**FLPS Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Mr. Vazquez Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Life Science-Study Guide**

**Marking Period 2**

**VOCABULARY**

**Directions: On a separate sheet of paper, define each word.**

1. Homeostasis: the maintenance of a constant internal state in a changing environment
2. Skeletal system: organ system whose primary function is to support and protect the body and to allow it to move
3. Ligament: tissue that holds together the bones in a joint
4. Joint: location where two or more bones meet
5. ~~Bone tissue~~
6. ~~Cartilage tissue~~
7. ~~Marrow~~
8. ~~Skeleton~~
9. ~~Spine~~
10. Tendon: tough connective tissue that attaches a muscle to a bone or to another body part
11. Vertebrae: protective bones that surround the spinal chord
12. ~~Voluntary movement~~
13. ~~Involuntary movement~~
14. Fracture: broken bone, usually repairs itself in 6 to 8 weeks
15. Sprains: injury to a ligament caused by stretching a joint too far
16. Osteoporosis: disease caused by a deficiency of calcium that affects the bone tissue making it thin, thus weakening the bones and making them more easily breakable
17. Arthritis: disease that causes joints to swell, stiffen, and become painful. It may also cause deformation of the bones.
18. Muscular system: collection of muscles whose primary function is movement and flexibility
19. ~~Cardiac muscle~~
20. Skeletal muscle: muscles attached to bones
21. ~~Smooth muscle: muscles that make up the internal organs~~
22. Muscular Dystrophy: hereditary disease that causes skeletal muscle to become weaker over time
23. ~~Tendonitis~~
24. ~~Muscle Strain~~
25. Circulatory System: describes both the Cardiovascular and Lymphatic Systems which work closely together to move fluids around the body and protect it from disease.
26. Cardiovascular system: organ system whose function is to transport blood throughout the body; it includes the heart, arteries, and veins.
27. Lymphatic System: network of organs and tissues that collect fluid that leaks from blood and returns it to blood vessels; includes lymph nodes, lymph vessels, and lymph; it is also the place where certain white blood cells mature.
28. Blood: the fluid that carries oxygen and nutrients to the body and it made up of platelets, white blood cells, red blood cells and plasma.
29. Lymph: the clear watery fluid that leaks from blood vessels and contains white blood cells; circulates in lymphatic system; returned to bloodstream through lymph vessels
30. Lymph node: small, bean-shaped masses of tissue that remove pathogens and dead cells from the lymph; Concentrated in the armpits, neck and groin; high concentration of white blood cells are found in lymph nodes.
31. Artery: a blood vessel that carries blood AWAY from the heart to the body’s organs
32. Capillary: a tiny blood vessel that allows an exchange between blood and cells in tissues.
33. Vein: vessel that carries blood TO the heart
34. ~~Heart~~
35. ~~Lymphoma~~
36. Respiratory system: organ system whose primary function is to take in oxygen and expel carbon dioxide; organs include the lungs, the throat, and the passageways that lead to the lungs
37. Pharynx: part of the Respiratory System that extends from the mouth to the Larynx
38. Larynx: part of the Respiratory System between the Pharynx and the Trachea ; has walls of cartilage and muscle and contains the vocal chords
39. Trachea: thin-walled tube that extends from the larynx to the bronchi; carries air to the lungs; also called windpipe
40. Bronchii: the two main branches of the trachea that lead directly to the lungs;
41. Alveoli: tiny, thin-walled, capillary-rich sac in the lungs where the exchange of oxygen and carbon dioxide takes place; also called air sac
42. ~~Atherosclerosis~~
43. ~~Hypertension~~
44. ~~Heart attack~~
45. ~~Stroke~~
46. Asthma: condition where the airways are narrowed due to inflammation of the bronchi
47. Pneumonia: inflammation of the lungs usually caused by bacteria or viruses
48. Emphysema: condition that prevents oxygen from passing across into the blood because the alveoli has been damaged
49. Digestive system: organs that break down food so that it can be used by the body
50. Enzyme: a type of protein that speeds up metabolic reactions in plants and animals without being permanently changed or destroyed
51. Esophagus: a long, straight tube that connects the pharynx to the stomach
52. Stomach: the saclike digestive organ that is between the esophagus and the small intestine and that breaks down food by the action of muscles, enzymes and acids.
53. Small intestine: organ between the stomach and the large intestine where most of the breakdown of food happens and most of the nutrients from food are absorbed.
54. Large intestine: the broader and shorter portion of the intestine, where water is removed from the mostly digested food to turn the waste into semisolid feces, or stool
55. Liver: the largest organ in the body; makes bile; stores and filters blood, and stores excess sugar
56. Excretory system: the system that collects and excretes nitrogenous wastes and excess water from the body in the form of urine.
57. Kidney: one of the organs that filter water and waste from the blood; excrete products as urine and regulates the concentration of certain substances in the blood.
58. Nephron: The unit in the kidney that filters blood.
59. Urine: the liquid excreted by the kidneys, stored in the bladder and passed through the urethra to the outside of the body
60. Nervous System: the structures that control the actions and reactions of the body in response to stimuli from the environment; it is formed by billions of specialized nerve cells called neurons
61. Brain: organ that is the main control center of the nervous system
62. Spinal chord: a column of nerve tissue running from the base of the brain through the vertebral column
63. Neuron: nerve cell that is specialized to receive and conduct electrical impulses
64. Axon: an elongated extension of a neuron that carries impulses away from the cell body
65. Dendrite: branchlike extension of a neuron that receives impulses from neighboring neurons
66. Endocrine system: Collection of glands and groups of cells that secrete hormones that regulate growth, development, and homeostasis; includes the pituitary, thyroid , parathyroid, and adrenal glands, the hypothalamus, the pineal body and the gonads.
67. Hormone: a substance that is made in one cell or tissue and that causes a change in another cell or tissue in a different part of the body
68. Gland: group of cells that make chemicals for use elsewhere in the body

