Phenotype Cross Project

1. What are the different Phenotypes in the population?
2. What are the approximate ratios of the population phenotypes? (How many of each type?)
3. What pigments, combination of pigments, or lack of pigments could explain each observed phenotype?
4. Since each pigment is produced by an allele of a gene, how many alleles for this “color gene” are there?
5. Is this phenotype binary?
6. How can you tell?
7. What is your assigned organism’s phenotype?
8. What are the possible genotypes that could produce your organism’s phenotype?
9. Hypothesize a likely genotype for your organism, and for another organism in the classroom. Given your hypothesized genotypes, create a Punnett square to determine the possible offspring genotypes and possible phenotypes. Compare this prediction with the actual cross.
   1. If your hypothesis was correct, explain what evidence led you to make your prediction.
   2. If your hypothesis was incorrect, explain what evidence led you to make your prediction, and what mistakes you made.

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