👩‍🔬 Lesson Plan: Organ Systems

Grade Level: 4
Subject: Science
Duration: 45–60 min
4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

🎯 Learning Objectives

By the end of this lesson, students will be able to:

- **Identify** the major organ systems in the human body, such as the respiratory, circulatory, digestive, and nervous systems.
- **Describe** the primary functions of each major organ system and the main organs within

impulses throughout the body, acting as a command center.

💼 Materials Needed: (all links are included in this PDF)

- Study Guide Science Grade 4 Organ Systems (https://newpathworksheets.com/api/guide/study-guide-science-grade-4-organ-systems.pdf)

- Worksheet Science Grade 4 Organ Systems 0 (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-organ-systems-0.pdf)
- Worksheet Science Grade 4 Organ Systems 1 (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-organ-systems-1.pdf)
- Vocabulary Science Grade 4 Organ Systems 1 (https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-organ-systems-1.pdf)
- Vocabulary Science Grade 4 Organ Systems 2 (https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-organ-systems-2.pdf)

Lesson Procedure

Step 3: Guided Practice (15 minutes)

- Distribute Vocabulary Set 1 and work together as a class to match the body systems with their correct definitions. (https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-organ-systems-1.pdf)
- Use Vocabulary Set 2 to reinforce the definitions of systems and matching terminology. (https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-organ-systems-2.pdf)

Step 4: Independent Practice (15 minutes)

- Have students complete Worksheet 0 to independently answer multiple-choice questions focusing on the respiratory and digestive systems. (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-organ-systems-0.pdf)
- Have students complete Worksheet 1 to independently assess their knowledge of the skeletal, muscular, and circulatory systems. (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-organ-systems-1.pdf)

Step 5: Assessment (10 minutes)

- Review the answers to the independent practice worksheets as a class to clarify any misunderstandings.
- Have a brief wrap-up discussion asking students to name one vital organ and describe how it contributes to its overall system.

Extension Activities

- Create a life-sized body outline on butcher paper and have students draw and label the major organs in their correct locations.
- Have students write a creative story tracing the path of a red blood cell through the circulatory and respiratory systems.

Complete List of Available Resources:

- Organ Systems Topic (https://newpathworksheets.com/science/grade-4/organ-systems)
- Study Guide Science Grade 4 Organ Systems (https://newpathworksheets.com/api/guide/study-guide-science-grade-4-organ-systems.pdf)
- Worksheet Science Grade 4 Organ Systems 0 (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-organ-systems-0.pdf)
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- Worksheet Science Grade 4 Organ Systems 2 (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-organ-systems-2.pdf)
- Vocabulary Science Grade 4 Organ Systems 1 (https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-organ-

ORGAN SYSTEMS

Systems Work Together

Your body is made up of many organs and systems that all work together to keep your body running properly. Each of the systems in your body has its own individual job to do **but** each system depends on the other systems in order to work properly.

The Skeletal System

- ✓ The human **skeletal system** is made up of bones that support the entire body. Without our bones, we would be just a blob of skin and organs on the floor.
- ✓ Our bones also help protect important organs such as the heart,

Lesson Checkpoint:
How many bones does a human skeleton have?

The Muscular System

The **muscular system** is made up of muscles that are attached to your skeletal system. Your muscles help you move all your body parts.

is a muscle? Your heart beats for you...you don't have to make it beat.

Lesson Checkpoint:
What are involuntary muscles?

The Circulatory System

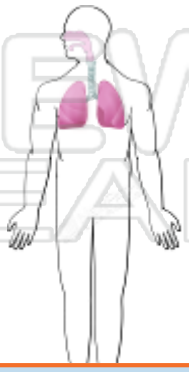
The **circulatory system** is made up of three parts, the **heart, blood vessels, and blood**.

Your **circulatory system's** main function is to move blood throughout your body. Blood carries important nutrients and gets rid of waste. So the circulatory system is an important one since it makes the blood move all around your body!

Which side of your heart pumps blood to your lungs to remove the carbon dioxide and receive fresh oxygen?

The Respiratory System

The main function of the **respiratory system** is to supply our bodies with **oxygen** that we need in order to survive and to let out carbon dioxide. The word **respiration** simply means the process of breathing--that's easy enough! The **respiratory system** is made up of a trachea, bronchial tubes, a diaphragm, and the lungs.

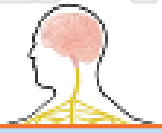


Lesson Checkpoint:
What is digestion?

The Nervous System

The **nervous system** controls **all** of your body's systems and organs. Your brain is the main part of your body's **nervous system**; it is like a command center. It controls all the systems and organs of the body and keep them working properly.

The **brain** communicates with the rest of the body through the **spinal cord** and the nerves. Your spinal cord is like the main communication highway of your body! All parts of **nervous system** contain **neurons** which are cells that pass along signals to and from your brain and your nervous system.



