusion: Overall, the response fits the criteria for Level 1. While the first aspect of the task is not addressed for either environmental change, the information presented demonstrates a limited understanding of the effects of the changes. Information from the documents frames a brief discussion of some positive and negative effects of both changes.

Throughout history people have adapted to meet certain problems. The answers to these problems affect the society and the people in this society. Egypt had problems with its rivers but adapted by making new inventions. In Britain there was not enough wood which was a source of energy so coal replaced wood. These answers to problems have positive and negative effects on the place where it is happening.

Wood was a source of energy and was used for ships, and cooking. As seen in document 7a, coal replaced wood as a new energy source. Coal was already used for stoves and cooking but was found to be useful in factories with the improvement of the steam engine. Early factories often used water as an energy source. In document 8 it is said that coal produced more energy than the water wheel. Because the location of factories that used water for energy were set up near fast flowing rivers, it was difficult to build more factories and grow. Coal changed all this. It allowed Britain to expand and build more factories in urban areas.

Coal was hard to mine and caused many problems. In the beginning, coal was mined in open pits but coal near the surface ran out and mines had to be dug deeper. People had to build shafts and gallaries which then started to fill knee high up with water as shown in document 7b. Many small kids and young women worked in the minds and crawled through dark and cramped tunnels while working long hours with little pay (outside info). Some people died from explosions or suphocated on the contaminated air as said in document 9. Small children and women were forced to pull heavy wagons of coal and developed physical problems. These working conditions were not fixed until laws were passed to protect the miners (outside info).

Burning coal was also harmful to the enviornment. The gas and smog produced acid rain and changed the way the enviornment looks. The coal smoke from the factories was so bad that it made some buildings turn from brown & grey to black (outside info). The water became contaminated from mining waste and many animals died. (outside)

In Egypt flooding of the Nile was sometimes unpredictable. At times it would flood either to much or to little. If the Niles water levels were to high it would wash away dikes and flood villages and thousands could drown as told in document 1. If it was to low the crops wouldn't get enough water and would die. This caused starvation and hunger. Ways to solve these problems needed to be invented.

New inventions were made to help solve these problems. Irrigation canals and dikes were dug to direct the Nile's flood waters. Shadufs were invented and used to transport water from the Nile and canals to fields that were away from the problematic flood plain as shown in document 2a. The shadufs were very useful and allowed men to transport water in a quick and effective way. As told in document 2b, in twelve hours up to 100,000 liters could be lifted and moved to fields. It helped make these fields productive. This invention allowed for more food to be produced. People could water their crops without having to go down to the river. This enabled farmers to grow two crops a year instead of one as seen in document 2b. More people could eat and the population could grow (outside).

This allowed Egypt to grow in size and power. As shown in document 3, laws were passed so the amount of water a farmer could

take from the canal was based on the time he spent in filling the canal. Breaking this rule would lead to harsh punishments. A person caught breaking the law could be put to death. This shows that the government leaders had power over the people. Similar to Hammurabi's Code, the laws used in Egypt created a form of justice that was strict.

Throughout history, people have faced problems. Solutions are made to deal with these. Coal was used to replace wood and irrigation along with the shadufs allowed for more crops. The results of these could be positive negative or both. As long as there are problems there will be new solutions.

Throughout history, people have changed their environments to meet their needs. These changes have had both positive and negative effects on people, societies, and regions. Some examples include the development of irrigation in ancient Egypt and coal mining in Great Britain during the industrial Revolution. Both of these changes have had a huge effect on the regions and their people.

