

FOSS Human Systems Interactions Module

Glossary

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abnormal different from what is usual (SRB)

aerobic cellular respiration the process by which a cell releases energy using chemical reactions that require oxygen (SRB, IG)

alveolus (plural: alveoli) tiny air sac in the lungs, surrounded by capillaries, where oxygen and carbon dioxide are exchanged (SRB, IG)

amygdala (ah•MIG•da•la) a region of the brain involved in emotional memory, such as fear (SRB)

artery a muscular blood vessel that carries blood from the heart to the body (SRB)

atom a particle that is the basic building block of all matter (IG)

autonomic nervous system the system that controls the functions of internal organs and is not consciously directed (SRB)

axon a thin and usually long extension of the neuron that carries impulses away from the cell body (SRB)

bone marrow a spongy material found in the center of most bones (SRB)

calorie the unit used to measure food energy (IG)

capillary the smallest blood vessel where gases, nutrients, and wastes are exchanged between blood and cells. (SRB, IG)

cardiac muscle the muscle tissue of the heart (SRB)

cartilage a connective tissue in joints between bones (SRB)

cell the basic unit of life (SRB, IG)

cell body the operational center of the neuron, which contains the nucleus of the cell (SRB)

cell structure component of a cell. Different kinds of cells may be made of different kinds of cell structures. (IG)

central nervous system part of the nervous system made up of the brain and spinal cord (SRB)

cerebral cortex the outer layer of the cerebrum where millions of neurons make sense out of the signals that come into the brain (SRB, IG)

chemoreceptor a sensory cell that responds to a chemical stimulus (SRB, IG)

circulatory system the system of blood vessels and organs that transports blood to the cells in the body (SRB, IG)

cone a photoreceptor in the eye that distinguishes color and detects fine details in bright light (SRB)

dendrite a branch that extends from a neuron's cell body and receives incoming information (SRB)

diabetes a disease which triggers the immune system to attack insulin-producing beta cells in the pancreas (IG)

diagnosis the identification of a disease (IG)

digestive system the organs and structures that process food in the body (SRB, IG)

electromagnetic light input that photoreceptors respond to (SRB)

endocrine system the system that makes, stores, and releases hormones (SRB, IG)

enzyme a protein that regulates chemical reactions (SRB)

epiglottis a flap that directs food down the esophagus and away from the trachea (SRB)

excretory system the organs and structures, responsible for the elimination of waste from the body. (SRB, IG)

fatigue an extreme lack of energy (SRB)

gland a specialized group of cells that manufactures and releases hormones (SRB)

glucose a simple sugar that is an important energy source (SRB, IG)

heart a muscular organ that pumps blood (SRB)

hippocampus a region of the brain related to memory (SRB)

homeostasis the constant regulation of internal conditions in the body (SRB)

hormone a substance produced in the body that helps to control the way a cell or organ works (SRB, IG)

interneuron a neuron that connects sensory and motor neurons (SRB)

joint where bones meet; allows the body to move in different ways (SRB)

learning the acquisition of new knowledge and skills (IG)

mechanoreceptor a sensory cell that responds to mechanical stimuli such as pressure or sound waves (SRB, IG)

memory the storage and recall of information, including past experiences, knowledge, skills, and thoughts (IG)

metabolism all of the chemical reactions that take place in the human body (SRB)

metacognition the process of thinking about our thinking (IG)

molecule a particle that is made of two or more smaller particles held together by chemical bonds (IG)

motor neuron a nerve cell that sends information from the brain or spinal cord to a muscle or gland (SRB)

muscular system the system that gives shape to the body and allows it to move; made up of skeletal muscles, smooth muscles, and cardiac muscle. (SRB, IG)

nerve the “electric wire” that make up the brain and the structures of the nervous system. Nerves can carry information in the form of electric impulses between the brain and the rest of the body (IG)

nervous system the system that controls all the activity inside the body, and monitors and responds to the outside environment (SRB, IG)

neuron a nerve cell that transmits electrical impulses (SRB, IG)

neurotransmitter a chemical that is released when an electric impulse reaches the end of a neuron’s axon; transmits the signal to the dendrites of the next neuron (SRB, IG)

organ group of different kinds of tissues working together to perform the functions in a multicellular organism (IG)

organ system group of organs working together to perform complex functions in a multicellular organism (IG)

osteoblast a bone cell responsible for making new bone tissue for growth or repair (SRB)

pain a message created by a sensory receptor in response to potentially harmful stimuli (SRB)

peripheral nervous system part of the nervous system; made up of all the nerves outside of the brain and spinal cord (SRB)

peristalsis the smooth muscle activity that pushes food from the esophagus to the stomach (SRB)

photoreceptor a sensory cell that responds to visible light in the electromagnetic spectrum (SRB, IG)

photosynthesis the process by which organisms that have chlorophyll use light energy, carbon dioxide, and water to make sugar (SRB)

plasma the fluid part of blood containing red blood cells, white blood cells, and platelets (SRB)

platelet a type of blood cell that is important for blood clotting (SRB)

pressure mechanical stimulation of the skin (SRB)

reaction time the time it takes for a stimulus to produce a response (SRB, IG)

receptive field the area from which sensory receptors gather information (IG)

receptor a cell that collects information to send to the brain for interpretation (SRB)

red blood cell a blood cell that contains hemoglobin, which transports oxygen and carbon dioxide (SRB)

respiratory system the organs and structures that transport oxygen to the red blood cells and get rid of carbon dioxide. (SRB, IG)

response an action (IG)

rod a photoreceptor in the eye that becomes active in dim light (SRB)

saliva fluid produced in the mouth that aids digestion (SRB)

sense of hearing the perception of vibration experienced through the outer ear and eardrum (SRB)

sense of sight the perception of light experienced through the eyes (SRB)

sense of smell the perception of chemicals experienced through the nose (SRB, IG)

sense of taste the perception of chemicals experienced through taste buds in the mouth (SRB)

sense of touch the perception of pressure, temperature, or pain experienced through the skin (SRB, IG)

sensory neuron a nerve cell that sends information from sense receptors to the brain (SRB)

sensory receptor a nerve ending that responds to a stimulus in the environment (SRB, IG)

skeletal muscle a single organ of muscle tissue, blood vessels, tendons, and nerves that produces contractions resulting in movement (SRB)

skeletal system a system of bones that provides structure, assists movement, and protects the main organs of the nervous system (SRB, IG)

smooth muscle involuntary muscle tissue found inside organs, such as the stomach, intestines, and blood vessels (SRB)

spinal cord the part of the nervous system that carries information between the brain and other parts of the body (SRB)

stimulus (plural: stimuli) anything that causes an action or response (SRB, IG)

symptom an indicator that something is wrong in the human body (SRB, IG)

synapse a tiny gap between the axon of one neuron and the dendrite of another neuron; the point at which a nerve impulse passes from one neuron to another by way of a chemical neurotransmitter (SRB, IG)

syndrome a collection of symptoms produced by a disease (SRB)

temporal lobe one of the four main lobes of the cerebral cortex where memories are stored and language processed (SRB)

tendon ropelike tissue that connects muscle to bone (SRB)

tissue group of related kinds of cells working together to perform specific functions. Tissues exist only in multicellular organisms. (IG)

vein a blood vessel that carries blood from the body to the heart (SRB)

vision the perception of light experienced through the eyes (IG)

white blood cell a blood cell that defends the body against disease (SRB)