**QUESTIONS /Directions: Answer all questions using full and complete sentences.**

1. What is the difference between mechanical and chemical digestion?

Mechanical digestion refers to the digestion process that breaks the food into smaller particles; Chemical digestion is the process where acids, bases and enzymes extract nutrients from food.

1. What is the slippery substance called that aids the passing of food through the gullet?

Saliva

1. Which part of the tooth is covered with enamel?

The Crown

1. What connects the throat to the stomach?

The esophagus

1. What organ secretes bile into the gall bladder?

The Liver

1. Where does most chemical digestion occur?

In the Stomach

1. What gas is present in greater quantity in exhaled air than in inhaled air?

CO2

1. The difference of \_\_\_\_**pressure**\_\_\_\_\_\_\_\_ will move air into and out of the lungs.
2. How would the chest cavity move when the diaphragm moves downward and the ribs move upwards?

It will expand.

1. Where are the vocal chords located? In the Larynx
2. What does the wall of the windpipe contain so it does not collapse?

C-shaped cartilage rings

1. What else does the mucus in the nose do besides trap bacteria and small dust particles?

It provides defense against pathogens by isolating them and preventing them from entering the body

1. What is the chemical process that produces energy inside a muscle cell?

Cellular respiration

1. Which compound in cells make energy available for their immediate use?

ATP (Adenosine Tri Phosphate)

1. Where does the exchange of carbon dioxide in the blood for oxygen take place?

In the Alveoli

1. In what region are the tonsils located?

In the pharynx by the rear of the throat

1. What are large dust particles that enter the nostrils stopped by?

They are stopped by cilia in the nose

1. What does the epiglottis prevent?

It prevents the passage of food and liquid into the lungs (aspiration).

1. Where is solid waste material discharged from that cannot be digested by the digestive system?

The solid waste formed is called feces. The large intestine temporarily stores the feces prior to elimination then the body expels it through the rectum and anus.

1. In what organ are worn out red blood cells broken down?

In the spleen

1. ~~What two important nutrients are excreted from the body when they are present in excess? Water and what else?~~
2. ~~Why would an athlete weigh less after a five mile run?~~
3. ~~Which two glands help in excretion?~~
4. Where does blood pass through so dissolved wasted are removed from the blood?

Kidneys

1. Which tube leads urine out of the body?

Urethra

1. ~~Name three wastes that must be removed from animal cells.~~
2. Where are the kidneys located?

In the back by the side of the spine

1. Where are involuntary muscles located?

Inside the body in internal organs

1. Which type of muscle is used in directly throwing a ball?

Skeletal muscle

1. What do long bones manufacture?

Blood

1. Which two body systems enable an animal to move when they work together?

Muscular and skeletal

1. How many bones are between the hip and the knee?

One, the femur

1. What is the nerve tissue of the spinal cord covered with?

**Covered by the meninges**

1. What part of the skeleton protects the lungs?

The ribcage

1. ~~What are the three main divisions the bones of the skeleton can be grouped in?~~
2. ~~What supplies the force that enables body levers to move?~~
3. ~~What type of joint is the elbow?~~
4. ~~What is the beating of the heart while sleeping an example of?~~
5. ~~How do bones in the body move?~~
6. ~~Where are immovable joints found?~~
7. What are the parts of the Central Nervous System (CNS)?

The Brain and the Spinal Chord

1. What is the function of the following brain structures:
   1. Cerebrum – controls all voluntary movement
   2. Cerebellum – motor control, also cognitive functions such as attention and language as well as emotional control regulating fear and pleasure
   3. Brain Stem – controls the flow of messages between the brain and the body. Also controls basic body functions such as breathing, hear rate, blood pressure, consciousness, etc.