Harvard Summer Program Immunology Project Resource Information Form	
Title	Immunity: Playing Defense
Resource Type	X Lesson Plan __Activity ___ Lab Activity ___Web-quest
Description	This AP biology lesson includes 1) a PowerPoint presenation with figures and animations from Campbell's Biology textbook, 2) detailed student notes, and 3) a follow-up quiz. The purpose of this lesson is to cover the topic of immunology in one 50 min class period. This lesson can be followed by a research assignment on a disease or disorder affecting the immune system.
Author(s)	Bradford Cranston
Author Institution(s)	Trinity Catholic High School
Objective	To present the basic features of the immune system. To provide a general sense for how different branches of the immune system work together to eradicate foreign invaders. To lead into a discussion or project involving disorders of the immune system.
Key Concepts	Cell differention, Form fits function, Cell dynamics, system-level organization
Student Prep	Cell biology (based on AP biology unit)
Materials	Digital projector, computer access to PowerPoint (teacher)
Grade level(s)	11, 12
Teacher Prep Time	30 min
Class Time	50-min class
National Standards	Cells can differentiate, and complex multicellular organisms are formed as a highly organized arrangement of differentiated cells. In the development of these multicellular organisms, the progeny from a single cell form an embryo in which the cells multiply and differentiate to form the many specialized cells, tissues and organs that comprise the final organism. This differentiation is regulated through the expression of different genes.
State Standards	2.1 Relate cell parts/organelles to their functions. 2.4 Describe how cells function in a narrow range of physical conditions, such as temperature and pH, to perform life functions that help to maintain homeostasis. 2.5 Explain the role of cell membranes as a highly selective barrier (diffusion, osmosis, and active transport).
Sources	N/A
References	Biology by Campbell Immune System: An Introduction (Ch1) by William Paul
Assessment	See included quiz.