

EOT TERM 2 GRADE 6 – SCIENCE INSPIRE QUESTIONS 2023/2024

Page 5

Four friends were planting flowers in the school garden.

They began to question whether or not seeds are alive.

Here are their thoughts: Circle the friend you most agree with

- a) Eli: I don't think seeds are alive until they are watered.
- b) Kelly : I think seeds are always alive.
- c) Tory: I don't think seeds are alive.
- d) DeAndre: I don't think seeds are alive until they sprout.

Mousa Eyad 6/4 AlGhazali School

Academic Year	2023/2024
العام الدراسي	
Term	2
الفصل	
Subject	Science / Inspire
المادة	العلوم / إنسپاير
Grade	6
الصف	
Stream	General
القسام	العام

Page 16 &17

Which is not a part of cell theory?

- a) All organisms are made of cells.
- b) All matter is composed of living cells.
- c) All existing cells come from preexisting cells.
- d) The cell is the most basic unit of life.

Which of the following is a component of the cell theory?

- a) All living things have a nucleus.
- b) Cells are only found in animals, not in plants.
- c) All living things are made up of one or more cells.
- d) Cells can be created spontaneously.

Who is credited with developing the cell theory?

- a) Robert Hooke
- b) Charles Darwin
- c) Louis Pasteur
- d) Isaac Newton

What is the main function of a cell?

- a) To store and release energy.
- b) To control the body's movements.
- c) To protect the body from disease.
- d) To carry out the basic functions of life.

Which type of microscope uses light and lenses to enlarge an image of an object?

- a) Transmission electron microscope
- b) Scanning electron microscope
- c) Light microscope
- d) Dissecting microscope

Which of the following is an advantage of using an electron microscope over a light microscope?

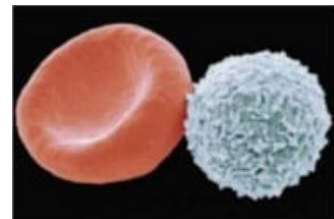
- a) Electron microscopes are cheaper.
- b) Electron microscopes can view living specimens.
- c) Electron microscopes have higher magnification and resolution.
- d) Electron microscopes do not require electricity to operate.

Which type of microscope can be used to view the internal structure of a cell in detail?

- a) Light microscope
- b) Electron microscope
- c) Compound microscope
- d) Dissecting microscope

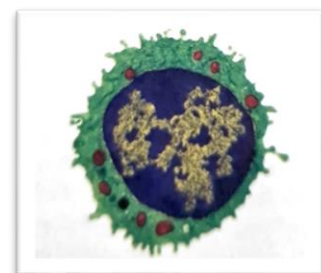
The image shows blood cells, which microscope used to capture this 3D image and study the surface of the cells?

- a) Compound microscope.
- b) Transmission electron microscopes (TEMs)
- c) Simple light microscope.
- d) Scanning electron microscopes (SEMs)



The image shows white blood cells, which microscope used to capture this image?

- a) Compound microscope.
- b) Transmission electron microscopes (TEMs)
- c) Simple light microscope.
- d) Scanning electron microscopes (SEMs)



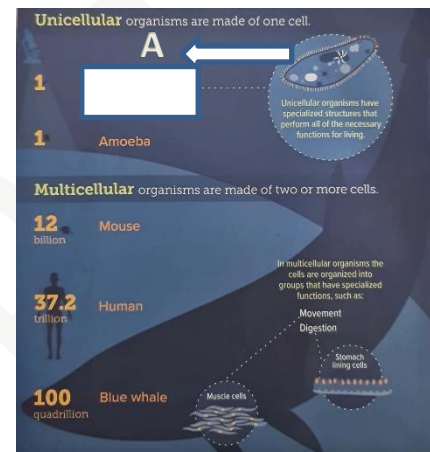
Which of the following is FALSE about microscopes?

- a) Scientists use microscopes to magnify cells.
- b) We can observe living and nonliving things using a light microscope.
- c) All types of microscopes use light to see objects.
- d) Each type of microscope is used to see things of different sizes.

Page 19 – 20 - 21

Identify the organism labelled as A

- a) Amoeba
- b) Paramecium
- c) Blue wale
- d) Human cell



Which of the following is true about unicellular organisms?

- a) They are made up of only one cell.
- b) They are made up of multiple cells.
- c) They are only found in humans.
- d) They are always visible to the naked eye.

Which of the following is true about multicellular organisms?

- a) They are made up of only one cell.
- b) They are made up of multiple cells.
- c) They are only found in plants.
- d) They are always microscopic in size.

Which of the following is an example of a unicellular organism?

- a) A dog
- B) A mosquito
- c) Amoeba
- d) A tree

Which of the following is an example of a multicellular organism?

- a) A paramecium
- b) A yeast cell
- c) A red blood cell
- d) A human

Which of the following statements is true about unicellular and multicellular organisms?

- a) Multicellular organisms always have specialized cells for specific functions.
- b) Unicellular organisms are always larger than multicellular organisms.
- c) Multicellular organisms have a simpler structure than unicellular organisms.
- d) Unicellular organisms can reproduce sexually.

Which of the following statements is not a characteristic that all living things have?

- a) Growth
- b) Development
- c) Moving
- d) reproduction

Page 22

Which of the following is a characteristic of living things?

- a) They don't need energy to survive.
- b) They can't grow or change.
- c) They can't reproduce.
- d) They respond to their environment.

Which of the following is a characteristic of living things?

- a) They don't need water.
- b) They don't need energy .
- c) They can't move.
- d) They have ability to maintain steady internal conditions.

Which of the following is a characteristic of living things?

- a) They can't sense their surroundings.
- b) They can't maintain a stable internal environment.
- c) They can respond to stimuli.
- d) They can't reproduce.

Which of the following is an example of homeostasis in the body?

- a) Drinking soda to quench thirst.
- b) Sweating to cool down when it's hot.
- c) Not eating for several days to lose weight.
- d) Staying indoors all day to avoid sunlight.

What is homeostasis?

- a) The ability of the body to maintain a stable internal environment.
- b) The process of breaking down food to release energy.
- c) The process of eliminating waste products from the body.
- d) The process of growing and developing new cells.

Page 23 & 24

Which of the following is a characteristic of prokaryotic cells?