Ancient Egypt is known for its hot climate and deserts. Because of this quality it has a need for a fresh water supply. Its main source of water comes from the Nile River. Egyptians main goal was to control the flow of water so villages located on the banks of the Nile could survive. In ancient civilizations like Mesopotamia and Egypt irrigation canals were created. Canals were a good invention because it made it easier to obtain water for their crops (doc. 1)

The irrigation canals in Egypt started out like a good idea and were used to solve problems. One problem the Egyptians faced was the high flows of the Nile. When the Nile had high flows and canals were not maintained they would overflow and dikes were washed away along with whole villages. Thousands of people were killed. To help with this the government called for maintaining and digging irrigation canals so that high flows could be redirected. Another problem was when the Nile had low flows. When little water was passing through the canals it was impossible to grow crops in some areas. This was solved when a new invention was created called the shaduf. This was basically a bucket on the end of a cord that hung from the long end of a pivoted boom, counterweighted at the short end (doc. 1). Without the shaduf farmers could only grow one crop. But with the shaduff Egyptians might be able to grow 2 crops per year (doc. 2). Farmers

could now live further away from the banks of the Nile than ever before and grow crops. Some people feared they would not get a supply of water because they did not live close to the river. The government created water laws to ensure people who farmed farther from the river had access to water in the canals. The only requirement demanded by the government was to contribute labor to fill the canal with water. The longer you spent filling the canal the more water you were allowed to take (doc. 3). If these laws were broken punishments could be severe. This shows the power and strength of government. Laws and punishments are only as strong as the ability of the government to enforce these laws. The Pharoah, who had supreme power over his subjects, forced some of them to work on public projects, such as the building of the pyramids. The growth and glory of the Egyptian civilization and the power of the pharaoh depended on a steady food supply.

The Industrial Revolution was a time for building factories and making goods. One of the early sources of energy for Great Britain had came from wood. Unfortunately this source was running low in supply. Wood was used for cooking food, building ships and producing charcoal needed to process iron ore. The main source of energy to power the early factories was water. But water power limited the factory owners because they could only build their factories on rivers with rapids that would be able to provide enough power. Great Britain needed to find a new source of energy. Eventually Great Britain started to use coal which was an abundant and versatile energy source.

The change from wood and water to coal had a great effect on the

region. Coal was a positive change for factories. With the use of coal, factories became much larger and ever more mechanized because coal-powered steam engines are much more powerful then using a waterwheel. Factories no longer had to be located on rivers with rapids. Coal allowed industrialization in Great Britain to increase and created a revolution (doc. 8). Even though coal had multiple positive effects it also had multiple negative effects as well. Some of these effects were caused in the coal mine itself. Miners faced many dangers in these coal mines. Inside the mines the air is extremely dusty and it is easy for miners to suffocate because of unhealthy gases and particles in the air. Also some of these workers are working by the light of a candle. This is extremely dangerous because it could cause a fire or even an explosion because of the gases in the coal mines. An example of this is the Rainton Mine Disaster in Durham, Great Britain on December 18, 1817. Many were killed or injured because of an explosion (doc. 9). Miners also face the danger of cave ins which can kill many people. This shows the coal mines had dangerous and poor working conditions. These reasons are why coal mines had a negitive effect on the region of Great Britain. Coal mining had both positive and negitive effects during the Industrial Revolution.

In conclusion regions that have changed their environment to meet their needs, have had positive and negative effects on people and regions. The development of irrigation in Egypt and coal mining in Great Britain show this is true.

Throughout histroy, people have faced enviromental problems which forced them to modify it. These modifications brought affects that could be seen as both positive and negative. Two examples include, the Aztec creation of chinampas and the coal mines in Great Britain, because both had affects on their people and region. They were created for the benifet of society. The real result may be argued of having done differently.

The Aztec civilization founded its perminate location in present day Mexico, on an island in a lake naming their city Tenochtitlan. Having a capital city in a lake though created problems. There wasn't much room to house its people or grow its food. The Aztecs needed a way to create land in the lake in order to farm and live. In response, they decided a modification was in order and created the chinampas. These were plots of lands that were made by frames of mud and layers that included a dense bed of vegetation. These plots made it possible to create areas for cultivation in shallow parts of the Aztec lakes. (Doc-4). Once established the chinampas also gave the Aztecs land to live on.