The Excretory System

When you have to go, you have to go. Everyone does it; everyone gets rid of their bodies' wastes in several ways. The **excretory system** in your body gets rid of all your body's **waste.** The skin, intestines, kidneys, liver, lungs, and sweat glands are the **main organs** of this system.

Lesson Checkpoint:
What is the function of the excretory system?

Our bodies have special defense systems that help protect us from harmful microorganisms, sicknesses, and diseases. Your body's **first layer of protection** that acts as a barrier to keep harmful microorganisms out is your skin. Your body has its own **defense system** too, known as your **immune system.** Your immune system is made up of special cells, proteins, tissues, and organs that defend your body against germs.

You may remember going to the doctor and getting a shot! That may hurt a bit, but those shots help protect you against certain diseases.

A **vaccine** is medicine that protects you from certain diseases. A vaccination is a shot given that contains a vaccine against a certain disease, such as the measles.

Organ systems

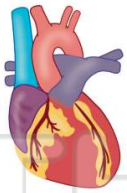
Sci D

Name_____ Class_____ Date_____

1 The **human skeletal system** is made up of _____ that support your entire body.

A bones
B skin
C muscles
D ligaments

2 What is one important function the **skeletal system** performs for vital organs such as the **heart**?



A helps the organs work
B produces oxygen
C provides protection
D releases carbon dioxide

3 The human **skeletal system** is made up of _____ bones that are of all different shapes and sizes.

A 20 **C** 26

4 Your _____ is made up of **muscles** that are attached to your skeletal system. Your muscles help you move all your body parts.

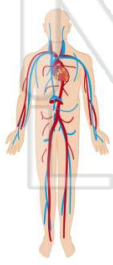
A excretory system

5

D respiratory

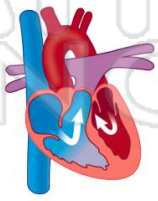
D nervous system

9 The main function of your **circulatory system** is to pump blood from the heart to **all parts** of your **body**. _____ carries important nutrients throughout your body and gets rid of waste.



A Blood **C** Muscles
B Oxygen **D** Bones

10 The **right side** of your heart collects blood **filled with carbon dioxide** from your body. This blood gets pumped to your _____, where the carbon dioxide is exhaled (breathed out) of your body.



A brain **C** liver
B lungs **D** mouth

Organ systems

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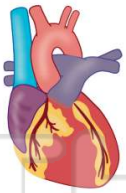

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A excretory system

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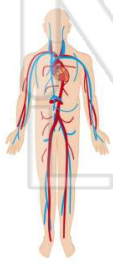

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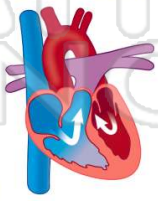

A brain **C** liver
B lungs **D** mouth

B

PREVIEW

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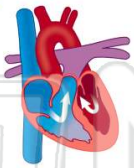
Organ systems

Sci D

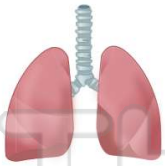
Name_____ Class_____ Date_____

1 When the **left side** of your heart collects blood from your lungs and pumps it throughout your body, what has been **breathed into** that blood through your lungs?



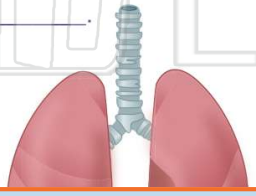
A oxygen
B nerves
C water
D carbon dioxide

2 The main function of the _____ is to supply our bodies with **oxygen**, which we need in order to survive, and to let out carbon dioxide.



A respiratory system
B excretory system
C muscular system
D nervous system

3 **Respiration** = _____.



A pumping
B listening
C breathing
D changing

4 Your **respiratory system** is made up of a trachea, bronchial tubes, a diaphragm, and what two important **organs**?

A heart and kidney

PREVIEW

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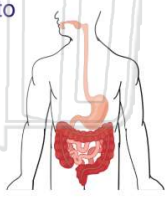
5

7

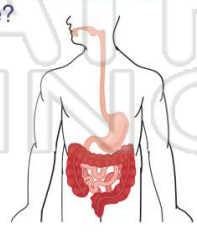
D digestion

9 Food that is **swallowed** goes through your _____ where the muscles push the food down to the stomach.



A intestines
B esophagus
C trachea
D lungs

10 Where does **most** of the digestion process take place?



A small intestines
B large intestines
C stomach
D liver

Organ systems

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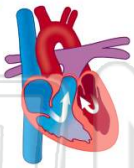

A oxygen
B nerves
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A

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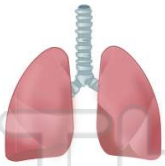