- a) They have a true nucleus.
- b) They are typically larger in size than eukaryotic cells.
- c) They lack membrane-bound organelles.
- d) They are found only in animals.

Which correctly describes a difference between prokaryotic and eukaryotic cells?

- a) Only prokaryotic cells have vacuoles.
- b) Eukaryotic cells are smaller than prokaryotic cells.
- c) Prokaryotic cells have many organisms, each with their own specialized functions.
- d) Only eukaryotic cells have their genetic material surrounded by a lining.

Which should NOT be included in a model developed to show difference between unicellular and multicellular organism ?

- a) Unicellular organisms have fewer cells than multicellular organisms.
- b) Unicellular organisms are organized differently than multicellular organisms.
- c) Unicellular organisms are smaller than multicellular organisms.
- d) Unicellular organisms are larger than multicellular organisms.

Which of the following cell types would have a nucleus?

- a) Prokaryotic cells
- b) Eukaryotic cells
- c) Both prokaryotic and eukaryotic cells
- d) Neither prokaryotic nor eukaryotic

Which of the following is a type of eukaryotic cell?

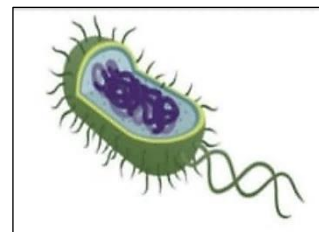
- a) Bacteria
- b) Archaea
- c) Protists
- d) Cyanobacteria

Which of the following is a function of the mitochondria in eukaryotic cells?

- a) To produce energy
- b) To store genetic material
- c) To synthesize proteins
- d) To detoxify harmful environment

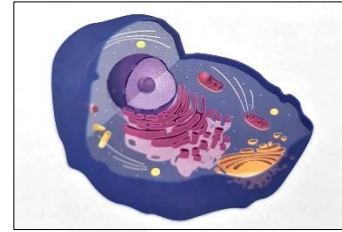
If a living organism contains a cell with the structures seen below, which of the following can you conclude about the organism?

- a) The organism is a eukaryote.
- b) The organism is prokaryotic .
- c) The organism's cells contain organelles .
- d) The organism's cells do not contain genetic information .



If a living organism contains a cell with the structures seen below, which of the following can you conclude about the organism?

- a) The organism is a eukaryote.
- b) The organism is unicellular .
- c) The organism's cells do not contain organelles.



Which of the following is False about Kingdom Archaea and Kingdom Protista?

- a) Both Protists and Archaea are prokaryotic.
- b) Protists are eukaryotic while Archaea are prokaryotic.
- c) Both kingdoms include unicellular organisms.
- d) Protists are more complex than Archaea.

What is one similarity between prokaryotes and eukaryotes?

- a) Both have genetic material surrounded by a lining.
- b) Both are types of non-living things.
- c) Both are made up of cells.
- d) Both types are multicellular organisms.

Which of the following organisms DO NOT belong to Domain Eukarya?

- a) birds
- b) grass
- c) blue-green algae
- d) fungi

Eukaryotic cells have structures that help cells function properly that called

- a) colonies
- b) organelles
- c) genetic material
- d) lining

Which of the following is NOT a domain of classification of organisms?

- a) Domain Eukarya
- b) Domain Bacteria
- c) Domain Archaea
- d) Domain Plantae

Page 35

Which of the following structures surrounds the cell and controls the movement of substances in and out of the cell?

- a) Cell wall
- b) Cell membrane
- c) Mitochondria
- d) Nucleus

Which of the following structures provides support and protection to plant cells?

- a) Cell wall
- b) Cell membrane
- c) Nucleus
- d) Cytoplasm

Which of the following is a function of the cell membrane?

- a) To provide support to the cell
- b) To store genetic material
- c) To control the movement of substances in and out of the cell
- d) To produce energy for the cell

Which of the following is a function of the cell wall?

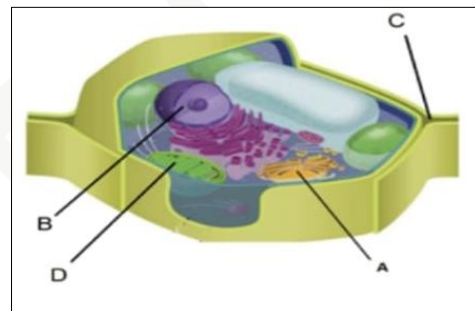
- a) To control the movement of substances in and out of the cell
- b) To provide support and protection to the cell
- c) To store genetic material
- d) To produce energy for the cell

The fluid inside a cell that contains salts and other molecules is

- a) Cell wall
- b) Cell membrane
- c) Cytoplasm
- d) Nucleolus

The image shown plant cell, which letter represents a stiff structure outside the cell and protects a cell from attack by viruses and other harmful organisms?

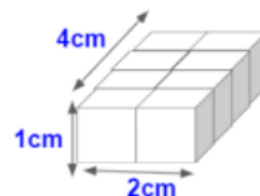
- a) A
- b) B
- c) C
- d) D



Page 36 & 37

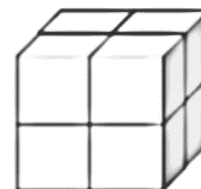
The structure in the image represents a cell. Its surface area is 28 and its volume is 8. What will be its surface area to volume ratio?

- a) 28
- b) 8: 28
- c) 8
- d) 28: 8



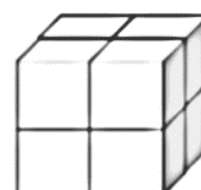
Calculate the surface area of the cell that are 2 cm per side.

- a) 8
- b) 6
- c) 24
- d) 16



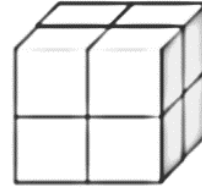
Calculate the volume of the cell that are 2 cm per side.

- a) 8
- b) 6
- c) 24
- d) 16



Find the surface area to volume ration .

- e) 8 : 24
- f) 2 : 2
- g) 2 : 4
- h) 24:8



Which of the following is true about cell surface area and volume?

- a) As a cell's surface area increases, its volume decreases.
- b) As a cell's volume increases, its surface area decreases.
- c) A cell's surface area and volume are always equal.
- d) A cell's surface area and volume have no relationship to each other.

Why is it important for a cell to have a high surface area to volume ratio?

