# EDPuzzle: Genetics & Heredity

Name _____

**Video 1: Heredity Basics - Use the information to help you fill in the blanks and complete the video quiz.**

1. Who is the "Father of Genetics"? _____

2. What type of plants did he study? _____

3. When purebred yellow plants were crossed with purebred green ones, the offspring were all _____, which was called the _____ trait.

4. When the new offspring were crossed, the next generation had both _____ & _____ seeds. The green seeds had the _____ trait.

5. Different variations of a gene are called _____.

6. Gene pairs with two capital letters (YY) or two lowercase letters (yy) are called _____ gene pairs, while those with two different letters (Yy) are called _____ gene pairs.

7. The gene letters (_____, _____, & ____) are called a _____, while the appearance (yellow or green) is called a _____.

8. A _____ _____ is used to determine the results of a cross between two organisms.

**Video 2: Punnett Square - Use the information to help you fill in the blanks and complete the video quiz.**

1. DNA makes up _____ which are inherited from the organism's _____.

2. An _____ is a form of a gene and is often represented by a _____, such as a capital H for the _____ allele and lowercase h for the _____ allele.

3. The genotype for a hairless guinea pig is _____, while one with hair could be either _____ or _____.

4. The genotypes for the _____ go on the top and left side of the Punnett square, while the genotypes inside the squares represent the _____ or babies.

5. If the parents are both Hh (heterozygous dominant),

  (a) What percent of the offspring will have each genotype? HH = ____% Hh = _____% hh = ____%

  (b) What percent of the offspring will have each phenotype? Hairy = _____% Hairless = _____%

6. The results shown in Punnett squares are _____ or the probability that something will happen.