

Lecture 2 Study Guide (video: 45 minutes)

Study Questions

1. At about what time did scientists first realize that such things as disease-causing microbes existed? In this regard, what did the following people know about the root causes of disease: Abraham, Aristotle, Moses, Socrates, Hippocrates, Mohammed, Jesus, George Washington, Benjamin Franklin, and Napoleon Bonaparte?
2. Can you draw the logarithmic curve that represents worldwide human population increase over time since the birth of agriculture? What happened around AD 1800?
3. What is the so-called "primary cycle," and about when did it begin? In this regard, which group of people is more vulnerable to epidemic disease, hunter-gatherers or agriculturalists? Why?
4. Where were the first Old and New World centers of agriculture, and what main crop sustained each?
5. What plant disease probably wreaked havoc in ancient Egypt and Rome?
6. What caused the Irish Famine, when did it occur, and what impact did it have on the population of Ireland?
7. Which scientist, working with tobacco mosaic virus, received the Nobel Prize, and why? (As students of biology, you should also know what the following people are famous for, -- and if you don't know, look them up: Gregor Mendel, Charles Darwin, Louie Pasteur, Robert Koch, Carl Linnaeus, Robert Hooke, Antoni van Leeuwenhoek, James Watson and Francis Crick.)
8. Who coined the term "contagium vivum fluidum" and what does it signify?

Key Words

Agriculturalists
Andes (potatoes)
Beijerinck ("contagium vivum fluidum")
Darwin
Ergot
Hooke (cells)
Huang He (wheat)
Hunter-gatherers
Indus (wheat)
Industrial Revolution
Irish Famine
Leeuwenhoek
Linnaeus
Logarithmic
Mendel
Mesoamerica (maize)
Mesopotamia (wheat)
Nile (wheat)

Pasteur

Potato late blight

Primary Cycle

Spontaneous generation)

Stanley ("autocatalytic protein")

Watson & Crick

Wheat rust (ancient Egypt, Rome)