- a) It allows more nutrients to be transported into the cell.
- b) It allows the cell to be larger in size.
- c) It allows the cell to have more organelles.
- d) It has no significant impact on the cell.

Which of the following types of cells would have the highest surface area to volume ratio?

- a) A small cell
- b) A large cell
- c) A plant cell
- d) A bacterial cell

What happens to a cell if its volume becomes too large in relation to its surface area?

- a) It will become more efficient at exchanging nutrients and waste.
- b) It will have difficulty exchanging nutrients and waste, leading to cell death.
- c) It will produce more organelles.
- d) It will become more resistant to environmental stressors.

Which of the following factors can influence a cell's surface area to volume ratio?

- a) The size of the cell
- b) The shape of the cell
- c) The amount of organelles in the cell
- d) All of the above

What is the relation between a cell's surface area and its volume?

- a) When a cell grows, its volume increases slower than its surface area.
- b) When a cell grows, its volume decreases faster than its surface area.
- c) When a cell grows, its volume increases faster than its surface area.
- d) When a cell grows, its volume decreases at the same rate as its surface area.

Pages 38 / 39 / 40 / 41

Which part of the cell controls what enters and exits the cell?

- a) Nucleus
- b) Cell membrane
- c) Ribosome
- d) Mitochondria

Which part of the cell is responsible for making proteins?

- a) Nucleus
- b) Mitochondria
- c) Ribosome
- d) Endoplasmic reticulum

Which part of the cell is known as the "powerhouse" of the cell?

- a) Nucleus
- b) Mitochondria
- c) Golgi apparatus
- d) Lysosome

Which part of the cell is responsible for storing materials such as water, food, and waste?

- a) Nucleus
- b) Mitochondria
- c) Vacuole
- d) Chloroplast

Which part of the cell contains the cell's genetic material?

- a) Nucleus
- b) Cell membrane
- c) Ribosome
- d) Mitochondria

Which part of the cell is responsible for breaking down waste and old cell parts?

- a) Nucleus
- b) Mitochondria
- c) Golgi apparatus
- d) Lysosome

Besides storage. What does a vacuole provide in a plant cell ?

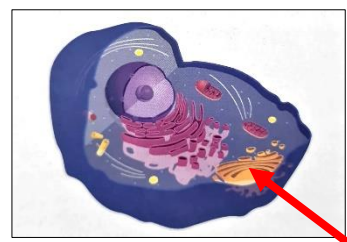
- a) Energy
- b) Protein production
- c) Structure
- d) Communication with other cells

The organelles that transport proteins in the cell .

- a) Ribosomes
- b) Endoplasmic reticulum
- c) Vacuoles
- d) vesicles

To which organelles is the line pointing? What is its function?

- a) Golgi apparatus .packages proteins into vesicles.
- b) Golgi apparatus, production of proteins.
- c) Ribosome. Packages proteins into vesicles.
- d) Ribosome. Production of proteins.

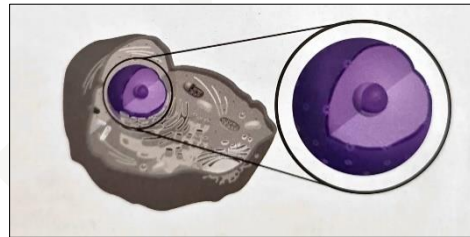


..... is important because it helps remove harmful substances from a cell .

- a) Ribosomes
- b) Rough Endoplasmic Reticulum (ER)
- c) Smooth Endoplasmic Reticulum (ER)
- d) Vacuoles

The image represents the cell nucleus that contains the genetic information. Which macromolecule stores the Genetic?

- a) Lipids
- b) carbohydrates
- c) proteins
- d) DNA



The image shows the Chloroplasts. What is the function of this structure in plant cells?

- a) It converts energy in food to ATP.
- b) The cell eats it as food.
- c) It helps the cell gather sunlight and make glucose.
- d) It controls mineral movement inside the cell.



..... Is a series of chemical reactions that convert the energy in food molecules into a usable form of energy called ATP.

- a) Lysosomes
- b) Cellular respiration
- c) Chloroplasts
- d) ER

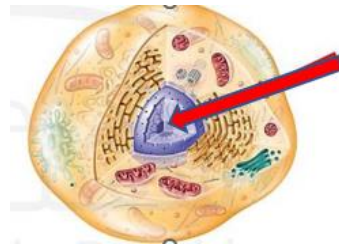
Mitochondria function as subsystems within the larger system of the cell as a whole. Which explains why a mitochondrion, shown below, is known as the “ power house” of a cell ?

- a) It helps the cell gather sunlight.
- b) The cell eats its as food.
- c) It converts energy in food to ATP.
- d) It has two membranes.



The arrow show the

- a) chloroplast
- b) b. mitochondrion
- c) c. cytoplasm.
- d) d. nucleus



In cells a large oval organelle that contains the cells genetic material in the form of DNA and controls many of the cells activities

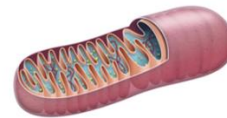
- a)nucleus
- b)organelle
- c)cell wall
- d)ribosome

How are the mitochondria and chloroplast similar?

- a) Both function in protection.
- b) Both function in energy production.
- c) Both function in transport.
- d) Both function in control.



chloroplast



mitochondria

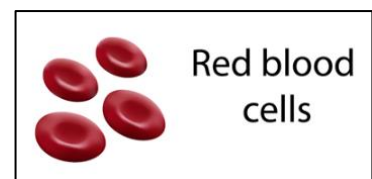
What is the relationship between DNA and ribosomes?

- a) DNA is made in the ribosome.
- b) The ribosome organizes DNA into chromosomes.
- c) Both function in energy production.
- d) DNA holds the instructions for making proteins in the ribosome.

Page 44

Which of the following is NOT a characteristic of red blood cells?

- a) Their shape helps them to move through blood vessels throughout the body.
- b) They have a flat disk-shape.
- c) They have a chloroplast that helps them make their own food.
- d) They are very small.



..... Is a cell found in many animals that transmits impulses from different parts of the body .

- a) Xylem cell
- b) Red blood cell
- c) Neuron cell

..... Are tubelike cells that transport water from the roots to the leaves of plants .

