Genetic Terms

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| **Across**  **2.** The offspring of two animals or plants of different breeds, varieties, species, or genera, especially as produced through human manipulation for specific genetic characteristics.  **3.** Having identical pairs of genes for any given pair of hereditary characteristics.  **6.** Any of several forms of a gene, usually arising through mutation, that are responsible for hereditary variation.  **10.** Of or relating to two different alleles that are fully expressed in a heterozygous individual.  **11.** A genetically determined characteristic or condition.  **13.** An organism that carries a gene for a trait but does not show the trait itself. Carriers can produce offspring that express the trait by mating with another carrier of the same gene.  **14.** The chromosomes of a cell, usually displayed as a systematized arrangement of chromosome pairs in descending order of size.  **16.** The genetic makeup of an organism or group of organisms with reference to a single trait, set of traits, or an entire complex of traits.  **17.** The union of male and female gametic nuclei.  **18.** A chromosome, differing in shape or function from other chromosomes, that determines the sex of an individual.  **19.** Of or relating to an animal, all of whose ancestors derive over many generations from a recognized breed.  **20.** Having dissimilar pairs of genes for any hereditary characteristic. | **Down**  **1.** The appearance of an organism resulting from the interaction of the genotype and the environment.  **4.** A single-stranded molecule of RNA that is synthesized in the nucleus from a DNA template and then enters the cytoplasm, where its genetic code specifies the amino acid sequence for protein synthesis.  **5.** The passage of biological traits or characteristics from parents to offspring through the inheritance of genes.  **7.** The mating of closely related individuals, as cousins, sire-daughter, brother-sister, or self-fertilized plants, which tends to increase the number of individuals that are homozygous for a trait and therefore increases the appearance of recessive traits.  **8.** A sudden departure from the parent type in one or more heritable characteristics, caused by a change in a gene or a chromosome.  **9.** A small RNA molecule, consisting of a strand of nucleotides folded into a clover-leaf shape, that picks up an unattached amino acid within the cell cytoplasm and conveys it to the ribosome for protein synthesis.  **12.** In genetics, a type of grid used to show the gametes of each parent and their possible offspring; a type of grid that can indicate all the possible outcomes of a genetic cross  **15.** A genealogical table, chart, list, or record, especially of a purebred animal. |