



Grade 4 Sample Lesson Plan: The Immune System

Objectives/Goals

Students will be able to identify the major structures and functions of the immune system.

Materials

- Internet access

Steps

- Have students visit the KidsHealth.org site - *How the Body Works* to:
 1. read article *Your Immune System* (<http://kidshealth.org/en/kids/immune.html>) ;
 2. watch the movie *How The Immune System Works* (<http://kidshealth.org/en/kids/ismovie.html>) ;
 3. take the *Immune Cells Quiz* at <http://kidshealth.org/en/kids/isquiz.html> and
 4. complete the *Cells That Keep You Well* matching activity at <http://kidshealth.org/en/kids/bfs-isactivity.html>.
- Engage in the discussion and activities outline in the KidsHealth.org *Teacher's Guide on the Immune System* <http://classroom.kidshealth.org/classroom/3to5/body/systems/immune.pdf>
- Visit the *Scholastic Study Jams!* site on the Immune System <http://studyjams.scholastic.com/studyjams/jams/science/human-body/immune-system.htm>



KidsHealth.org/classroom

Teacher's Guide

This guide includes:

- Standards
- Related Links
- Discussion Questions
- Activities for Students
- Reproducible Materials

Standards

This guide correlates with the following National Health Education Standards:

Students will:

- Comprehend concepts related to health promotion and disease prevention to enhance health.
- Demonstrate the ability to access valid information and products and services to enhance health.
- Demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
- Demonstrate the ability to use decision-making skills to enhance health.
- Demonstrate the ability to use goal-setting skills to enhance health.
- Demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

National Health Education Standards:
<http://www.cdc.gov/healthyschools/sher/standards/index.htm>

Let's hear it for leukocytes! These germ-fighting white blood cells are an important part of the immune system, along with the other cells, tissues, and organs in the human body that work together to help you fight illnesses. These activities will help your students learn how the body protects itself from disease.

Related KidsHealth Links

Articles for Kids:

Your Immune System

KidsHealth.org/en/kids/immune.html

Movie: The Immune System

KidsHealth.org/en/kids/ismovie.html

Word Find: Immune System

KidsHealth.org/en/kids/bfs-iswordsearch.html

Activity: Immune System

KidsHealth.org/en/kids/bfs-isactivity.html

Quiz: Immune System

KidsHealth.org/en/kids/isquiz.html

What Are Germs?

KidsHealth.org/en/kids/germs.html

Why Do I Need to Wash My Hands?

KidsHealth.org/en/kids/wash-hands.html

The 5-Second Rule

KidsHealth.org/en/kids/5-seconds.html

Article for Teachers:

Tips From School Nurses on Keeping Students Healthy

KidsHealth.org/en/parents/healthy-nurse-tips.html

Discussion Questions

Note: The following questions are written in language appropriate for sharing with your students.

1. What does the immune system do? Why is this job so important?
2. What parts of the body make up the immune system?
3. What are germs? How can germs spread from person to person? What you can do to avoid getting sick from germs?
4. What can you do to help your immune system keep you healthy?



Activities for Students

Note: The following activities are written in language appropriate for sharing with your students.

Germ Headquarters

Objective:

Students will:

- Learn about the parts of the immune system and how they function

Materials:

- Computer with Internet access
- Word processing program, or pencil or pen and paper

Class Time:

1 hour

Activity:

Shhh. OK, the coast is clear. **Attack!** You and some of your closest germ friends have just invaded a person's body. You're on your way to causing an infection, but you run into a roadblock: The person's immune system is fighting back! Your mission may fail! You need to call Germ Headquarters and inform them of the situation. After reading about germs and the immune system at KidsHealth.org, write a dialogue back and forth between the you and Germ Headquarters describing the battle. In the dialogue, start with how you get into the person's body, and how the body fights back. Describe a mission in which you and your germs friends succeed and cause an illness, and explain what happens to the person's body.

Extension:

Sometimes kids can have problems with their immune systems that aren't related to germs. Select an immune system problem like allergies, lupus, celiac disease, or juvenile rheumatoid arthritis. Do research at KidsHealth.org to learn more about the problem, and write down some facts explaining symptoms and treatment.



Help Wanted: Leukocytes

Objective:

Students will:

- Learn about the role of white blood cells in the immune system

Materials:

- Computer with Internet access
- Help wanted advertisements from a newspaper or online
- "Help Wanted: Leukocytes" handout

Class Time:

1 hour

Activity:

"Sniffle." "Cough." Sounds like you're coming down with something. Well, your leukocytes - germ-fighting white blood cells - can help make you get better. But there's a problem: You seem to be short on white blood cells! You'd better post a help wanted ad to get some more leukocytes fast! Take a look at some ads from a newspaper or the Internet to get some ideas about how to write a help wanted ad. Then go to KidsHealth.org to learn about white blood cells. Now you're ready to write a help wanted ad of your own. Include the following information:

- Job description (what white blood cells have to do on the job)
- Qualifications (skills that white blood cells need to have)
- Benefits (what white blood cells will get for doing a good job)

Good luck hiring some qualified white blood cells!

