

Lesson Plan

Description

White Blood Cells is a term that is used to describe all the cells in our blood (and immune system) that are not Red Blood Cells. The many cells of the immune system have extremely different roles, and each of them is key to a well-functioning defence system against infection by pathogens.

Learning Outcomes

Students will learn about the different cells in the immune system.

Students will learn that leukocytes, White Blood Cells, fall into different categories. Within these different categories the cells still have different functions.

Materials

- Paper
- Writing instrument
- Colouring pencils
- Information about the immune system and the different roles of leukocytes in the immune response.
- Word processing program – if you want to make a digital poster
- For Extra activity – Flipbook
 - Paper cut into 3” X 5” rectangles, index cards, thick stack of post it notes
 - Paper should not be too thick or too thin
 - Pencil and/pencil crayons
 - Eraser
 - Reference animation of phagocytosis

Action

1. Write a help wanted ad on the paper so you can hire some more leukocytes to help keep you healthy.
2. Look at some ads on the internet to get ideas about how to write a help wanted ad.
3. Be sure to include the following information:
 - a. Job description (what white blood cells must do on the job)
 - b. Qualifications (skills that white blood cells need to have)
 - c. Benefits (what white blood cells will get for doing a good job)
4. Draw a picture of the leukocyte.

Extra activity – Create a flipbook animation of phagocytosis.

1. Get a stack of paper that you can use for your flipbook.
2. Draw a series of images of a macrophage enveloping a pathogen, on the end of the book you will quickly flip through the pages.
 - a. This will depend on whether you want to flip with your right or left hand.
3. Use a pencil to sketch out the initial images and allow for mistakes or edits of the animation.
4. You can use this video as a reference: <https://youtu.be/TNK3WyEI3r8>

Consolidation/Extension

Assign a different white blood cell to each of the students. Get the students to work together to describe how the different cells work in the immune system to create an appropriate response against a pathogen that causes an infection in our bodies.

Additional Resources

Example of flipbook: <https://youtu.be/AslYxmU8xlc>

Leukocyte information: <https://my.clevelandclinic.org/health/body/21871-white-blood-cells>

Lymphocyte information: <https://en.wikipedia.org/wiki/Lymphocyte>