Science 10: Complete Dominance (Mendelian), Codominance, and Incomplete Dominance Class Notes

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|  | Phenotypes | Allele / Genotype Notation | Example |
| Complete Dominance | 2 phenotypes: heterozygote is same as homozygous dominantRequire two recessive alleles to show recessive phenotype.Require one (or two) dominant alleles to show dominant phenotype.  | Each allele is one letter.Dominant is capital. Recessive is lowercase.  | Flower colour in pea plantsPurple (B) dominant over white (b).BB: purpleBb: purplebb: white |
| Incomplete Dominance | 3 phenotypes: heterozygote is a mix or average of traits | Each allele is two letters. The big letter indicates the gene; the superscript indicates the allele (e.g. FW vs FB)  | Wavy hair in humans: curly hair incompletely dominant with straight hairHSHS: straightHSHC or HCHS: wavyHCHC: curly |
| Codominance | 3 phenotypes: heterozygote shows both traits | Each allele is two letters.The big letter indicates the gene; the superscript indicates the allele (e.g. FW vs FB) | Checkered feathers in chickensFW (white) codominant with FR (black). FWFW: whiteFWFB or FBFW: checkeredFBFB: black |
| Special Case: Blood Type | 4 phenotypes: is mixed codominance and complete dominance.Blood Type O, A, B, AB | Each allele is two letters. i = recessiveIA and IB are codominant.  | Type O: iiType A: IAi or IAIAType B: IBi or IBIBType AB: IAIB or IBIA |
| Sex-linkage | 2 phenotypes: is complete dominance but gene is on the X or Y sex chromosome (usually X) | Gene is attached to X OR Y chromosome.Allele can be dominant (capital) or recessive (lowercase) superscript. | XB = normal vision (dominant)Xb = red-green colour-blindness (recessive)Y = Y chromosomeXBXB = normal femaleXBXb = normal femaleXbXb = colourblind femaleXBY= normal maleXbY = colourblind male |