Unforunatly, these chinampas had both benefical and negative effects. The chinampas were benefical because they allowed the Aztecs to plant and grow a variety of products. Some of which include maize, as well as beans, tomatoes and flowers. Growing these crops made the Aztec stronger and they soon were able to be the most powerful empire in meso America. Tenochtitlan became a trading and administrative center of the empire. Unforunatly, the negative effected proved to be a great one. Floodings occured at times, which brought salty water across the chinampas. The salty water ruined not only the land but

also the crops. This affected the region and people leaving both with little food or nutrianes – (Doc 5). The Aztecs conquered neighboring areas to form their empire. A reason the Spanish were able to conquer the Aztec Empire in the 1500s was because they were able to join with these conquered people. Without the surplus of food from the chinampas, the Aztecs may not have made such a strong civilization and conquered other areas.

Another society who was seen making changes to their enviroment was Great Britain. When a shortage of wood appeared a solution was needed quickly, for wood was at the time the main fuel for many things. The quick solution needed by Britain to acquire a new source of energy was brought to them by coal. Coal took wood's place and was now used for cooking and heating, as well in industrial purposes-(doc 7a). Unforunaty, an effect of the exesive use of coal appeared. It was becoming harder to mine coal, a modification was needed.

Coal was at first, dug from open pits, but then the mines needed to go deeper. A result of this need resulted in the invention of mine shafts. They allowed sideways diging into coal seams, creating mines or rather tunnels allowing more coal to be mined. (doc 7b). Unforunatly, a negative effect resulted in this, unheathy and dangerous working conditions. Accidents would often occur killing many of the workers, an example is the Rainton Mine Disaster in Durham. Twenty-seven lives were taken by the unsafe conditions. Dangers included explosive matter having been present in the mine, as well as the workers having to work by candle light instead of safety lamps. The deaths included sixteen boys. This shows another problem — child labor. Because of the cramped and dangerous conditions, as well

as the greed of the mine owners who wanted to pay their workers less, many mines used child labor. Young boys worked long hours and were often under payed and even beaten (doc 9). Although coal was esential it affected the people, workers who would put their lives in danger and the region which would have to suffer the explosion. Coal also had positive effects. Britain built more factories, factory owners became very rich, and people gained a lot of technology.

Although these modification might have lead to negative effect their role were important. The chinampas for example made it possible to enlarge the Aztec city and shape it into a strong and massive cilivization (doc 6). Coal and coal mines did put its workers in constant danger but allowed Britain to undergo an idustrilization, which led to the Industrial Revolution. One may argue that this was the era which made Britain into the strong country known today. (Doc 8). Both modifications left their mark imprinted in history.

The indians the english and the egyptians all eventually modernized. great Britiont went from using coal as a main energy source to water steam. The indians and egyptians both created water techniques advanced for there time.

The egyptians created a device called a shebauf (Doc 2a) to carry water easier. The Aztecs came up with a farming method named chinampas (4). The Britis started using coal as a main powe source but then they came up with steam (Doc 8, 7A).

In history adaptations and/or changes needed to be done to the enviornment to fit the peoples needs. The changes have a possotive and negative effect on society and the enviornment. Two examples are coal mining in Great Britain durring the Industrial Revolution and the development of irrigation in ancient Egypt.

Coal mining in Great Britain durring the Industrial Revolution was a big change and their are many reasons to why this change happened. One reason is because the main source of energy was from wood but the supply was running out, as said in Doc. 7a. Another reason for this swtich to coal was because Energy was also used through water, as shown in Doc. 8, and water was getting harder and harder to get to. How was water used as energy do you ask, well water was used as energy by having this device called a water wheel be put in a fast flowing stream, so that the wheel could be turned by the moving water and when the wheel turns it runs the machiens. Coal was also used because it was becoming more popular in homes for cooking and heating, as seen in Doc 7a. The change as you can see was needed because the shift from farming to Industry and factories meant better power sources for the new technology coming out in Great Britain durring that time. The coal mining left many effects on people and socity. One effect was that people looking for work would have jobs! The men would mine and children, and the women and children would work in factories, which meant almost everybody had a job. A negative effect of coal was that their were many accidents in the mines, like shown in Doc. 9, where explosions can happen or fires or even having the mines collaps on the workers! The jobs in factories were not much better, the overseers often beat the workers for not being fast