A respiratory system
B excretory system
C muscular system
D nervous system

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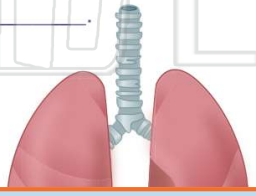

A pumping
B listening
C breathing
D changing

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C

5

A

7

D digestion

A

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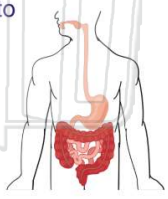

A intestines
B esophagus
C trachea
D lungs

B

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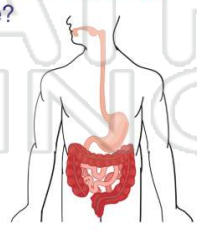

A small intestines
B large intestines
C stomach
D liver

A

PREVIEW

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Organ systems

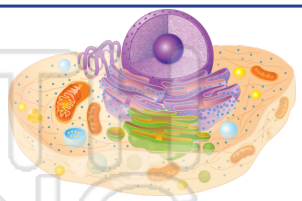
Sci D

Name_____ Class_____ Date_____

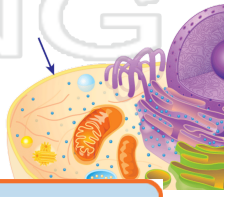
Match each of the following terms to its definition:

Cell wall	Compound microscope	Cell	Circulatory system
Cytoplasm	Digestive system	DNA	Cell membrane

1. - the basic building block of all living organisms



2. - the layer inside the cell wall of plants that regulates which substances enter and leave the cell; the outer protective layer of all animal cells



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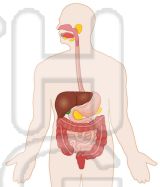
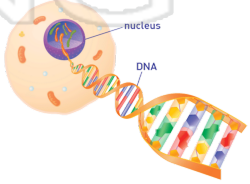
7. - a system made up of the mouth, esophagus, stomach and intestines that breaks food down into molecules that the body can use



8. - deoxyribonucleic acid; genetic material within the nucleus



Organ systems

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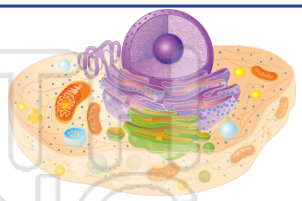
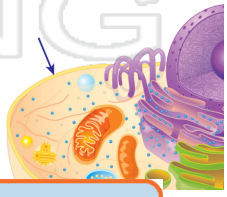


2. cell membrane - the layer inside the cell wall of plants that regulates which substances enter and leave the cell; the outer protective layer of all animal cells



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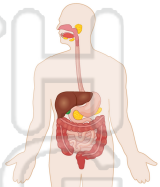
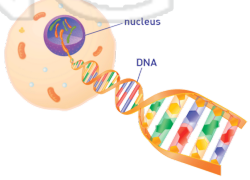
7. digestive system - a system made up of the mouth, esophagus, stomach and intestines that breaks food down into molecules that the body can use



8. DNA - deoxyribonucleic acid; genetic material within the nucleus



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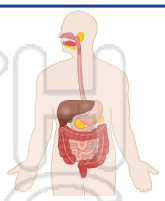
Name_____ Class_____ Date_____

Match each of the following terms to its definition:

Lysosome	Endoplasmic reticulum	DNA	Immune response
Digestive system	Involuntary muscles	Golgi body	Microscope

1. - a system made up of the mouth, esophagus, stomach and intestines that breaks food down into molecules that the body can use



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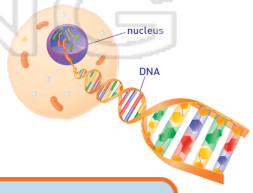

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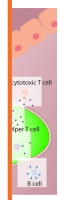

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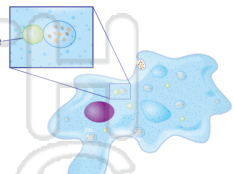
7. - a cell organelle that contains chemicals (enzymes) to break down food and recycle waste materials



8. - a tool used by scientists to make small things appear larger so that they are easier to observe and study; an instrument that magnifies small objects

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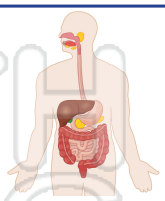

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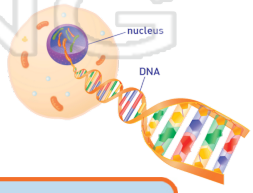

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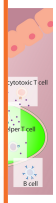

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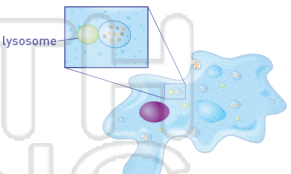
7. lysosome - a cell organelle that contains chemicals (enzymes) to break down food and recycle waste materials



8. microscope - a tool used by scientists to make small things appear larger so that they are easier to observe and study; an instrument that magnifies small objects