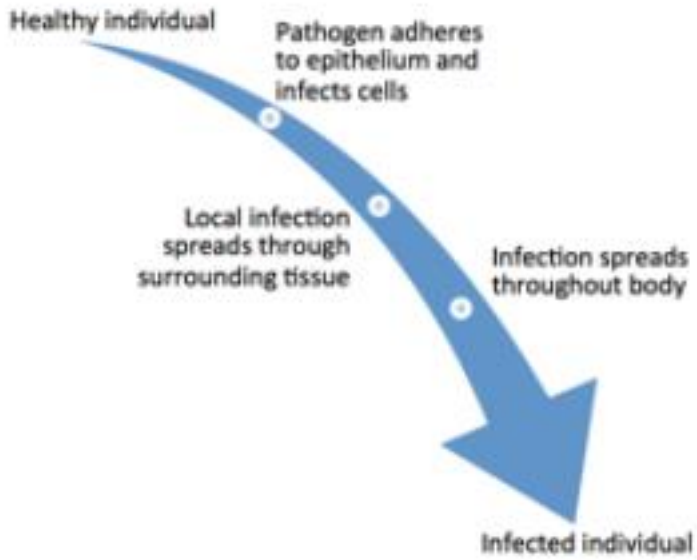


Prep Steps

Unit 2: Lesson 1



The Development of Disease

Lesson Questions

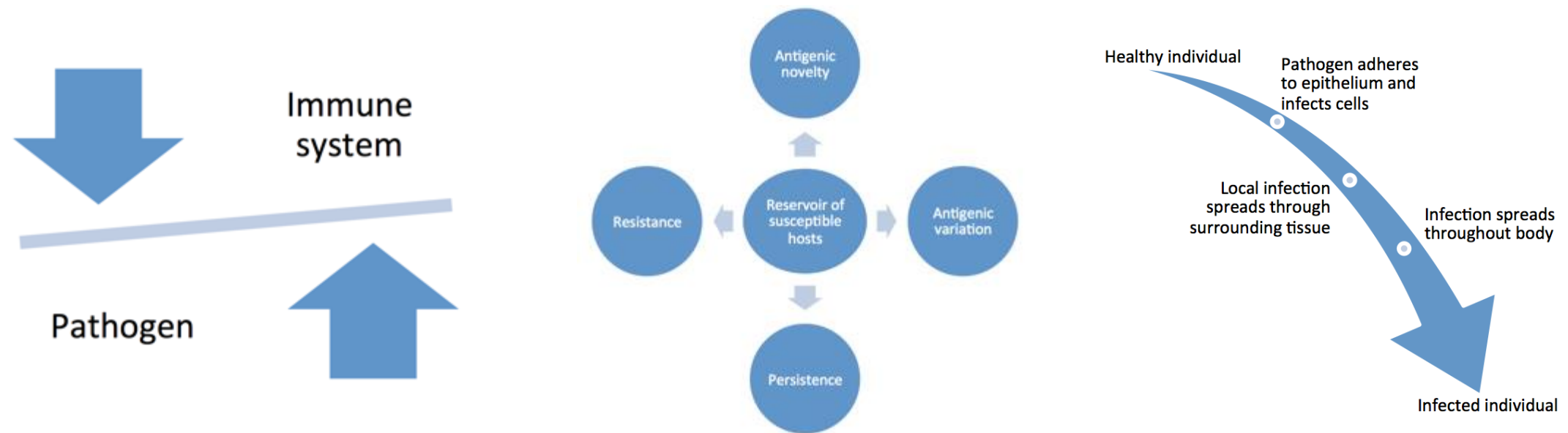
- How do antigens and the immune system affect each other's evolution?
- What are key steps in the process of the development of infection and disease?

Lesson Objectives

- Define glossary terms related to the causes and development of infection and disease.
- Explain the roles of antigens and the immune system in the development of infection and disease.
- Describe key steps in the process of disease development.

Unique Lesson Features

- Development of Disease—infection simulation game
- Models of disease



Lesson FAQs

- What's in the lesson?
 - Students explore the origins of diseases, and pathogens that cause disease.
 - In a hands-on activity, students simulate an attack by pathogens on the immune system.
 - Students analyze models of the disease and the infection process.
 - Students explore glossary terms associated with disease.
- What interactives are there?
 - Students watch animations: *How Does Hepatitis B Combat the Immune System?* and *A Virus Attacks a Cell*.
 - Students drag and drop terms into fields in an interactive diagram of the infection process.

Lesson FAQs (cont.)

- What other activities are there?
 - Students read a passage: *The Eternal Arms Race: The Constant Battle Between Pathogens and the Immune System*.
 - Students use simple graphical models to discuss the evolutionary balance between pathogens and the immune system.
 - Students play a game that simulates features of the infection process and the immune response.
 - Students write a post or article to explain how infection and disease develop.
 - Students create a concept map of how infection and disease develop.

Lesson FAQs (cont.)

- What other activities are there? (cont.)
 - Students choose a disease to research in more detail and create a presentation that describes the development of the disease and the immune response.
 - Students are assessed based on their presentations and completion of the activity questions.
- How long is the lesson?
 - Two to three 45-minute sessions

Lesson FAQs (cont.)

- What are the lesson pre-requisites?
 - Students should have:
 - Passed high school biology and chemistry
 - Completed all lessons in Unit 1.
- Who is the lesson designed for?
 - College prep students
 - Honors students
 - Advanced placement students
 - GED students (lesson may need adapting)

Lesson Content and Timing

- Create list of disease scenarios in pop culture
- Write about disease scenarios
- Watch animations
- Explore interactive glossary
- Read passages
- Discuss pathogens and the immune system
- Play infection process game
- Write article
- Create concept map
- Explore interactive
- Research a disease
- Create presentation
- Assess students