enough or hurting themself. Many people came out of working the Industrial Revolution deformed. On a posotive note the Coal helped make work more efficent and better michinery work better in factories. Overall the switch to coal in the Industrial Revolution in Britain was both good and bad.

Irrigation in ancient Egypt was a change that needed to be done. This is because Egypt's geography in northern Africa is right in the Saharah Dessert, and their is only one river that flows through Egypt, the Nile river. The Nile was used as the Irrigation source, as shown in Docs. 1, 2a, and 2b. This invention known as the Shaduf was used to collect water from the Nile, as seen in Docs 2a & 2b. The Irrigation had all posotive effects on Egypt. One posotive effect was that all farms got equal water so that plants & food can be cultivated, as shown in Doc. 3. This suppled the Egyptians with a lot of food to them and it was fair and even. Irrigation was also an effect because the people of the ancient Egyptian socity could all have farms and pleanty of water to suply their familys. Overall Irrigation used in ancient Egypt was posotive on socity.

Changes are always being made to adapt to peoples needs. Changes are both good and bad on socity and the people. Two good examples of change was coal being used in Britan in The Industrial Revolution and the use of Irrigation in ancient Egypt.

Practice Paper A—Score Level 3

The response:

- Develops all aspects of the task in little depth for coal mining in Great Britain during the Industrial Revolution and the development of irrigation in ancient Egypt
- Is more descriptive than analytic (*coal mining:* coal used for cooking but was found to be more useful in factories; location of factories that used water for energy were set up near fast flowing rivers making it difficult to build more factories and grow; coal allowed Britain to build more factories; coal was mined in open pits but this soon ran out and mines had to be dug deeper; shafts and galleries were built and started to fill with water; some people died from explosions or suffocated due to contaminated air; coal was harmful to the environment; *irrigation:* Nile was unpredictable at times; if the flood levels were too high it would wash away the dikes and flood villages and thousands could drown; if the flood levels were too low crops would not get enough water and would die causing starvation and hunger; irrigation channels and dikes were dug to decrease the intensity of the Nile by diverting some of the water; population could grow because more people could be fed; it allowed Egypt to grow in size and power; breaking the rules would lead to harsh punishments such as death)
- Incorporates relevant information from documents 1, 2, 3, 7, 8, and 9
- Incorporates relevant outside information (*coal mining:* small kids and women worked in the mines and crawled through dark and cramped tunnels working long hours with little pay; working conditions were not fixed until laws were passed; gas and smog produced acid rain and changed the way the environment looked; coal smoke from the factories was so bad that it made some buildings turn from brown and grey to black; water became contaminated with waste and many animals died; *irrigation:* similar to Hammurabi's Code, the Egyptian law code created a form of justice that was strict and often deadly)
- Supports the theme with relevant facts, examples, and details (*coal mining:* coal replaced wood as a new energy source; coal produced more energy than the water wheel; *irrigation:* shadufs used to transport water from Nile to fields)
- Demonstrates a logical and clear plan of organization; includes an introduction and a conclusion that are a restatement of the theme

Conclusion: Overall, the response fits the criteria for Level 3. Although documents serve as a frame for the response, the interpretation of document information demonstrates a good understanding of the task. The incorporation and development of more outside information and supporting details would have strengthened the response.

