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# Anchor Charts for GENETICS

# Anchor Charts Cover:

- heredity and genetics
- Gregor Mendel
- Mendel's experiments
- dominant and recessive traits
- homozygous and heterozygous
- genotype and phenotype
- asexual reproduction
- binary fission, budding, fragmentation
- sexual reproduction
- fertilization (in humans)
- the cell cycle
- interphase
- mitosis: prophase, metaphase, anaphase, telophase
- cytokinesis
- meiosis
- haploid and diploid
- genes and alleles
- steps to creating a Punnett square
- pedigree charts
- inherited and learned traits
- mutations
- and more!

**Gene**  
one set of instructions  
for an inherited trait

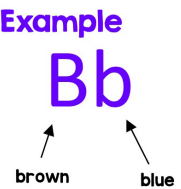
Example:  
genes that  
code for your  
eye color



**Allele**  
different forms of a gene

Example:  
dominant  
allele for  
brown eye  
color

Example  
**Bb**



**Steps to Creating  
a Punnett Square**

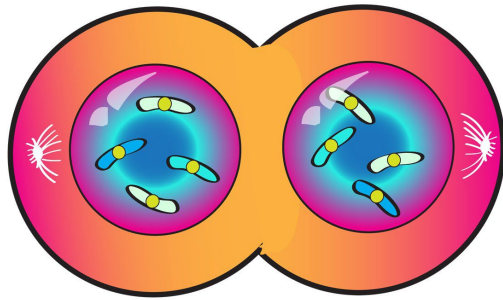
1. Determine the **genotypes of the parent organisms** and write down the "cross".
2. Draw a **2 x 2 square**.
3. "**Split**" the **genotypes**, and place one on the top of the square and the other on the left of the square.
4. Boxes will **inherit the letter** from their row and column.
5. Interpret the Punnett square → **each square is worth 25%**.

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# Frame Size

# Telophase

4<sup>th</sup> phase of mitosis

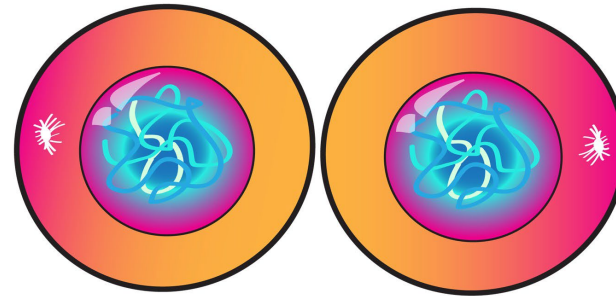


- chromosomes are at complete opposite ends of cell
- new nuclei form on each of these sides around the chromosomes; chromosomes uncoil
- goal of mitosis → form two identical cells; cells begin to split

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# Cytokinesis

two daughter cells formed

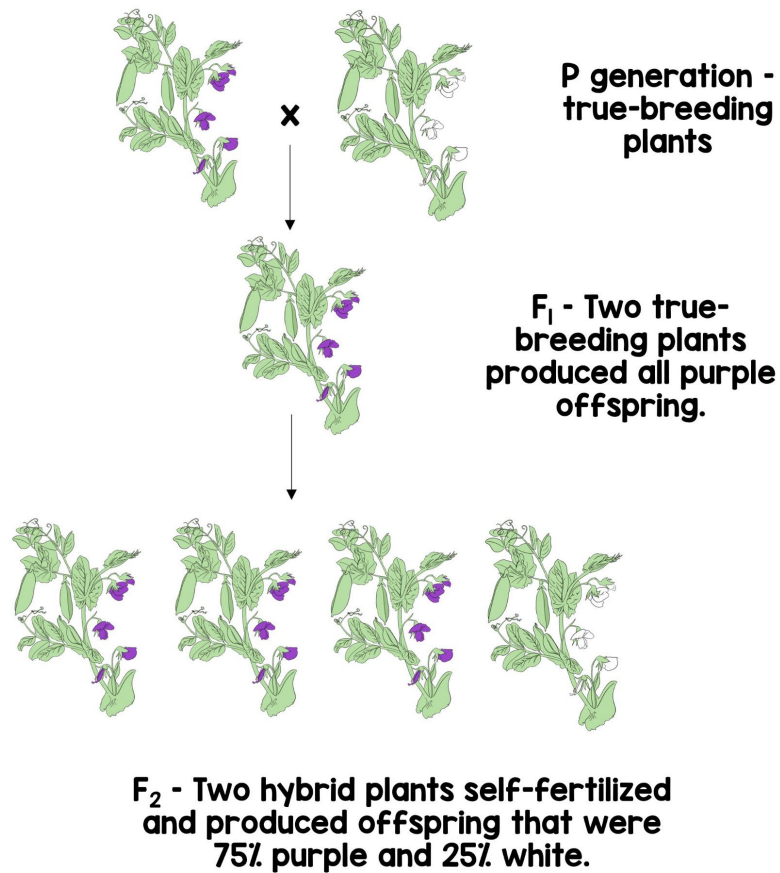


- final separation of the two identical daughter cells
- cells turn into two by splitting the cytoplasm after four mitosis stages
- new cells both contain a new nucleus

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# Half-Sheet Size

# Mendel's Experiments



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## Full-Sheet Size