



Principles of Biomedical Science

Virtual Learning

9-12 / PLTW[®] PBS

May 22, 2020



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Lesson: May 22, 2020

Objective/Learning Target:

Students will be able to: research and identify the function of the Specific defenses of the immune system and how it functions to protect the body. (*Reference: PLTW[®] 5.1.6 Lines of Defense*)



Let's Get Started (Bell Ringer):

Watch the following Videos on Adaptive (specific) defenses of the immune system:

[Immune System, Part 2: Crash Course A&P #46](#)

[B Cells vs T Cells | B Lymphocytes vs T Lymphocytes - Adaptive Immunity - Mechanism](#)



Lesson/Activity:

Let's Start by... Getting out your Notebook, Lab Journal, or a separate piece of paper. You will be using appropriate research techniques to investigate the basic structure and function of the adaptive or specific immune system. Take notes in your laboratory journal about these types of defences and properly document all sources.



Answers:

Cells of the adaptive immune system

- B-cells: memory B cell, effector B cell (plasma cells)
- T-cells: Helper T cells, Cytotoxic T cells, and T regulatory cells



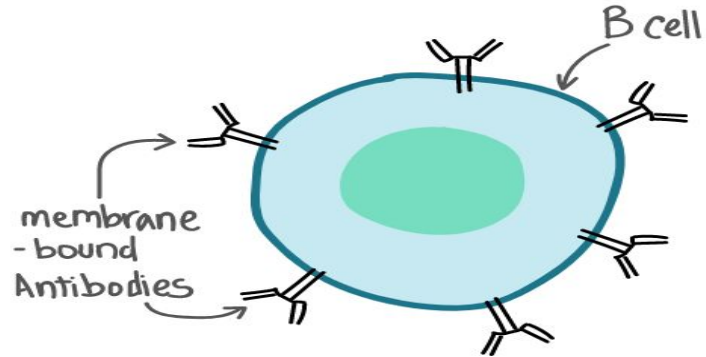
Lesson/Activity continued:

Get notecards or make some from blank lined or white paper. Create a flash card with each major function from the previous activity. Explanation on front of card, picture of the function on the back of the card.

Answers:

Notecard Example:

Memory B cells are a **B cell** subtype that are formed within germinal centers following primary infection. **Memory B cells** can survive for decades and repeatedly generate an accelerated and robust antibody-mediated immune response in the case of re-infection (also known as a secondary immune response).





Practice:

Get out your notebook, lab journal, or a separate piece of paper.

1. Go online and find (3) amazing resources that helped you understand how adaptive or specific immunity the best. Share the resources with someone in class, to help them.
2. Do YouTube/Video search to find the 3 videos that helped you the most to understand adaptive or specific immune response, share these new clip with your teacher.



Answers:

Articles and videos will vary depending on student needs



Additional Practice:

Additional Resources to Explore:

Watch following video clips about Innate/Nonspecific immune system. Jot down information that was helpful to you in your notebook, lab journal, or separate piece of paper.

[Immune System Rap 2 specific immunity](#)

What do you remember about Adaptive (specific immunity)

[Adaptive Body Defenses Quiz](#)

[Quizizz Adaptive Immunity](#)



Answers:

Answers are provided after quiz