- a) Xylem cell
- b) Red blood cell
- c) Neuron cell

Pages 62 – 63 - 64

What is an effect of the organization of tissues into groups ?

- a) They can form new organisms.
- b) They can develop more than one cell type.
- c) They can carry out all functions required for life.
- d) They can carry out more complex functions.

The process by which one cell becomes a different type of cell is called

- a) cell
- b) cell differentiation
- c) organ
- d) organ system

What is the smallest unit of life?

- a) Organ
- b) Organ system
- c) Tissue
- d) Cell

Plants have main types of tissues

- a) 1
- b) 2
- c) 3
- d) 4

..... is not type of animals tissue .

- a) epithelial tissue
- b) b. muscle tissue
- c) c. connective tissue
- d) d. vascular tissue

Which level of organization is composed of groups of cells that work together to perform a specific function?

- a) Organ system
- b) Organism
- c) Tissue
- d) Cell

Which human tissue is most similar in function to dermal tissue?

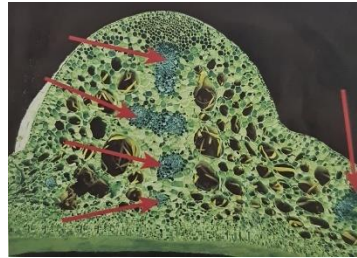
- a) Muscle tissue
- b) Connective tissue
- c) Epithelial tissue
- d) Nervous tissue

What is the difference between a cell and a tissue?

- a) cell is basic unit of life ; tissue is group of similar type of cells that work as one.
- b) b. cell is group of tissues; tissue is basic unit of life.
- c) c. cell is basic unit of life; tissue is groups of different cells.
- d) cell is group of organ; tissue is group of different cells.

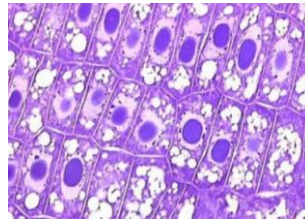
The tissue that shown in the photo indicated by arrows, moves water and nutrient throughout a plant is called

- a) Dermal issue
- b) Vascular tissue
- c) Ground tissue
- d) epithelial tissue



This is a example of

- a) cell
- b) tissue
- c) organ
- d) organ system



..... is Forms the protective outer layer of the skin and the internal lining of the body.

- a. Nervous tissue
- b. Epithelial tissue
- c. Muscle tissue
- d. Connective tissue

..... is Carries messages to and from the brain.

- a. Nervous tissue
- b. Epithelial tissue
- c. Muscle tissue
- d. Connective tissue

..... is provides structure and support and connects other types of tissues.

- a. Nervous tissue
- b. Epithelial tissue
- c. Muscle tissue
- d. Connective tissue

Animals have main types of tissues

- a) 1
- b) 2
- c) 3
- d) 4

..... Forms the protective outer layer of the skin and the lining of major organs and internal body cavities.

- a) Muscle tissue
- b) Connective tissue.
- c) Nervous tissue.
- d) Epithelial tissue.

Some diseases , such as leukemia and sickle cell disease can be treated using a

- a) bone marrow transplant
- b) blood donation
- c) Artificial respiration

Pages 68 & 70

Which of the following is the correct order of organization in living things from most basic (simple) to most complex?

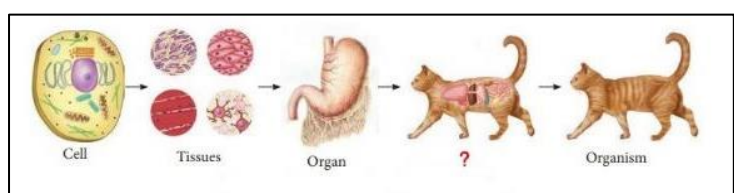
- a) Organism, cell, tissue, organ, organ system
- b) Organ system, organ, tissue, cell, organism
- c) Cell, tissue, organ, organ system, organism
- d) Cell, organ, tissue, organ, organism, organ system

Which level of organization includes all of the different organs that work together to perform a specific function in the body?

- a) Cell
- b) Tissue
- c) Organ system
- d) Organism

The following diagram shown

- a) nervous system.
- b) digestive system.
- c) respiratory system.
- d) cardiovascular system.

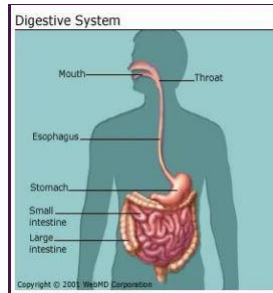


food and water are transported throughout the plant by the

- a) root system.
- b) digestive system.
- c) shoot system.
- d) respiratory system.

This is an example of.....

- a. tissue
- b. cells
- c. organ
- d. organ system

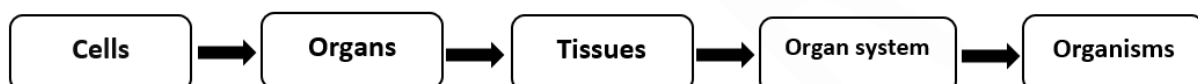


Which level of organization includes all of the different organs in the body that work together to keep an organism alive?

- a) Tissue
- b) Organism
- c) Organ system
- d) Cell

Pages 73

Cade is making a presentation on the way systems are organized in plants and animals for his science class. He prepared this flowchart to illustrate his presentation?

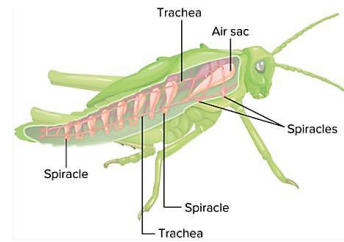


After further study, Cade realized his flowchart was incorrect. Which change should he make to correct the flowchart?

- a. add the phrase Cell Membranes.
- b. switch Organs and Tissues.
- c. remove Tissues and Cells.
- d. switch Organs and Cells.

The diagram shows the structures involved in respiration for a grasshopper. These structures are an example of which level of organization within an organism?

- a) the structure make up an organelle.
- b) the structures make up a specialized cell.
- c) the structures make up a tissue.
- d) the structures make up an organ system



Cade is making a presentation on the way systems are organized in plants and animals for his science class. He prepared this flowchart to illustrate his presentation?



- a) add the phrase Cell Membranes.
- b) switch Organs and Tissues.
- c) remove Tissues and Cells.
- d) switch Organs and Cells.

