

Punnett Squares-
Important Vocabulary to Discuss

Both Capital

Same Alleles
Homozygous- is a term used to describe two of the same allele. (Example; AA or aa)

Lowercase

Different Alleles - Capital and Lowercase
Heterozygous- is a term used to describe two different alleles for the same trait. (Example; Aa)

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Control - Capital

Dominant- Allele that masks or hides the recessive allele when the combination is heterozygous. (Example; the "A" in Aa.)

to be controlled - lowercase

Recessive- Allele that is hidden or masked by a dominant allele, unless both alleles are recessive. (Example; the "a" in Aa.)

Must Homozygous for trait to express

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Punnett Squares-
What do they look like?

Parent's Alleles

A	A
a	a

Punnett Square

Potential Offspring Trait

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Completing a Punnett Square-
 Bring down each allele from the top parent into the appropriate box.
 Bring over each allele from the side parent into the appropriate box.

Parents → A A

A	AA	AA
a	Aa	Aa

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Creating a Punnett Square-
 1) Drag alleles to create two parent traits.
 2) Then complete the square.

Parents →

Alleles
 A
 a

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The following are potential parent/offspring combinations.


A	A	A	A
A	AA	AA	A
a	Aa	Aa	a

A	a	A	a
A	Aa	Aa	A
a	Aa	aa	a

a	a	a	a
a	aa	aa	a
a	aa	aa	a

a	a	A	a
A	Aa	Aa	A
A	Aa	Aa	A

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 Additional Practice with Genetic Predictions.

For additional practice with Punnett Squares, utilize the following websites within the classroom.

Website #1 Website #2 Website #3

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1. Determine Parents
2. Draw a P-Square
3. Fill in your P-square
4. Calc. the results

* Do not forget to answer the actual question.

If two bunnies mate and both are heterozygous for the dominant trait of white fur, how many will be brown out of a litter of 8?

1. $P = Ww \times Ww$ 3 of 8 = 3

2. $\begin{matrix} & W & w \\ W & WW & Ww \\ w & Ww & ww \end{matrix}$ appearance

4. 2/8	phenotype		genotype
5/8	white	WW	Ww
3/8	white	Ww	Ww
1/8	brown	ww	ww

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