

NAME: _____

Science Summer Packet

6th Grade ← **7th Grade**

Mr. P

Major Topics

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Due on the FIRST day of school!!!

Enjoy your summer.

Levels of Organization in Plants and Animals

The Living Environment

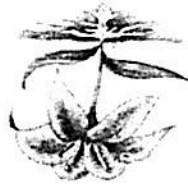
- 1.1e Cells are organized for more effective functioning in multicellular organisms. Levels of organization for structure and function of a multicellular organism include cells, tissues, organs, and organ systems.
- 1.1f Many plants have roots, stems, leaves, and reproductive structures. These organized groups of tissues are responsible for a plant's life activities.
- 1.1g Multicellular animals often have similar organs and specialized systems for carrying out major life activities.

You can distinguish between tissues, organs, and organ systems in plants and animals.

A **tissue** is a group of cells that work together.
 An **organ** is a group of tissues that work together.
 An **organ system** is a group of organs that work together.
 Vascular **tissue** transports water and sugar in plants.

DIRECTIONS Read the following information.

Multicellular organisms have cells that look and act in different ways. The human body is made of about 200 different kinds of cells. A group of cells that work together to perform a specific task in an organism forms a **tissue**. Two or more tissues that work together to get a job done form an **organ**.
 A group of organs that works together to perform a certain job is an **organ system**. Organ systems found in plants, animals, and other multicellular organisms allow these organisms to function more efficiently.
 Many green plants have a root system, a shoot system, and a reproductive system. The root system is an organ system made up of roots. The shoot system is made up of stems and leaves. Roots and stems are organs containing two kinds of vascular tissue. One, xylem, carries water and minerals upward through the roots and stems. The other, phloem, transports sugar downward. The leaves function in food production. A plant's reproductive system is made up of flowers and fruits.
 Many different kinds of animals have organ systems that carry out similar functions. The circulatory system is a transport system in which blood carries nutrients, wastes, and other substances throughout the body.



Which plant organs contain vascular tissue?

What is the difference between a **tissue** and an **organ**?
 What is an **organ system**?

Guided Questions

Guided Instruction

Apply the New York State Learning Standards to the State Test

Directions (6-10): For each question, write your answer in the spaces provided. Base your answers to questions 6 through 10 on the paragraph and chart below.

Starfish have an organ system that most other animals do not have. It is called the water vascular system. This system helps starfish eat, move, and breathe. The chart below lists the organs in the water vascular system and describes the function of each organ.

ORGANS OF THE WATER VASCULAR SYSTEM	
Organ	Function
Sieve plate	allows water to enter the starfish; keeps out pieces of debris
Ring canal	pumps water from the sieve plate to the radial canals
Radial canals	allow water to flow to the tube feet
Tube feet	help the starfish move, catch food, take in oxygen, and remove wastes
Ampullae	bulb-like structures that connect to the tube feet and regulate water pressure

6 What are three functions of a starfish's water vascular system?

7 What do the tube feet do?

8 Identify two separate human body systems whose functions are similar to those performed in a starfish by the water vascular system.

9 What are the five organs that make up the water vascular system of a starfish and how do they function as an organ system?