Pages 80 & 81

..... is made of strong tissue that can contract in an orderly way .

- a) joint
- b) ligaments
- c) muscle
- d) cell

When a muscle contracts , the cells of the muscle become

- a) shorter
- b) longer
- c) thinner
- d) return to their original length

When a muscle relaxes , the cells of the muscle become

- a) shorter
- b) longer
- c) thinner
- d) return to their original length

The joint that allows bones to move and rotate in nearly all directions is

- e) Ball and socket
- f) Hinge
- g) pivot

The joint that allows bones to move back and forth in a single direction is

- a) Ball and socket
- b) Hinge
- c) Pivot

The joint that allows bones to turn is

- a) Ball and socket
- b) Hinge
- c) Pivot

hips and shoulder are example of

- a) Hinge joint
- b) Ball and socket joint
- c) Pivot joint

Lower arm below the elbow are example of

- a) Hinge joint
- b) Ball and socket joint
- c) Pivot joint

What is the function of a ligament in a joint?

- a) To connect bones to muscles
- b) To provide cushioning between bones
- c) To prevent bones from rubbing against each other
- d) To connect bones to other bones

Which type of joint allows for the greatest range of motion?

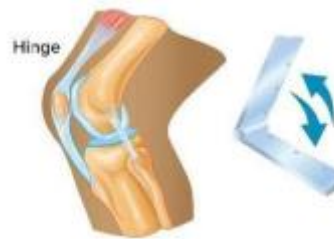
- a) Hinge joint
- b) Ball-and-socket joint
- c) Pivot joint
- d) Gliding joint

Which of the following is an example of a joint?

- a) Tendon
- b) Ligament
- c) Bone marrow
- d) Elbow

The hinge joint in the graph below allows bones to move back and forth. Which of the following do not have hinge joints ?

- a) Shoulder
- b) Fingers
- c) Elbows
- d) Knees



Pages 83

Which of the following is NOT a function of bones in the human body?

- a) To provide support and protection to internal organs
- b) To produce blood cells
- c) To store minerals such as calcium and phosphorus
- d) To generate energy for the body

What is the function of the skeleton in the human body?

- a) To produce energy for the body
- b) To control the movement of the body
- c) To provide support and protection to internal organs
- d) To transport oxygen to the cells

Which of the following is stored in the skeletal system?

- a) Potassium
- b) Calcium
- c) Sodium
- d) water

Which is NOT a function of the skeletal system ?

- a) Protects interior organs.
- b) Gives shape and support to body.
- c) Stores minerals.
- d) Produces vitamin D

Which of the following is NOT a function of the bones?

- a) Make and store materials needed by your body.
- b) Protect the soft tissue of your body from damage.
- c) Exchange gases .
- d) Support your body and help you move.

Pages 85

Which of the following animals does NOT have bones?

- a) Fish
- b) Snakes
- c) Jellyfish
- d) Birds

Which of the following animals has an exoskeleton instead of an internal skeleton?

- a) Fish
- b) Humans
- c) Insects
- d) Birds

What is an exoskeleton?

- a) A type of internal skeleton found in vertebrates.
- b) A type of skeleton found in invertebrates outside the body.
- c) A type of joint found in vertebrates.
- d) A type of bone found in invertebrates.

Which of the following animals has an exoskeleton?

- a) Fish
- b) Snake
- c) Crab
- d) Gorilla

What is a hydrostatic skeleton?

- a) A type of internal skeleton found in vertebrates.
- b) A type of skeleton found in invertebrates outside the body.
- c) A flexible skeleton supported by fluid pressure.
- d) A type of bone found in invertebrates.

Which of the following animals has a hydrostatic skeleton?

- a) Earthworm
- b) Lion
- c) Kangaroo
- d) Eagle

Which of the following defines a hydrostatic skeleton?

- a) A hard outer cover that gives support and protection to some animals.
- b) A fluid-filled internal cavity surrounded by muscle tissue.
- c) A group of muscle fibers that contract and relax to allow movement.
- d) A structure of bones and joints joined together.

Which of the following is an advantage of having an exoskeleton or hydrostatic skeleton?

- a) Increased flexibility and range of motion.
- b) Protection from predators and environmental hazards.
- c) Greater ability to grow and change over time.
- d) Improved circulatory and respiratory systems.

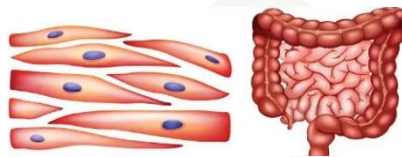
Pages 88 & 89

Which type of muscle is responsible for voluntary movements?

- a) Skeletal muscle
- b) Cardiac muscle
- c) Smooth muscle
- d) Involuntary muscle

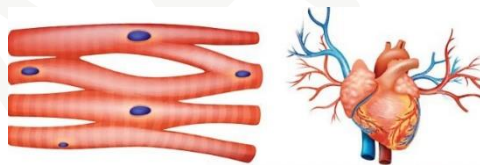
Which type of muscle is found in the walls of internal organs such as the stomach and intestines?

- a) Skeletal muscle
- b) Cardiac muscle
- c) Smooth muscle
- d) Involuntary muscle



Which type of muscle is found only in the heart?

- a) Skeletal muscle
- b) Cardiac muscle
- c) Smooth muscle
- d) Involuntary muscle

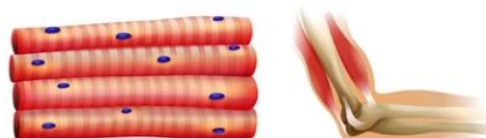


Which type of muscle is responsible for involuntary movements such as breathing and digestion?

- a) Skeletal muscle
- b) Cardiac muscle
- c) Smooth muscle
- d) Involuntary muscle

Which type of muscle is attached to bones and helps to move the body?

- a) Skeletal muscle
- b) Cardiac muscle
- c) Smooth muscle
- d) Involuntary muscle



Pages 90 & 91

Which of the following is a fibrous root system ?



Stems support plants in many ways. Which of the following is NOT a way in which stems support the plant?

