

Life Sciences/ Microbiology/Religion

#### **GRADE LEVEL:**

High School and Above

# Scope and Sequence

#### **COURSE OVERVIEW:**

It seems that a new and more terrible disease is touted on the news almost daily. The spread of these scary diseases from avian flu to SARS to AIDS is a cause for concern and leads to questions, such as where did all these germs come from and how do they fit into a biblical world view? Professor Alan Gillen sheds light on these and many other questions in this revealing and detailed book. He shows how these constantly mutating diseases are proof for devolution rather than evolution and how all of these germs fit into a biblical world view. Will the world find an answer in time or will we see this threat ravage populations as others have before 1918 with influenza, in the late 18th century with yellow fever, or the horrific "black "death" or bubonic plague in 1347 A.D.? These timely topics are examined throughout this book.

#### **FEATURES**:

Includes explanatory diagrams, illustrations, tables and graphs, a comprehensive glossary, thorough in-depth discussion and teaching, all focused bringing to light the book's clear objectives. Each chapter includes a test to evaluation comprehension of the topic, and critical thinking questions to help assess critical thinking skills.

#### **CONTENT FOCUS:**

**Chapter 1:** Microbes by Design

Concepts for discussion:

- The theory of biogenesis vs. spontaneous generation.
- · The "blood of Christ" and the history of a red mystery.
- · Serratia is an opportunistic pathogen.

#### Chapter 2: Beneficial Bacteria

Concepts for discussion:

- Does eating yogurt prolong your life?
- E. coli, "superbug" and evidence of extraordinary engineering.
- The ABCs of anthrax: Its anatomy, bioterror, and creation.

#### Chapter 3: Bacteria in a Fallen World

Concepts for discussion:

- · Carl Fliermans and his research on legionella.
- Yellowstone's hidden biological resources.
- The biomatrix of life: A creationist perspective of microbes and viruses.

#### Chapter 4: Protista: A Zoo in Pond Water

Concepts for discussion:

- The unseen world of Anton van Leeuwenhoek.
- · Cilia: Molecular machines of movement in paramecium.
- The microbe hunter that God used to discover the cause of malaria in mosquitoes.

#### **Chapter 5:** Fungi: Recyclers of Nutrients and Sources of Treasures

Concepts for discussion:

- · Yeast: One-celled creatures that have influenced molecular genetics.
- The origins of antibiotic resistance.
- · Competitive interactions between fungi and bacteria.

#### Chapter 6: Viruses: Fallen Genes Coated with Protein

Concepts for discussion:

- The bacteriophage as a tool in basic biological research.
- · How a Christian physician conquered yellow fever.
- · The origin of viruses, prions, and viroids.

### **Chapter 7:** Immune System: Created to Interact with Microbes

Concepts for discussion:

- Immune system: designed to interact with microbes.
- · Purposeful function of tears with lysozyme.
- · The high specificity of the adaptive immune response.

Chapter 8: Emerging Diseases: Plagues of the Present and Future

Concepts for discussion:

- A variational change in vibrios turn a mutualistic relationship into parasitism.
- · A historical fight against disease.
- · Recent history of emerging infectious diseases.



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# The Genesis of Germs

#### Chapter 9: The Origin of Disease: A Creation Perspective

Concepts for discussion:

- A picture of how the human body may have once interacted with "deadly" bacteria.
- Diseases in the Bible.
- A multifaceted model of factors that have led to the origin of infectious disease.

## Chapter 10: Plagues and Pestilences of the Future

Concepts for discussion:

- The pale horse of pestilences.
- · Human-engineered germs and bioterror.
- The antidote to great plagues.



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