#### Page 1 of 8

# SCIENCE 8: CHAPTER 3 RESEARCH PROJECT :ANALOGY OF THE IMMUNE SYSTEM

NAME:	
Date:	BlocK:

Goal: To explain how the immune system functions and show an understanding of the 3 main lines of defense: primary, secondary (innate), tertiary (acquired).

**TASKS**: Gather accurate scientific information in classroom and library. Show learning with a with an analogy: a 3-D model, poster or comic strip.

In partners, choose 1 of the following tasks to create an analogy of the Immune System. Model or analogy will **accurately** show the roles of all three lines of defense.

- 1. Fortress "student names". Design any sort of Fortress (castle, space ship, walled city, Trojan horse) which accurately depicts are major parts of the immune system.
- 2. CSI: Investigate the death of Antigen (or Pathogen) X. Using a story board, comic strip or illustrated script, incorporate all major parts of the immune system into an investigative style story.
- 3. "Pathogen Formidable": student partners are an unbeatable flu virus. In a comic strip or illustrated story, describe the pathogen's journey through the body as it defeats each major part of the immune system to successfully infect the body with the Flu.
- 4. Build an amazing sports team (eg. Football)

#### **Resources:**

Use your notes, textbook, Science Probe 8 text photocopy, BC Science 8 chapter 3, and library books. Websites:

http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=152&id=2402 http://www.youtube.com/watch?v=WJEc2GDEfz8

http://www.youtube.com/watch?v=z3M0vU3Dv8E

#### **Brainstorm:**

Page 2 of 8

	Science 8 Research Project: Analogy of the Immune System			
Which Line of Defence? 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> ?	Defense Mechanism	Protective Action	Evidence in Your Analogy	
	Skin			
	Mucus			
	Saliva			
	Sweat			
	Cilia			
	Tears			
	Gastric Juice			
	Ear Wax			
	neutrophils (White Blood Cells)			
	Macrophages (W.B.C.s)			
	Antibody			
	Antigen			
	Fever			

Page 3 of 8

Page 3 of 8				
	Lymphocytes			
	B-Cells			
	Memory B-Cells			
	Helper T-Cells			
	Killer T-Cells			
	Immunity			
,	Virus			
	Bacteria			
,	Vaccine			

**Additional Information and Ideas** 

# Working Bibliography (MLA Style)

#### **BOOKS**

Author (s) Last Name First	Title of Book	City & Province Of Publication	Publisher	Year Published

#### **WEBSITES**

Author (s) Last Name First (if given)	Title of Webpage Used	Title of Overall Web Site	Publisher of Site (go to root address or homepage	Publication Date

Page 5 of 8

Science 8 Research Project: Analogy of the Immune System				
Which Line of Defence? 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> ?	Defense Mechanism	Protective Action	Evidence in Your Analogy (model, comic strip, story board)	
	Skin			
	Mucus			

# Page 6 of 8 PLANNING PAGE

# Page 7 of 8

# **GO HUNTING**

Search through other sources of information to add to the scientific accuracy of your analogy.

<b>Brief Source</b>	Notes	Stars (1, 2, or 3)

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