In Depth: Smallpox, Part A Name: _____

Time: _____ Date: _____

Instructions: Read the information below and answer the questions by circling the letter(s)—each question can have more than one answer.

Disease

Pneumonia, tuberculosis, cholera, polio, typhoid, and malaria are only a few ancient diseases that have inflicted suffering and death on millions of humans for thousands of years. Between 1347 and 1351, bubonic plague, once called the Black Death, swept across Europe killing approximately 25 million people—one third of Europe! An influenza pandemic known as the Spanish Flu killed upwards of 50 million people world-wide between 1918 and 1919—that was more than all the people killed in four years of fighting in World War I. Despite the horror these diseases have caused, one virus over thousands of years has inflicted more misery and death upon the human race than any other: smallpox.

Disease has always existed. Yet, the hunter-gatherer lifestyle practiced by peoples in the Middle Stone Age and earlier, kept groups small and generally separated from other groups. This helped contain disease to a limited number of locations. About 11,000 B.C.E., people discovered agriculture and began settling down in one area. As the population grew, villages became towns, towns became cities, and cities became civilizations. With people crowded together in large numbers, socializing, and trading over great distances with other cities, diseases for the first time had the chance to spread and affect large groups over vast territories. The first epidemics had begun.

1. What disadvantage(s) resulted from agriculture?
   - E. The population decreased due to food shortages
   - H. Diseases could now spread over great distances
   - R. People developed immunities to more diseases
   - V. More people could be affected by disease

Smallpox

Diseases usually started among animals. At some point, the disease mutated and jumped from animals to humans. Thus, when humans began raising livestock, they came into more contact with animals and more easily contracted a new disease.

The first evidence of the smallpox virus was found in Ancient Egypt. The pharaoh Ramses V died suddenly in 1157 B.C.E. His well preserved mummy shows pox-like scars on his cheeks—a sign of the smallpox infection.

Smallpox was spread from contact with other people's bodily fluids. It usually entered through the nose by breathing in droplets from the air after an infected person sneezed. Less often, a victim could contract the disease from an infected person's clothing or bedding. In any case, symptoms appeared 12 to 14 days after infection resulting in symptoms that included a fever up to 106 degrees, headache, severe fatigue and back pain, and vomiting. A few days later pustules, large pimple-sized lumps filled with fluid, appeared on the arms, face, and trunk. The pustules turned to scabs leaving deep pits that scarred the victim for life. About thirty percent of victims died; those that survived had lifetime immunity.

Smallpox often spread through communities periodically. As the disease ran out of victims, it subsided until the unaffected population grew and then the epidemic began again. It was a given that everyone was going to get smallpox at some point in their lives, thus everyone had damage done to their complexions. It just became a part of life.

2. What symptom(s) appeared when contracting smallpox?
   - E. Large pustules formed on the legs
   - H. Symptoms appeared 14 to 17 days after infection
   - R. Severe fatigue and back pain
   - V. High fever

Description: The author describes a topic by listing characteristics, features, and examples.
Sequence: The author lists items or events in numerical or chronological order.
Comparison: The author explains how two or more things are alike and/or how they are different.
Cause and Effect: The author lists one or more causes and the resulting effect or effects.
Problem and Solution: The author states a problem and lists one or more solutions for the problem.

3. Look at the text in the box. Identify how the information is presented. (see above; choose one answer only)

   E. Description

   L. Sequence

   H. Comparison

   R. Cause and effect

   V. Problem and solution

The New World

After 33 days at sea, on 12 October 1492, Christopher Columbus reached what he believed to be Asia. He made contact with the Taino (ty-no) people who lived on the Caribbean Islands. Soon, Spain realized that Columbus had not reached Asia but a new world. They began sending settlers to colonize what became known as the Americas. With the settlers came European culture, goods, and diseases. Within twenty years, about one-third of the Taino, once numbering over a million, had died mostly from smallpox.

Europeans, Africans, and Asians had developed immunities to many diseases that allowed them to survive infections. Native Americans, being isolated in the Americas from the rest of the world, had no such immunities. Therefore, many Old World diseases such as measles, chicken pox, and whooping cough frequently became fatal. Most of all, Native Americans lacked any biological ability to fight smallpox. Often, smallpox killed eighty or ninety percent of infected Native Americans resulting in entire villages being wiped out.

4. How did Old World disease affect Native Americans?

   E. Entire villages were wiped out

   H. Native populations could better fight Europeans

   R. Large native populations were reduced

   V. Upwards of eighty or ninety percent of Natives died

Selected bibliography. Books available at the school library:

Everett, Felicity, and Struan Reid. *The Usborne Book of Explorers.* London: Usborne Publishing, Ltd., 1991. Print. The authors explain the contributions of explorers from Christopher Columbus to Neil Armstrong.

Flowers, Sarah. *World History Series: The Age of Exploration.* San Diego: Lucent Books, 1999. Print. The author presents an in depth view of many important explorers between the 15th and 16th centuries.

Giblin, James Cross. *When Plague Strikes: The Black Death, Smallpox, AIDS.* New York: Harper Collins Publishers, 1995. Print. The author traces three major diseases in fine detail that have caused great damage to the human race.

Walker, Richard. *Epidemics & Plagues.* Boston: Kingfisher, 2006. Print. The author presents information on diseases, biology, history and everything that a person needs to know about epidemiology.