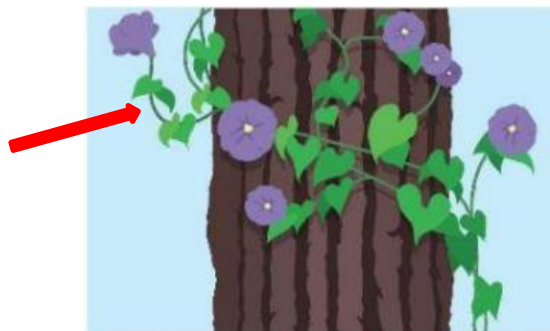
- a) join roots to leaves.
- b) take in water and minerals from the ground.
- c) make new cells for growth.
- d) hold a plant upright.

Which of the following is a fibrous root system ?



What type of stem does the arrow shown ?

- a) herbaceous stems
- b) woody stems



Pages 92

Which statement is NOT correct about plants and animals structure and support ?

- a) Plants have stem to support while animals have muscles and bones.
- b) Plants and animals have structure for support.
- c) Animals have bones to move while the plant not .
- d) Animals made up of cell and tissues while plants not .

Pages 95

Why do muscle cells have so many mitochondria ?

- a) Muscle cells are bigger than every other cell and can fit more mitochondria .
- b) Ther are more mitochondria only because there are more nuclei.
- c) Muscle cells need to quickly respond to energy needs.
- d) The mitochondria in muscle cells are smaller so more are needed.

What is the effect when a muscle contracts ?

- a) The muscle lengthens.
- b) The muscle shortens
- c) The muscle pushes on another muscle
- d) The muscle pushes on a bone

The image represents a joint that would be found in which structure ?

- a) finger
- b) Knee
- c) Neck
- d) Shoulder





Pages 102 – 103 – 104 -105

..... is the amount of energy it takes to raise the temperature of 1 kg of wate by 1 C.

- a) Nutrients
- b) Calories
- c) Fat
- d) Proteins

The table below shows the distribution of some nutrients for 1 serving of apple, banana, and brownie.

		
apple	banana	brownie
carbohydrates: 25 g proteins: 1 g fats: 0 g	carbohydrates: 28 g proteins: 1 g fats: 0 g	carbohydrates: 50 g proteins: 5 g fats: 25 g

An apple, a banana, or a brownie has the most calories?

- a) apple
- b) all three have the same amount of calories
- c) banana
- d) brownie

Our bodies need different foods to grow and survive. Calcium, potassium, and proteins are types of :

- a) calories
- b) food
- c) nutrients
- d) energy

We use calories to measure :

- a) How much energy is in food
- b) How much nutrients is in food
- c) How much sugar is in food
- d) How much fat is in food

..... are the parts of food used by the body to grow and survive.

- a) calories
- b) nutrients
- c) food
- d) energy

The amount of energy a person needs depends on several factors .Which of the following is NOT from this factors

- a) activity level
- b) gender
- c) eyes color
- d) age

Pages 106 and 107

Which of the following is not a part of the digestive system?

- e) Esophagus
- f) Pancreas
- g) Kidney
- h) Stomach

What is the function of the stomach in the digestive system?

- a) To absorb nutrients.
- b) To break down food into smaller pieces.
- c) To filter waste products.
- d) To produce bile.

Where does most of the digestion and absorption of nutrients occur in the body?

- a) Stomach
- b) Small intestine
- c) Large intestine
- d) Liver

Which of the following is not a type of nutrient that is digested and absorbed by the body?

- a) Carbohydrates
- b) Proteins
- c) Vitamins
- d) Water

What is the name of the process by which food is broken down into simpler substances?

- a) Digestion
- b) Absorption
- c) Assimilation
- d) Elation

What is the name of the muscular tube that connects the mouth to the stomach?

- a) Esophagus
- b) Trachea
- c) Bronchi
- d) Alveoli

What is the name of the involuntary muscle contractions that move food through the digestive system?

- a) Digestion
- b) Absorption
- c) Elimination
- d) Peristalsis

Choose the answer which lists the correct order of the digestion process.

A – Nutrients and water in the food are absorbed.

C – Food is ingested.

B – Undigested food is eliminated.

D – Food is digested.

- a) C , A , D , B
- b) A , B , C , D
- c) C , D , A , B
- d) A , C , D , B

Absorption in the small intestines occurs through the walls of fingerlike projections called.....

- a) Peristalsis
- b) Villi
- c) Saliva
- d) gastric

Which type of digestion breaks down pieces of food into small molecules?

- a) mechanical digestion
- b) chemical digestion
- c) peristalsis digestion
- d) absorption digestion

Page 108 -109

What is the primary function of the excretory system in humans?

- a) To produce energy for the body.
- b) To break down food into nutrients.
- c) To remove waste products from the body.
- d) To circulate oxygen and nutrients throughout the.

Which of the following is not a part of the excretory system in humans?

- a) Kidneys
- b) Liver
- c) Stomach
- d) Bladder

Which of the following is a function of the kidneys in the excretory system?

- a) To produce insulin for the body
- b) To filter waste products from the blood
- c) To digest food and extract nutrients
- d) To produce red blood cells

Which of the following is a disorder of the excretory system in humans?

- a) Arthritis
- b) Asthma
- c) Diabetes
- d) Malaria

The kidneys, skin, and lungs are each a part of the system.

- a) respiratory
- b) nervous
- c) digestive
- d) excretory

How does the skin remove waste from the body?

- a) The skin removes oxygen waste by sweating.
- b) The skin removes extra salt by sweating.
- c) The skin releases carbon dioxide through tiny openings in the skin.
- d) The skin removes solids that are not absorbed by sweating.

Page 111

What is photosynthesis?

- a) The process by which plants absorb water.
- b) The process by which plants convert sunlight into energy.
- c) The process by which plants reproduce.
- d) The process by which plants produce oxygen.

Which of the following is not a raw material required for photosynthesis?

- a) Carbon dioxide
- b) Water
- c) Oxygen
- d) Sunlight

In which part of the plant does photosynthesis occur?

- a) Stems
- b) Leaves
- c) Roots
- d) Flowers

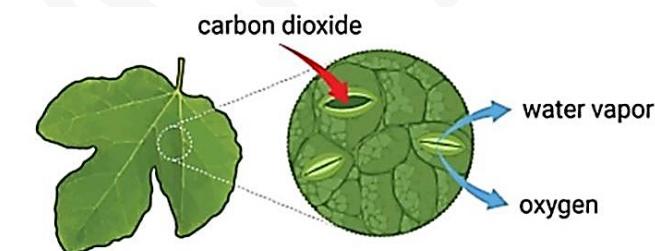
Which pigment in plant cells is responsible for absorbing sunlight during photosynthesis?

