



**Biology A**  
**Unit 6 Glossary**

<b>Term</b>	<b>Definition</b>
amino acids	the subunit that makes up protein, there are 20 common types of amino acids. (Unit 6, Lesson 1)
base pairing	the specific matching of one nitrogen base to another. Base pairing is determined by and held together by hydrogen bonds. (Unit 6, Lesson 1)
codon	combination of three mRNA nucleotides that codes for a specific amino acid. (Unit 6, Lesson 1)
deletion mutation	one or more nucleotides are removed from a gene. (Unit 6, Lesson 5)
DNA (deoxyribonucleic acid)	the double-helix-shaped nucleic acid that contains the genetic information of an organism. (Unit 6, Lesson 1)
frameshift mutation	a mutation that results in the incorrect reading of the mRNA code during translation because of a shift in the reading frame. This usually causes each protein downstream to be incorrect. (Unit 6, Lesson 5)
gene expression	the amount of protein produced from a gene. (Unit 6, Lesson 4)
gene regulation	the expression of genes can vary based on outside stimuli, cell location, and other factors.(Unit 6, Lesson 4)
genetic code	each codon codes for a specific amino acid, and this would be the same in any organism. (Unit 6, Lesson 3)
insertion mutation	one or more nucleotides are added into a gene. (Unit 6, Lesson 5)
mRNA (messenger RNA)	the type of RNA that carries genetic instructions from the DNA in the nucleus to the ribosomes in the cytoplasm of the cell. (Unit 6, Lesson 1)
mutation	a change in the DNA sequence. These are not always harmful and sometimes have little or no effect on an organism. (Unit 6, Lesson 5)
nitrogen base	a component of a nucleotide that determines base pairing. In DNA the nitrogen bases are adenine, thymine, cytosine, and guanine, and in RNA the nitrogen bases are adenine, uracil, cytosine, and guanine. (Unit 6, Lesson 1)
nucleotide	the basic unit of DNA and RNA, consisting of a nitrogen base, a sugar and a phosphate group. (Unit 6, Lesson 1)
proteins	a biomolecule made up of amino acids important in catalyzing chemical reactions for the cell and providing some structural support. (Unit 6, Lesson 1)
ribosome	this is where proteins are made. Ribosomes make all of the structural proteins, enzymes, and hormones. Some ribosomes are free-floating in the cytoplasm, and some are attached to the ER (rough ER). (Unit 6, Lesson 3)

RNA (ribonucleic acid)	single-stranded nucleic acid involved in protein synthesis. There are three main types: ribosomal RNA, messenger RNA and transfer RNA. (Unit 6, Lesson 1)
RNA polymerase	the enzyme that constructs a messenger RNA molecule by attaching RNA nucleotides together according to the DNA sequence.(Unit 6, Lesson 2)
substitution mutation	one or more nucleotides are replaced by nucleotide(s) with different nitrogen bases. (Unit 6, Lesson 5)
transcription	the process by which genetic information in the DNA is copied to RNA. (Unit 6, Lesson 1)
translation	the process of assembling amino acids into polypeptide chains or proteins based on a sequence of codons on an mRNA transcript. (Unit 6, Lesson 1)
tRNA (transfer RNA)	the type of RNA that carries amino acids from the cytoplasm to the ribosomes. (Unit 6, Lesson 3)