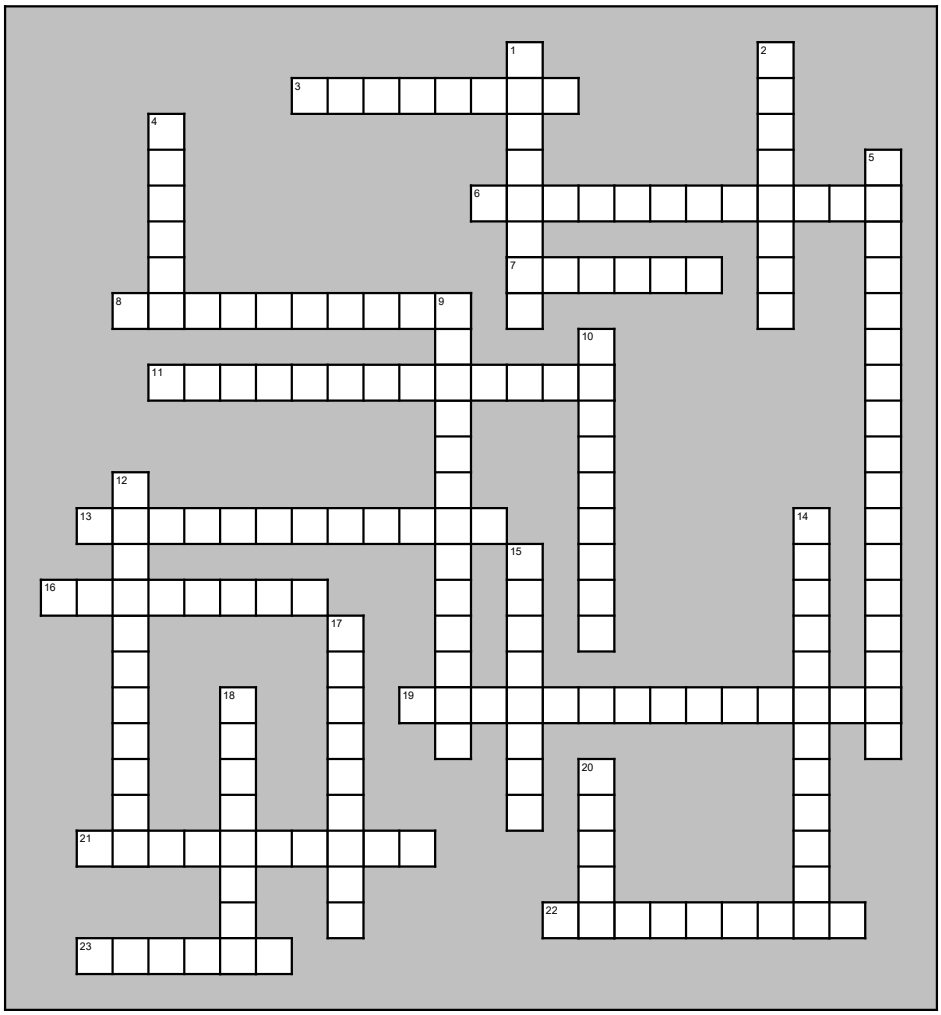
Crossword



Across

3. Any change in structure or genetic material. Gene ___ is a change in genetic material (DNA) which are usually recessive and harmful.
6. Since RNA translates DNA 3 base sequences (codons), the exact sequence must be maintained.
7. Substitution point mutation that does NOT affect the organism.
8. Result from deletion or addition point mutations. Changes the sequence of nucleotides and, therefore, amino acids.
11. Breeding between individual organisms with different parentage; reproduction between organisms that are distantly related. "Vigor".
13. Point mutation in which an incorrect nucleotide is inserted into the DNA instead of the correct one.
16. Type of mutation in which a portion of the chromosome is lost completely.
19. The failure of homologous chromosomes to separate during meiosis so offspring have extra chromosomes. e.g. Down's, Turner's & Klinefelter's syndromes. Usually causes mental retardation.
21. Mating closely related organisms that have desirable traits in an attempt to maintain those traits. This increases the likelihood of undesirable traits and mutations.
22. Deletions, translocations, duplications, inversions are examples of changes in chromosome ___.
23. Aneuploidy and polyploidy are example of change in chromosome ___.

Down

1. Substitution point mutation that alters an amino acid encoding group of nucleotides into a STOP signaling group.
2. Mutation is a form of ___ genetic variation that may occur in somatic cells or gametes.
4. Abnormal cell division produced by environmental conditions (radiation, drugs, viruses, chemicals, hazardous materials).
5. Artificial breeding that can greatly enhance food supplies often through hybridization.
9. Type of mutation in which a section of a chromosome is transferred to a non-homologous chromosome.
10. Type of mutation in which parts of a chromosome are detached and then reattached in reversed order.
12. Type of mutation in which a section of DNA in a chromosome is doubled and left in that sequence.
14. The exchange of parts of a chromosome during prophase of meiosis allowing great variation in the offspring.
15. ____ + environment = the organism. Genes determine potential capacities, but interactions of genotypes and the environment determine the phenotype of an organism.
17. Normal and abnormal ___ exists to ensure survival of a population. Occurs as a result of different alleles for a trait.
18. Substitution point mutation that changes a group of nucleotides resulting in the insertion of an incorrect amino acid during protein synthesis. Sickle Cell.
20. Mutation that changes a single nucleotide during mitosis or meiosis.