

VOCABULARY LIST

GENETICS

amino acids (*noun*): a molecules that combine to form proteins.

- Amino acids are present in all living organisms, from viruses to humans, and are often called the building blocks of life.

DNA (*noun*): the molecule found in cells that carries instructions for cell structure and processes in the body.

- DNA contains genes that are passed on from parents to offspring and give living things their inherited characteristics. The letters DNA stand for **deoxyribonucleic acid**.

encode (*verb*): when referring to a gene, to encode is to be responsible for producing a substance or behavior.

gene (*noun*): a small section of DNA that contains instructions, usually for making a specific protein.

genome (*noun*): the complete set of genes in an organism.

messenger RNA (*noun*): a type of molecule that delivers genetic instructions in DNA so that cells can produce proteins according to the instructions.

- Also known as mRNA, it is naturally found in every cell in your body. The letters RNA stand for **ribonucleic acid**.

sequence (*noun*): a particular order (such as, among the base components that make up DNA; different sequences form different genes).

IMMUNITY

antibody (*noun*): a blood protein produced by the immune system to counteract a specific antigen.

antigen (*noun*): a substance that is recognized as foreign by the immune system, such as an outer piece of a virus.

clinical trial (*noun*): a research study involving human participants, used to gather data on the safety and effectiveness of a health treatment.

muscle cell (*noun*): a type of animal cell that can change its length, and in groups, helps the body move.

- Muscles are good sites for vaccines to enter the body because they contain important immune cells.

memory cell (*noun*): a type of white blood cell that “remembers” antigens as well as which antibodies the immune system should produce to defend against those specific antigen.

vaccine (*noun*): a substance that helps protect against certain diseases by helping the immune system recognize and destroy specific microbes.

SCIENTIFIC RESEARCH

cryo-electron microscope (*noun*): a type of microscope that blasts a beam of electrons into a frozen specimen, such as a virus. A specialized camera detects how the electrons interact with the atoms in the specimen, which tells scientists where the atoms are located.

- This technology allows scientists to determine the 3D structure of specimens that are too tiny to be seen with light.

machine learning (*noun*): a type of artificial intelligence in which computer algorithms (sets of rules and procedures) are developed to analyze and make predictions from data that’s fed into the system.

TAKE IT FURTHER

Choose five vocabulary words that you think will be hardest to remember, then write a paragraph with them (nonfiction or fiction).