

# Studying Gene Frequencies in a Population of Domestic Cats

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The domestic cat makes an ideal subject for gathering information regarding more than a dozen genotypes, simply by observing coat color and patterning. From the data, the frequency of the alleles at each of the various loci can be calculated and from this information it is possible to determine if a population is in Hardy-Weinberg equilibrium. Using a population of familiar animals as opposed to flipping coins or some of the other “paper labs” that are published on this topic brings the concepts to life and is interesting, motivational and fun. In this exercise, students calculate the frequencies of the alleles of the various genes that act to determine the coat color and patterning in a population of random-bred cats.

**Keywords:** Hardy-Weinberg, gene frequencies, cat coat colors

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