



**ACROSS**

- 1 Genetic \_\_\_\_\_ is the process by which a strand of DNA is broken and then joined to the end of a different DNA molecule.
- 5 \_\_\_\_\_ is the process by which bacterial DNA is moved from one bacterium to another by a virus.
- 8 \_\_\_\_\_ recombination involves the alignment of similar sequences, a crossover between the aligned DNA strands, and breaking and repair of the DNA to produce an exchange of material between the strands.
- 10 Genetic \_\_\_\_\_ is the addition of one or more nucleotide base pairs into a genetic sequence.
- 13 DNA \_\_\_\_\_ refers to a collection of processes by which a cell identifies and corrects damage to the DNA molecules that encode its genome.
- 14 A \_\_\_\_\_ is a chromosome rearrangement in which a segment of a chromosome is reversed end to end.
- 15 \_\_\_\_\_ mutations or nonsynonymous mutations are types of point mutations where a single nucleotide is changed to cause substitution of a different amino acid.
- 16 A \_\_\_\_\_ mutation is a point mutation in a sequence of DNA that results in a premature stop codon, or a nonsense codon in the transcribed mRNA, and possibly a truncated, and often nonfunctional protein product.
- 18 A \_\_\_\_\_ sequence is a short DNA sequence that acts as a simple transposable element.
- 19 Gene \_\_\_\_\_ may occur during meiotic division through a process by which DNA sequence information is transferred from one DNA helix to another DNA helix, whose sequence is altered.
- 20 A \_\_\_\_\_ is a physical or chemical agent that changes the genetic information of an organism.

**DOWN**

- 2 \_\_\_\_\_s are sequences of DNA that can move around to different positions within the genome of a single cell, a process called transposition.
- 3 \_\_\_\_\_s are changes to the base pair sequence of the genetic material of an organism.
- 4 Bacterial \_\_\_\_\_ is the transfer of genetic material between bacteria through direct cell-to-cell contact.
- 6 A \_\_\_\_\_ is a mutation in which a part of a chromosome or a sequence of DNA is missing.
- 7 A \_\_\_\_\_ mutation, or single base substitution, is a type of mutation that causes the replacement of a single base nucleotide with another nucleotide.
- 9 A \_\_\_\_\_ mutation is any detectable, heritable variation in the lineage of germ cells.
- 11 \_\_\_\_\_ over is the process by which two chromosomes, paired up during prophase 1 of meiosis, exchange some portion of their DNA.
- 12 A \_\_\_\_\_ mutation is a genetic mutation caused by inserts or deletes from a DNA sequence of a number of nucleotides not evenly divisible by three.
- 17 \_\_\_\_\_ mutations are DNA mutations that do not result in a change to the amino acid sequence of a protein.