- a) Chlorophyll
- b) Melanin
- c) Hemoglobin
- d) Carotene

What is the main product of photosynthesis?

- a) Carbon dioxide
- b) Water
- c) Glucose
- d) Oxygen

Carbon dioxide, oxygen, and water vapor move in and out of tiny opening in the leaves.

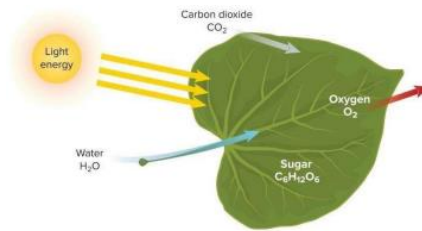


Which of the following is true?

- a) Water vapor and oxygen are absorbed from the air.
- b) Plants release glucose through tiny openings.
- c) Water vapor and oxygen are waste products released into the air.
- d) Carbon dioxide, water vapor, and oxygen are all needed by plants.

The diagram below models the process of photosynthesis in the plant leaves. Which of them takes glucose to all plant cells ?

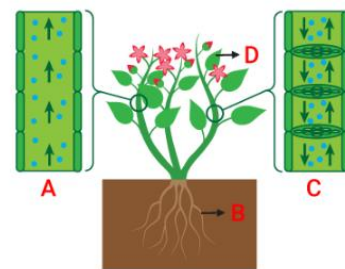
- a) Xylem
- b) Phloem
- c) Ground tissue
- d) Dermal tissue



Page 120-121

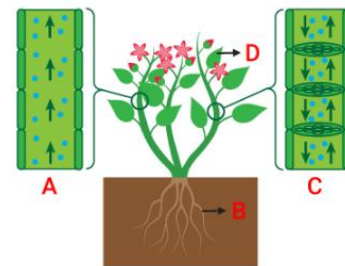
Structure A represents :

- a) Ground tissue
- b) Dermal tissue
- c) Phloem
- d) Xylem



Structure C represents :

- a) Ground tissue
- b) Dermal tissue
- c) Phloem
- d) Xylem



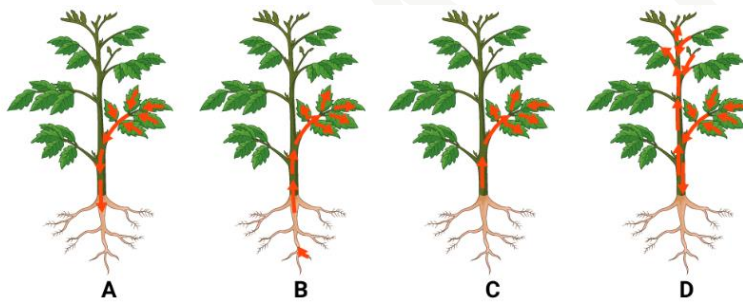
..... is specialized plant tissue composed of tubelike cells that transport water and nutrients in some plants.

- a) Xylem
- b) Phloem
- c) Vascular tissue
- d) Dermal tissue

When you place a fresh leaf in a bowl of water, and place the bowl in sunlight bubbles formed on the leaf . Why do you think this is happening ?

- a) Because gases passed through its stomata.
- b) Because the leaf is nonliving things.
- c) Because the sun heat the leaf.

Which image correctly shows the transportation of water and minerals in the xylem?



Page 123 – 124 -125

What is the function of the respiratory system?

- a) To pump blood throughout the body
- b) To remove waste products from the body
- c) To break down food into nutrients
- d) To take in oxygen and remove carbon dioxide.

Which of the following is not a part of the respiratory system?

- a) Lungs
- b) Trachea
- c) Stomach
- d) Bronchi

How does air enter the body during respiration?

- a) Through the mouth and nose
- b) Through the ears
- c) Through the eyes
- d) Through the skin

What is the role of the alveoli in the respiratory system?

- a) To filter air entering the lungs
- b) To transport oxygen to the rest of the body
- c) To absorb nutrients from the air
- d) To exchange oxygen and carbon dioxide with the blood

What is a disorder of the respiratory system?

- a) Arthritis
- b) Asthma
- c) Diabetes
- d) Malaria

Which of the following is not part of the respiratory system?

- a) pharynx
- b) ventricle
- c) trachea
- d) bronchus

Which best describes the function of a diaphragm?

- a) The diaphragm is the site where oxygen enters the capillaries .
- b) The diaphragm regulates air pressure inside the chest.
- c) The diaphragm receives air , food, and liquids from the mouth.
- d)The diaphragm vibrates when air passes through causing sound.

..... is a tubelike passageway at the top of the throat that receives air, food and liquids from the mouth or nose .

- a) Trachea
- b) Diaphragm
- c) Pharynx
- d) alveoli

..... is a large muscle below the lungs that contracts and relaxes as air moves into and out of your lungs.

- a) Trachea
- b) Diaphragm
- c) Pharynx
- d) Alveoli

Which of the following does NOT happen when you inhale?

- a) Muscles between the ribs cause the ribcage to get larger in size.
- b) Air from the environment moves into the lungs.
- c) Carbon dioxide in blood is exchanged for oxygen in the alveoli.
- d) The diaphragm contracts and moves downwards.

Which of the following is NOT a structure or a function of the respiratory system?

- a) inhale carbon dioxide, exhale oxygen.
- b) gases move between your body and the environment.
- c) diaphragm contracts and relaxes.
- d) Lungs.

Page 126

Which of the following are NOT true about capillaries?

- a) allow carbon dioxide to move from the body into the blood to be removed from the body.
- b) found near of the alveoli.
- c) large blood vessels.
- d) allow oxygen and nutrients to move from the blood into the body and organs.

Oxygen moves between the respiratory system and circulatory system when it transfers from to

- a) bronchi , trachea
- b) alveoli , capillaries
- c) capillaries, veins
- d) bronchi, capillaries

Which of the parts of the circulatory system brings blood from a part of the body to the heart?

- a) Arteries
- b) Capillaries
- c) Arterioles
- d) Veins

Blood enters the upper two chambers of the heart, called the

- a) Arteries
- b) Atria
- c) Ventricles
- d) veins

Blood leaves through the lower two chambers of the heart, called the.....

