Agenda for October 5th and October 6th:

Entrance Ticket – Vocabulary

Station Rotations –
Station 1 – I do, Guided notes (15 minutes)
Station 2 – Achieve 3000, “No Peanuts Here”
Station 3 – Journal Activity

Exit ticket – 3,2,1
CHAMPS – STATION ROTATION 1

Conversation level – 0, no talking or noises
Help – raise your hand and wait for me to call on you
Activity - Teacher led activity
Movement – none without permission
Participation – Everyone
Success!
What is your body’s defense system?

• Microscopic organisms and particles can cause sickness. Your body has ways to prevent sickness.

• A **pathogen** is an organism, virus, or protein that causes disease.

• The skin provides external protection against pathogens that may enter the body.
First line of defense! Your SKIN!

- The skin and all of the these structures make up the **integumentary system**.
- Hair, nails, and sweat and oil glands can help protect the body.
• When a pathogen enters the body, *inflammation* may occur.

• **Inflammation** is the swelling and increased blood flow that happens as the body reacts to the pathogen.

• **Platelets** are cell pieces in blood that help seal a wound on the body.

• A raise in body temperature, called a **fever**, slows the growth of bacteria and other pathogens.
The **immune system** is made up of tissues and specialized white blood cells that recognize and attack foreign substances in the body.
What are some white blood cells that protect the body?

• White blood cells can move out of blood vessels and destroy invading pathogens.

• A macrophage is a white blood cell that destroys pathogens by engulfing and digesting them.

• Macrophages help start the immune response to antigens.
What are some white blood cells that protect the body?

• An antigen is a substance that stimulates a response by the immune system.

• T cells can coordinate the body’s immune response and attack infected cells.

• Helper T cells activate killer T cells, which attack infected body cells.
What are some white blood cells that protect the body?

• **B cells**, once activated by helper T cells, make antibodies that attach to specific antigens.

• An **antibody** is a specialized protein that binds to a specific antigen to tag it for destruction.
How does the body build immunity?

- Immunity is the ability to resist or recover from an infectious disease.

- Immunity can be passed from mother to fetus.

- Immunity can also result from being infected with a disease or from being vaccinated.
How does the body build immunity?

• Once a body has found a pathogen, the body produces memory cells.

• **Memory cells** are T cells and B cells that remember specific pathogens.

• A **vaccination** is a substance prepared from killed or weakened pathogens that is introduced into the body to produce immunity.
What can challenge the immune system?

• An immune system response to a harmless or common substance is called an allergy.

• Cancer is a group of diseases in which cells divide at an uncontrollable rate. The immune system may not be able to stop the cells from growing.
What can challenge the immune system?

• An **immune deficiency disorder** occurs when the immune system fails to develop properly or becomes weakened.

• An **autoimmune disease** is a disease in which the immune system attacks the body’s own cells.
Benchmark – SC.6.L.14.5

Identify and investigate the general functions of the major human body systems (immune system) and describe ways in which the function together to maintain homeostasis.
WARM UP – Use the textbook glossary and index to look up and define each term. Write in your vocabulary folder

- Bacteria
- Fungi
- Immune System
- Immunity
- Infect
- Infectious
- Parasite
- Pathogen
- Vaccine
- Virus