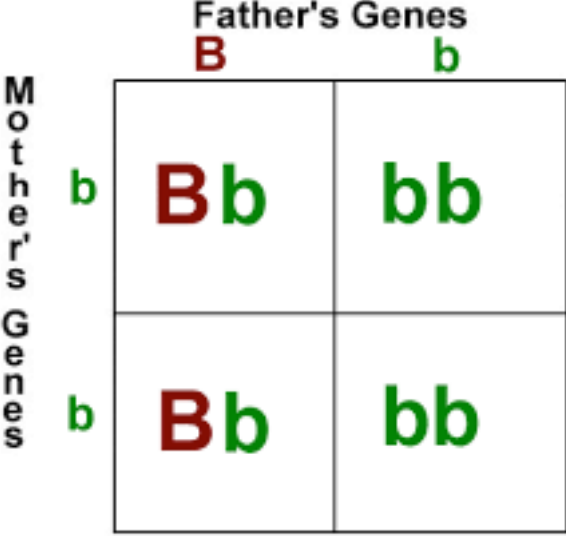


Heredity	The passing of traits from parents to offspring.
Who was Gregor Mendel?	An Austrian Monk who studied how pea plants pass traits from parents to offspring.
Why did Mendel study peas?	pea plants grow fast, wide variety of traits, able to self and cross pollinate.
Mendel's First Experiment	Law of Segregation: The sex cell carries one trait from the parent.
Dominant Trait	The trait observed when at least one dominant allele for a characteristic is inherited.
Recessive Trait	A trait that is apparent only when two recessive alleles for the same characteristic are inherited.
Mendel's Second Experiment	Law of Dominance: A dominant trait will always appear in a hybrid, unless both traits are recessive. Law of Independent Assortment: Each trait has an equal and random chance of being chosen. Only true for genes on different chromosomes.
Heredity and Ratios	Dominant to Recessive traits are found to have a ratio of 3:1

Genes	Segments of DNA that carry hereditary instructions and are passed from parent to offspring; located on chromosomes.															
alleles	Different forms of a single gene, represented by a single letter.															
Genotype	The inherited combination of alleles, represented as two letters.															
Homozygous	Having 2 of the same alleles for a trait. Also called purebred. Can be either dominant or recessive. Represented with either two upper case or two lower case letters.															
Heterozygous	Having 2 different alleles for the same trait. Also called hybrid. Can be dominant. Represented with one uppercase and one lowercase letter.															
Phenotype	An organisms inherited appearance, what is seen.															
Punnett Square	<p>The Punnett square is a diagram that is used to predict an outcome of a particular cross or breeding experiment</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="2"></td> <th colspan="2" style="text-align: center;">Father's Genes</th> </tr> <tr> <td colspan="2"></td> <th style="text-align: center;">B</th> <th style="text-align: center;">b</th> </tr> <tr> <th rowspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg);">Mother's Genes</th> <th style="text-align: center;">b</th> <td style="text-align: center;">Bb</td> <td style="text-align: center;">bb</td> </tr> <tr> <th style="text-align: center;">b</th> <td style="text-align: center;">Bb</td> <td style="text-align: center;">bb</td> </tr> </table>			Father's Genes				B	b	Mother's Genes	b	Bb	bb	b	Bb	bb
		Father's Genes														
		B	b													
Mother's Genes	b	Bb	bb													
	b	Bb	bb													
Probability	The mathematical chance that an event will occur, expressed as a fraction or percent.															

Section Review Questions: **Answer in complete sentences.**

1. The allele for a cleft chin, C, is dominant among humans. What would the results from a cross between a woman with the genotype Cc and a man with the genotype cc? Create a Punnett square showing this cross.

2. Of the possible combinations you found in question 1, what is the ratio of offspring with a cleft chin to offspring without a cleft chin?