Practice Paper B—Score Level 4

The response:

- Develops all aspects of the task for the development of irrigation in ancient Egypt and coal mining in Great Britain during the Industrial Revolution
- Is both descriptive and analytical (*irrigation:* main goal of Egyptians was to control the flow of water so villages on the banks could survive; canals made it easier to obtain water but when little water was passing through them it was impossible to grow crops; without the shaduf and other tools only one crop could be harvested; some people feared they would not get water because they did not live close to the river but the government allowed them access to the canal; the longer you filled the canal the more water you were allowed to take; laws and punishments were only as strong as the ability of the government to enforce them; *coal mining:* coal was a more abundant and versatile energy source than wood; with coal, factories became larger and more mechanized; coal was more powerful than a waterwheel; factories could be built anywhere not just on rivers; miners faced many dangers; candlelight could cause a fire or an explosion; because coal helped the Industrial Revolution grow, some negative effects were partly caused by coal mining)
- Incorporates relevant information from documents 1, 2, 3, 7, 8, and 9
- Incorporates relevant outside information (*irrigation:* Nile is Egypt's main source of water; pharaoh forced subjects to work on public projects, such as irrigation systems and building of the pyramids; like many other absolute rulers such as Hammurabi, the pharaohs delivered absolute justice to the people of Egypt; *coal mining:* water power limited factory owners because they could only build factories on rivers that provided enough water power; miners suffocated because of the unhealthy gases in the mines; miners faced the danger of a cave-in)
- Supports the theme with relevant facts, examples, and details (*irrigation:* canals created in Mesopotamia and Egypt; with high flows of Nile canals would overflow and dikes washed away along with whole villages; shaduf basically a bucket on the end of a cord that hung from long end of pivoted boom, counterweighted at short end; government created water laws; *coal mining:* wood supply low; wood used for cooking, building ships; charcoal needed to process iron ore; water main source of energy for early factories; many killed or injured in Rainton Mine Disaster in Great Britain)
- Demonstrates a logical and clear plan of organization; includes an introduction and a conclusion that are a restatement of the theme

Conclusion: Overall, the response fits the criteria for Level 4. The inclusion of integrated outside information offsets a dependence on document information which frames a methodical discussion. Limited analytic statements are effective and add to an understanding of the task.

Practice Paper C—Score Level 3

The response:

- Develops all aspects of the task with little depth for the construction of chinampas by the Aztecs and coal mining in Great Britain during the Industrial Revolution
- Is more descriptive than analytical (*chinampas:* Aztecs did not have much room to house its people or grow its food; they made it possible to create areas for cultivation in shallow parts of Aztec lakes; salty water from floods ruined not only the land but also the crops leaving little food or nutrients; without the surplus of food from them, the Aztecs may not have conquered neighboring areas; *coal mining:* when a wood shortage appeared, a solution was needed quickly as wood was the main fuel; mines needed to go deeper resulting in mine shafts and tunnels; mining resulted in unhealthy and dangerous working conditions; dangers included explosive matter in the mines and workers having to work by candlelight instead of safety lamps)
- Incorporates some relevant information from documents 4, 5, 6, 7, 8, and 9
- Incorporates relevant outside information (*chinampas:* location gave them some protection from their enemies; they helped Aztecs become the most powerful empire in Mesoamerica; Tenochtitlán became a trading and administrative center of the empire; *coal mining:* young boys were often underpaid and beaten; it led to Britain building more factories, factory owners becoming very rich, and people gaining technology)
- Includes some relevant facts, examples, and details (*chinampas:* Aztec capital Tenochtitlán; plots of land made by frames of mud and layers including a dense bed of vegetation; once established they gave land to live on; maize, beans, tomatoes, and flowers grown; *coal mining:* coal replaced wood and was then used for cooking, heating, industrial purposes; coal dug from open pits; Rainton mine disaster)
- Demonstrates a satisfactory plan of organization; includes an introduction that states while environmental changes were made for the benefit of society the results may have been different and a conclusion that discusses while modifications to the environment might lead to negative effects their role was important

Conclusion: Overall, the response fits the criteria for Level 3. Documents are used to establish a framework for a descriptive discussion. Although an understanding of the task is evident, further explanation would have helped substantiate generalizations and brief concluding statements.

