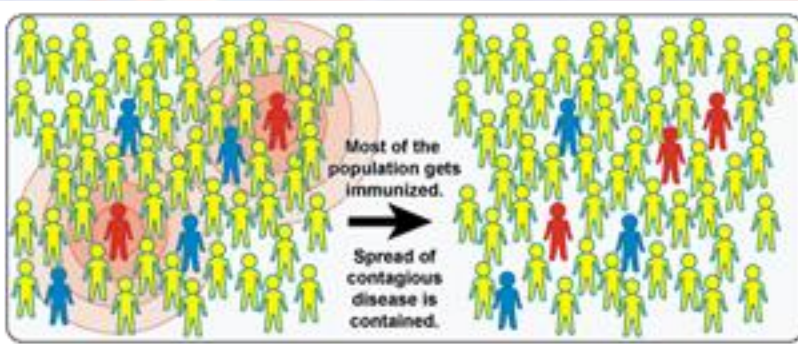


Prep Steps

Unit 2: Lesson 3

The Development of Vaccines



Lesson Questions

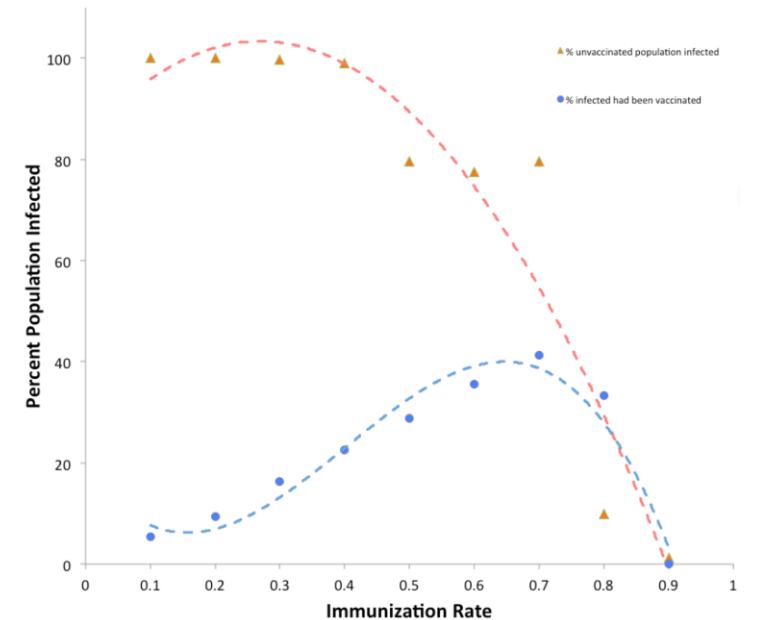
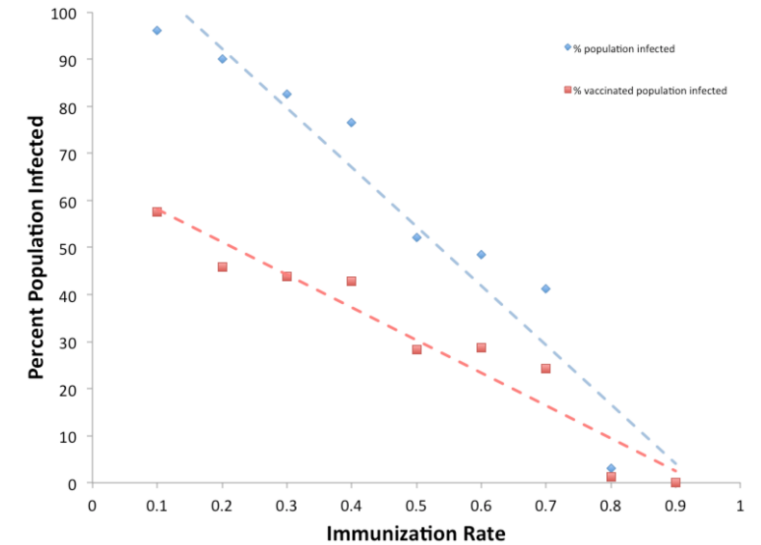
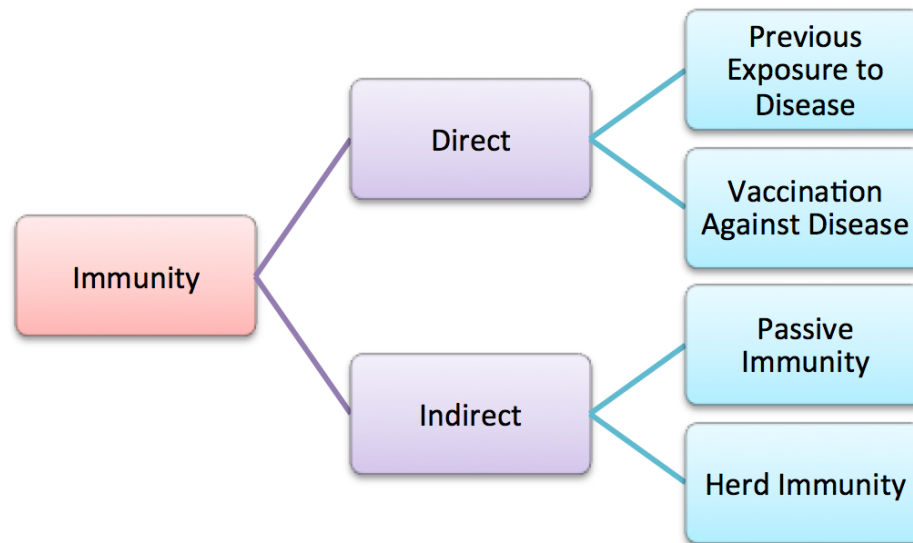
- What is the purpose of a vaccine?
- What are the different ways in which vaccines are made?
- How do vaccines protect populations of people?

Lesson Objectives

- State the purpose of a vaccine.
- Give examples of different ways in which vaccines are made.
- Analyze how vaccines protect populations of people.

Unique Lesson Features

- Computer simulation of herd immunity
- Model of types of immunity



Lesson FAQs

- What's in the lesson?
 - Students explore the function and manufacture of vaccines.
 - Students evaluate the advantages and disadvantages of the various approaches to making vaccines.
 - Students analyze and graph data from a computer simulation of herd immunity and describe the concept of herd immunity.
- What interactives are there?
 - Students use an online simulator to model herd immunity given various scenarios.

Lesson FAQs (cont.)

- What other activities are there?
 - Small groups research how a particular type of vaccine is made and completes a worksheet.
 - Groups present their findings to share with the class.
 - The class discusses various vaccine types, methods of production, advantages, disadvantages and examples.
 - Students work in small groups to explore a computer simulation of herd immunity.

Lesson FAQs (cont.)

- What other activities are there? (cont.)
 - Students calculate various statistics from the simulations and graph their results.
 - Students self-evaluate responses to questions on their worksheets and 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 and Lessons 1 and 2 in Unit 2.
- Who is the lesson designed for?
 - College prep students
 - Honors students
 - Advanced placement students
 - GED students (lesson may need adapting)

Lesson Content and Timing