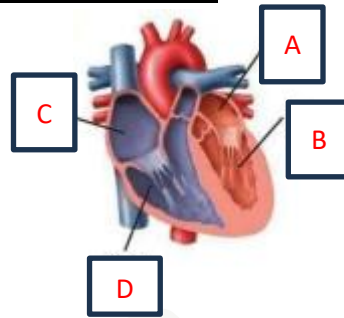
- a) Arteries
- b) Atria
- c) Ventricles
- d) veins

..... are very tiny vessels that enable oxygen, CO₂, and nutrients to move between your circulatory system and your entire body.

- a) Arteries
- b) Atria
- c) Ventricles
- d) Veins

Which letter refer to the chamber that receives blood from the lungs?

- a) A
- b) B
- c) C
- d) D



Page 132

What do insects use to transport material and waste throughout the body?

- a) skin
- b) an open circulatory system
- c) lungs
- d) a closed circulatory system

..... is a system that transports materials through blood using vessels.

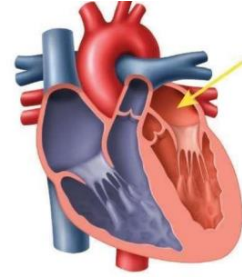
- a) Skin
- b) An open circulatory system
- c) A closed circulatory system
- d) lungs

..... is a system that transports blood and other fluids into open spaces that surround organs in the body.

- a) Skin
- b) An open circulatory system
- c) A closed circulatory system
- d) Lungs

Page 135

The arrow in the diagram below shows where blood enters the heart through the atrium after coming from the lungs. Which best describes the function of this blood entering the heart?



- a) The blood is carrying oxygen that it absorbed as it passed through the lungs.
- b) The blood is carrying carbon dioxide that it absorbed as it passed through the lungs.
- c) The blood is carrying nutrients that it absorbed as it passed through the small intestine.
- d) The blood is carrying capillaries that it absorbed as it passed through the stomach.

Which best explains the function of the alveoli in the respiratory system?

- a) The alveoli help to keep the lungs healthy by providing a way for all the cells in the lungs to obtain nutrients from the bloodstream.
- b) The alveoli provide a large surface area for absorbing oxygen from the air and releasing carbon dioxide wastes from the bloodstream.
- c) The alveoli help to keep the lungs inflated when you breathe out and make it possible to absorb oxygen when you breathe in.
- d) The alveoli provide a large surface area for absorbing oxygen from the air when you breathe in and look like a bunch of grapes.

Page 155

Which part of the eye is responsible for controlling the amount of light that enters the eye by changing the size of the pupil ?

- a) Cornea
- b) Iris
- c) Lens
- d) Retina

What is the function of the lens in the eye?

- a) To control the amount of light that enters.
- b) To convert light into electrical signals.
- c) To detect color.
- d) To focus light onto the retina

What part of the eye is responsible for detecting color?

- a) Cornea
- b) Iris
- c) Lens
- d) Retina

What is the name of the nerve that carries electrical signals from the eye to the brain?

- a) Auditory nerve
- b) Olfactory nerve
- c) Optic nerve
- d) Vagus nerve

A thin membrane that protects the eye and changes the direction of light rays are

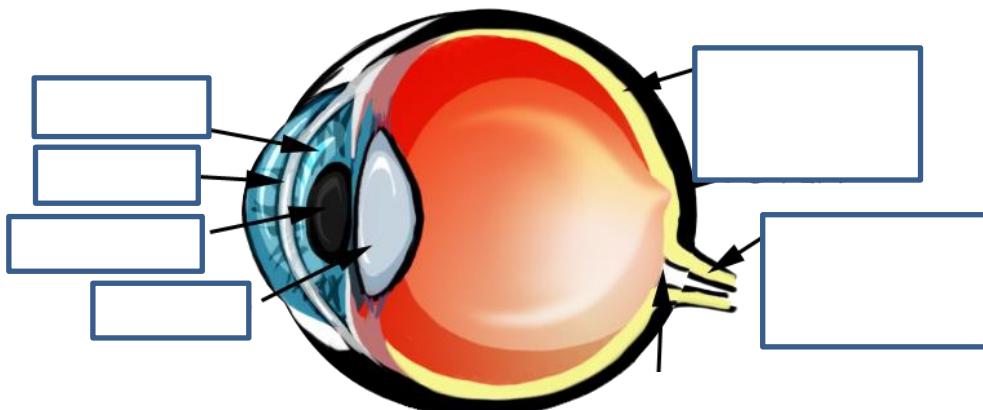
- a) iris
- b) cornea
- c) pupil
- d) retina

The muscle that enables the lens to change shape is

- a) Oculi muscles.
- b) Skeletal muscles.
- c) Ciliary muscles
- d) Cardiac muscles.

Identify the part of the eye

Retina – iris – cornea - lens - pupil – optic nerve



Light rays pass through different structures of the eye before the information is processed by the brain.

Which of the following is the correct order of this process?

- a) pupil → retina → lens → optic nerve → cornea → brain
- b) optic nerve → pupil → retina → lens → cornea → brain
- c) cornea → pupil → retina → lens → optic nerve → brain
- d) cornea → pupil → lens → retina → optic nerve → brain

..... is an area at the back of the eye that has two types of cells , rod cells and cone cells with photoreceptors.

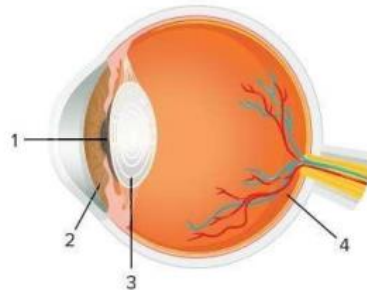
- a) Iris
- b) Cornea
- c) Pupil
- d) retina

Page 158

Use the diagram and answer the question.

Which numbered structure focuses the light on the retina , where it is detected by photoreceptors?

- a) 1
- b) 2
- c) 3
- d) 4



A doctor sees a patient who has a loss of balance from an illness. The doctor thinks injury to the sense receptors for balance might be causing this effect. In which structure are they located?

- a) middle ear
- b) nasal cavity
- c) spinal cord
- d) inner ear

بالنجاح والتوفيق
لا تنسونا من صالح دعائكم

Good Luck!
😊