Science 8

Cell Theory V

Name:
Date:
Block:

1. Immune System

Immune System

In the year 1850, a patient had a _____ chance of survival after an operation.

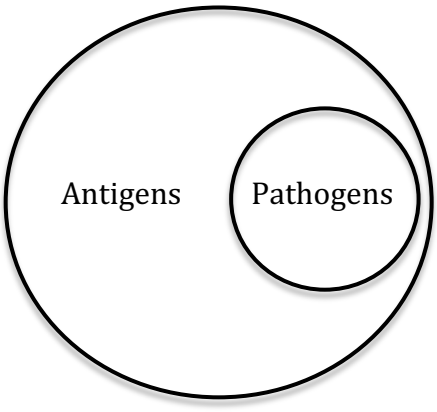
The surgeons used _____ instruments and rarely washed their _____ before performing an operation.

FOREIGN substances

Foreign substances: _____.

1. Antigen:
   - A substance that your body _____.
   - _____ cause a disease.
   - Examples:

2. Pathogen:
   - A substance that _____.
   - Can be _____ or _____
   - Examples:



Transmitting A Disease

In infectious diseases, _____ are transmitted in _____ different ways.

Transmission Method	Example
1.	• •
2.	•
3.	•
4.	•

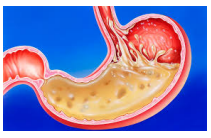
The Immune System

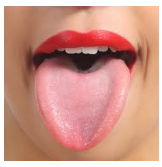
The Immune System: The system in an organism that _____.

The immune system offers _____ lines of defense.

<u>The First Line of Defense</u>:

- Works to keep _____ out of the body.
- Specific parts of the body are designed to protect it:





The Second Line of Defense:

- Attacks the _____ and _____ that _____ the body.
- Uses _____ that are transported in the _____ that help fight an infection.

- Innate (Natural) Immune Response:
  - Response is _____, _____, and _____.
  -
  - The body sends _____, _____, and _____ to the site of infection.
  -

The Third Line of Defense:

- Acquired (Learned) Immune Response:
  - A _____ and _____ attack against a pathogen or an antigen.
  - Takes up to _____ for effects to be seen.
  - Uses two types of white blood cells:
    1.
    2.

Type of White Blood Cell	How It Fights Infection
_____ T Cells	Send signals to _____ to come and produce _____.
_____ Cells	_____ Cells recognize _____ in the _____ and produce _____. **Antibodies:**
_____ T Cells	Directly _____ and _____ antigens or pathogens that have been marked by _____.

Active Immunity

- Active immunity:

- All acquired immune responses help give you an _____.
- After an infection, the body stores some _____ on _____ cells which are called _____.
- Memory B cells can be _____ if the antigen or pathogen reappears.
- Example:

Passive Immunity

- Passive Immunity:

- Antibodies can be transferred:
    -
    -

Vaccines

- Vaccine:

    - A _____ form of a disease.
    - Stimulates your immune system to create _____ against the disease and can be _____ in the future.
    - Booster –

        - Example:

Looking at the immune system

Vocabulary	
acquired	immune
antibodies	infectious
antigens	innate
active immunity	pathogens
bacteria	second
first	white blood cells

Use the terms in the vocabulary box to fill in the blanks. You will not need to use every term.

1. Organisms, such as some bacteria, and substances, such as viruses, that cause disease are called _____.

2. _____ diseases can be passed to other people.

3. The _____ system is the body's defence system.

4. The immune system's _____ line of defence against infectious diseases includes the skin.

5. The immune system's _____ line of defence includes two types of immune response.

6. _____ are carried in the blood to fight infections in the body.

7. All living things are born with a(n) _____ immune response.

8. Non-living substances that are foreign to the body and trigger an immune response are called _____.

9. In the first process of an acquired immune response, B cells make substances called _____ that bind to antigens.

10. All acquired immune responses help give you _____.