

Genetics & Heredity

Bikini Bottom Genetics

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GENETICS & HEREDITY

Glue the worksheet on page 31 FAF Left.

Sign onto EDPuzzle and watch the videos to complete the note worksheet.

You will also need to complete the video quizzes – they will count as a grade.

Assignment



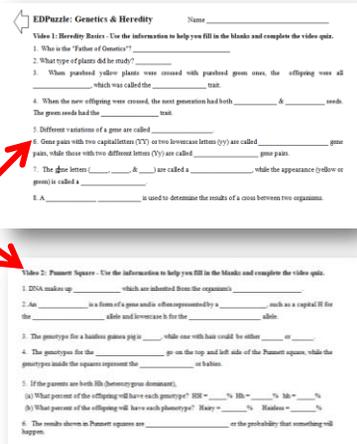
BACK

Punnett Square



FRONT

Heredity Basics



EDPuzzle: Genetics & Heredity Name _____

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

- Who is the "Father of Genetics" _____?
- What type of plants did he study? _____
- When purebred yellow plants were crossed with purebred green ones, the offspring were all _____, which was called the _____ test.
- When the new offspring were crossed, the next generation had both _____ & _____ seeds. The green seeds had the _____ trait.
- Different variations of a gene are called _____.
- 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.
- The blue letter (_____ & _____) are called a _____, while the appearance (yellow or green) is called a _____.
- 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.

- DNA makes up _____, which are inherited from the organisms.
- An _____ is a form of a gene and is represented by a _____, such as a capital H for the _____ allele and lowercase h for the _____ allele.
- The genotype for a heterozygous pig is _____, while one with hair could be either _____ or _____.
- The genotypes for the _____ go on the top and left side of the Punnett square, while the genotypes inside the squares represent the _____ or alleles.
- If the parents are both Hh (heterozygous dominant):
 - What percent of the offspring will have each genotype? HH = _____% Hh = _____% hh = _____%
 - What percent of the offspring will have each phenotype? Hair = _____% Hairless = _____%
- The results shown in Punnett squares are _____ or the probability that something will happen.

EDPUZZLE: GENETICS & HEREDITY**Video 1: Heredity Basics - Use the information to help you fill in the blanks**

1. Who is the "Father of Genetics"? Gregor MENDEL
2. What type of plants did he study? PEA PLANTS ← 7 traits; easy to see
3. When purebred yellow plants were crossed with purebred green ones, the offspring were all YELLOW, which was called the DOMINANT trait.
4. When the new offspring were crossed, the next generation had both YELLOW & GREEN seeds. The green seeds had the RECESSIVE trait.

Reminder ... If your notes are done, you may make additions or corrections. If they are NOT DONE, close your notebook and listen. You will have to find time to review the notes after you are done.

5. Different variations of a gene are called ALLELE.
6. Gene pairs with two capital letters (YY) or two lowercase letters (yy) are called HOMOZYGOUS gene pairs, while those with two different letters (Yy) are called HETEROZYGOUS gene pairs.

GENE letters you would TYPE

7. The gene letters (YY, Yy, & yy) are called a GENOTYPE, while the appearance (yellow or green) is called a PHENOTYPE.

What you would see in a PHotograph

8. A PUNNETT SQUARE 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 qui

↓ **Found on chromosomes**

1. DNA makes up **GENES** which are inherited from the organism's **PARENTS**.
2. An **ALLELE** is a form of a gene and is often represented by a **LETTER**, such as a capital H for the **DOMINANT** allele and lowercase h for the **RECESSIVE** allele.
3. The genotype for a hairless guinea pig is **hh**, while one with hair could be either **HH** or **Hh**.
4. The genotypes for the **PARENTS** go on the top and left side of the Punnett square, while the genotypes inside the squares represent the **OFFSPRING** or babies.

5. If the parents are both **Hh** (heterozygous dominant),
 (a) What percent of the offspring will have each genotype?

HH = **25** % Hh = **50** % hh = **25** %

- (b) What percent of the offspring will have each phenotype?

Hairy = **75** % Hairless = **25** %

	H	h
H	HH	Hh
h	Hh	hh

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

BIKINI BOTTOM GENETICS #1 - Glue on page 33 FAF Right