Practice Paper D—Score Level 0

The response:
Fails to develop the task; refers to the theme in a general way

Conclusion: Overall, the response fits the criteria for Level 0. An attempt is made to address all three changes but most of the information is incorrect and muddled. No understanding of the task is demonstrated.

Practice Paper E—Score Level 2

The response:

- Minimally develops all aspects of the task for coal mining in Great Britain during the Industrial Revolution and the development of irrigation in ancient Egypt
- Is primarily descriptive (*coal mining:* wood was main source of energy in Great Britain but supply was running out; coal was becoming more popular in homes for cooking and heating; there were many accidents in the mines; it helped make work more efficient; *irrigation:* Nile used as the irrigation source); includes faulty and weak application (*coal mining:* water was getting harder and harder to get to; many people came out of working during the Industrial Revolution deformed; *irrigation:* all farms got equal water; people of ancient Egypt could all have farms and plenty of water to supply their families)
- Incorporates limited relevant information from documents 1, 2, 7, 8, and 9
- Presents little relevant outside information (*coal mining:* shift from farming to industry and factories meant better power sources for the new technology; women and children would work in factories; fires could happen in the mines or the mine could even collapse on the workers; *irrigation:* Egypt is in northern Africa in the Sahara desert; Nile only river that flows through Egypt)
- Includes few relevant facts, examples, and details (*coal mining:* men and children worked in mines; *irrigation:* shadufs used to collect water from Nile)
- Demonstrates a general plan of organization; includes an introduction and a conclusion that are a restatement of the theme

Conclusion: Overall, the response fits the criteria for Level 2. A few statements of relevant outside information add to the discussion, especially in the case of coal mining in Great Britain. Over-generalizations and some faulty analysis characterize the development of the task, especially in the development of irrigation in Egypt.

Global History and Geography Specifications
January 2014

Part I
Multiple Choice Questions by Standard

Standard	Question Numbers
1—United States and New York History	N/A
2—World History	4, 5, 7, 8, 12, 13, 15, 18, 20, 22, 26, 27, 28, 29, 35, 37, 40, 41, 43, 44, 46, 47, 48
3—Geography	2, 3, 6, 9, 11, 14, 16, 23, 24, 30, 32, 33, 36, 39, 42, 50
4—Economics	1, 10, 17, 25, 34, 38, 49
5—Civics, Citizenship, and Government	19, 21, 31, 45

Parts II and III by Theme and Standard

	Theme	Standards
Thematic Essay	Human Rights; Justice	Standards 2, 3, and 5: World History; Geography; Civics, Citizenship, and Government
Document-based Essay	Change; Environment and Society; Factors of Production; Human and Physical Geography; Needs and Wants; Scarcity; Science and Technology; Urbanization	Standards 2, 3, 4, and 5: World History; Geography; Economics; Civics, Citizenship, and Government

Scoring information for Part I and Part II is found in Volume 1 of the Rating Guide.

Scoring information for Part III is found in Volume 2 of the Rating Guide.

The *Chart for Determining the Final Examination Score for the January 2014 Regents Examination in Global History and Geography* will be posted on the Department's web site at: http://www.p12.nysed.gov/assessment/ on the day of the examination. Conversion charts provided for the previous administrations of the Global History and Geography examination must NOT be used to determine students' final scores for this administration.

Submitting Teacher Evaluations of the Test to the Department

Suggestions and feedback from teachers provide an important contribution to the test development process. The Department provides an online evaluation form for State assessments. It contains spaces for teachers to respond to several specific questions and to make suggestions. Instructions for completing the evaluation form are as follows:

1. Go to http://www.forms2.nysed.gov/emsc/osa/exameval/reexameval.cfm.

2. Select the test title.

3. Complete the required demographic fields.

4. Complete each evaluation question and provide comments in the space provided.

5. Click the SUBMIT button at the bottom of the page to submit the completed form.