Reproducible Materials

Handout: Help Wanted: Leukocytes

KidsHealth.org/classroom/3to5/body/systems/immune_handout1.pdf

Quiz

KidsHealth.org/classroom/3to5/body/systems/immune_quiz.pdf

Quiz: Answer Key

KidsHealth.org/classroom/3to5/body/systems/immune_quiz_answers.pdf



Name: _____

Date: _____

Help Wanted: Leukocytes

Instructions: Write a help wanted ad on the blank lines or the other side of this paper so you can hire some more leukocytes to help keep you healthy. Take a look at some ads from a newspaper or the Internet to get ideas about how to write a help wanted ad. Then go to KidsHealth.org to learn about white blood cells. Include the following information:

- Job description (what white blood cells have to do on the job)
- Qualifications (skills that white blood cells need to have)
- Benefits (what white blood cells will get for doing a good job)

Help Wanted

TOP JOB
Insurance
Home Surveyor
P/T or F/T Flexible
Schedule! Work
from your home.
No experience is
necessary. Will train.
www.surveyor.com

candidates should
fax resume to 512-
232-5666.

Legal Assistants
Large firm seeks
top legal assistant
with litigation
experience to
work for managing
partner. 3 to 5
years experience
required. Please
contact Joe Smith
to apply. Phone:
112-231-1121

Senior Management
Looking for customer
service oriented individual
with strong, proven upper
management/leadership
experience to oversee
day-to-day operations.
Responsible for design of
workflows, validation of
policies and procedures,
productivity, financial budgets,
in a very fast-paced dynamic
environment. Company offers
a competitive salary, benefits
package and excellent work
environment. Send resumes to
jobs@maintenancerus.com

Leasing
Consultant
For large apartment
community.
Applicant must
have 5+ years
apartment rental
experience and
strong sales closing
skills. Great benefits
and 401K. Please fax
resume and salary
requirements to
321-456-9876.

TOP JOB
Maintenance
Engineer

Hi-rise office
building requires
minimum 5 yrs
experience with
a Class A license,
and absorption
chillers and steam
related equipment.
Must have knowledge
of plumbing and
electrical to apply.
Fax resume to:
211-511-5555.
www.hiriseon4th.com

LANDSCAPERS
Company seeking
three experienced
landscapers with
familiarity of native
and non-native trees,
shrubs and perennials,
ornamental grasses,
and annuals. Qualified

PRODUCT MANAGER

A leading supplier of bath
and shower products seeks
an experienced professional
to act as Product Manager.
The person we seek must be
a strong communicator who
will develop and manage our
entire bath line. Must have a
degree and a minimum of 3
years Marketing experience.
Strong organization and
project management skills
required. Forward resume
and salary requirements to
jdownsing@showerclean.com
Fax: 557-222-1212



Name: _____

Date: _____

Quiz

Instructions: Answer each question.

1. What is the job of the immune system?

2. What are leukocytes?

- a. red blood cells
- b. white blood cells
- c. platelets
- d. plasma

3. What do phagocytes do?

- a. chew up invading germs
- b. allow the body to remember previous invaders
- c. carry oxygen throughout the body
- d. help you stop bleeding if you get a cut

4. List two places where leukocytes can be found:

5. What is another name for the glands in your neck?

6. What do lymph nodes do?

7. Name three places where you have lymph nodes:

8. _____ are doctors who specialize in immune system problems.

9. Name two ways you can help your immune system protect you:

10. True or false: When your lymph nodes are swollen, your immune system is at work. T F



Quiz Answer Key

1. What is the job of the immune system?
The job of the immune system is to protect the body from disease. The parts of the immune system work together to fight of outside invaders like germs.
2. What are leukocytes?
 - a. red blood cells
 - b. white blood cells
 - c. platelets
 - d. plasma
3. What do phagocytes do?
 - a. chew up invading germs
 - b. allow the body to remember previous invaders
 - c. carry oxygen throughout the body
 - d. help you stop bleeding if you get a cut
4. List two places where leukocytes can be found:
spleen and bone marrow
5. What is another name for the glands in your neck?
lymph nodes
6. What do lymph nodes do?
Lymph nodes work like filters to remove germs that could hurt you
7. Name three places where you have lymph nodes:
in your neck, in your armpit, and in your groin area
8. *Immunologists* are doctors who specialize in immune system problems.
9. Name two ways you can help your immune system protect you:
any two of the following: washing your hands regularly, eating nutritious foods, getting plenty of exercise, and getting regular medical checkups
10. True or false: When your lymph nodes are swollen, your immune system is at work. T F