

# Science for Success Vocabulary

## *Life Science*

### Lesson 1

1. Research- A study or an investigation
2. Theory- a hunch or idea
3. Scientific theory- a widely tested and accepted explanation of a set of observations
4. Cell- the basic unit, or building block, of life
5. Unicellular- one-celled organisms
6. Microorganisms- one-celled organisms
7. Multicellular- many-celled organisms
8. Cell membrane- controls the substances that flow in and out of the cell.
9. Chloroplasts- cell components where photosynthesis takes place
10. Chemical Reaction- a change of one or more substances into new substances
11. Metabolism- chemical changes in an organism

### Lesson 2

12. Mitosis- the process by which a cell divides into two daughter cells, each of which has the same number of chromosomes as the original cell.
13. Meiosis- in organisms that reproduce sexually, a process of cell division during which the nucleus divides into four nuclei, each of which contains half the usual number of chromosomes.
14. Gamete- a mature sex cell, such as sperm or ovum
15. Zygote- a fertilized egg

### Lesson 3

16. Dogma- explanation
17. Translation- a process where proteins are made
18. DNA- deoxyribonucleic acid-carries genetic information
19. Gene- a part of a DNA molecule, which is part of a chromosome
20. RNA- ribonucleic acid, a cell macromolecule that helps make protein
21. Alleles- one of two or more alternative forms of a gene, occupying the same position locus on paired chromosomes and controlling the same inherited characteristic
22. Genotype-a pair of alleles an organism has for a trait.

23. Phenotype- an organism's appearance or characteristic that results from the genotype.
24. Homozygous- having two identical genes at the corresponding loci of homologous chromosomes.
25. Heterozygous- having dissimilar pairs of genes for any hereditary characteristic.

#### **Lesson 4**

26. Body systems- organ systems, respiratory, circulatory, urinary, digestive, muscular, skeletal, nervous, integumentary (skin), lymphatic, and reproductive
27. Alveoli- tiny air sacs, from which oxygen passes to the blood
28. Pulmonary- relating to or affecting the lungs
29. Medulla- the lowermost part of the brain in vertebrates. It is continuous with the spinal cord and controls involuntary vital functions such as those involved with the heart and lungs.
30. Cerebellum - the part of the brain located directly behind the front part cerebrum,

#### **Lesson 5**

31. Hypothermia- dangerously low body temperature caused by prolonged exposure to cold
32. Calorie- a unit of energy-producing potential in food, equal to one large calorie. This energy, if not used, is converted to fat and stored.
33. Carbohydrates- a biological compound containing carbon, hydrogen, and oxygen that is an important source of food and energy
34. Fat- a water-soluble substance, solid at room temperature, that belongs to a group of chemicals that are main constituents of food derived from, e.g. animal tissue, nuts, and seeds.

#### **Lesson 6**

35. Disease transmission- the act or process of transferring something, especially a disease
36. Vaccines- inoculation; shot; a preparation containing weakened or dead microbes of the kind that cause a disease, administered to stimulate the immune system to produce antibodies against that disease
37. Immunity- a body's ability to resist a disease. Immunity may exist naturally or as a result of inoculation or previous infection.
38. Mutate- change; to undergo change, or make something undergo change.
39. Infection- when the body becomes invaded by germs.
40. Germs- microorganisms that cause disease
41. Antibodies- destroy germs
42. Antibiotics- man-made drugs that help our bodies overcome infection

#### **Lesson 7**

43. Evolution- the theoretical process by which all species develop from earlier forms of life.

44. Analogous structures- body parts that are similar in species but that didn't develop in the same way.
45. Homologous Structures- body parts that developed in similar ways but have different functions
46. Vestigial structures- body parts that a species has but doesn't use
47. Cladograms- diagrams that show similarities between different organisms
48. Convergent evolution- Process in which two distinct **lineages evolve** a similar characteristic independently of one another. This often occurs because both lineages face similar environmental challenges and selective pressures.
49. DNA- a nucleic acid molecule in the form of a twisted double strand double helix that is the major component of chromosomes and carries genetic information. DNA, which is found in all living organisms except some viruses, reproduces itself and is the means by which hereditary characteristics pass from one generation to the next.
50. Amino Acids-make up proteins and are important components of cells.
51. Gene- a basic unit of heredity capable of transmitting characteristics from one generation to the next.
52. Protein- a complex natural substance that has a globular or fibrous structure composed of linked amino acids. Proteins are essential to the structure and function of all living cells and viruses.

## **Lesson 8**

53. Environment-surroundings, including living and non-living things.
54. Ecosystem- a community of living and non-living things and the interactions among them.
55. Carrying Capacity-the largest population that an environment can support at any given time.
56. Predator- an organism that eats another organism
57. Symbiosis- a very close relationship between two species.
58. Parasitism- an organism that lives on or in an organism. (The host in this relationship is harmed.)
59. Commensalism- an organism gets food or another resource (shelter) from another species, but the other species is not harmed.
60. Mutualism- when one species lives in or on an organism of another species and both are helped.
61. Biodiversity- a measure of an ecosystem's balance and health