

11-1 Work of Gregor Mendel

Gregor Mendel

- Austrian Monk
- Studied science and math
- Worked with peas

Terminology you NEED to know

- Self Pollination
 - Pollen (male cell) fertilizes egg (female cell) on the same flower. Resulting seeds inherit all of their characteristics from one parent.
- Cross Pollination
 - Pollen from one flower fertilizes egg of another flower. Resulting seeds inherit characteristics from two different parents.
- True Breeding
 - Resulting from self pollination. Producing offspring identical to self.
- Hybrid
 - Resulting from cross pollination. Offspring of crosses between parents with different traits.






















Terminology you NEED to know

- P generation
 - Parental generation
- F₁ generation
 - First filial. First "son". First generation.
- F₂ generation
 - Second filial. Second "son". Second generation.

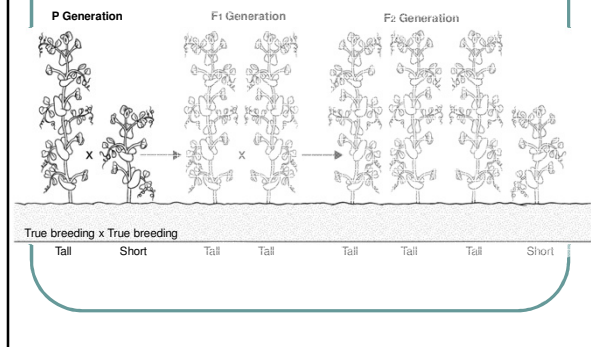
Main Ideas Established by Mendel

- Alleles – Different forms of the same gene. (ex. Brown hair and blonde hair) (ex. Blue eyes and brown eyes)
- Principle of Dominance – If a dominant allele is inherited with a recessive allele the dominant will be expressed.
- Principle of Segregation – Each gamete only carries a single copy of each gene. REMEMBER – you receive one copy of a trait from mom and one copy of a trait from dad. This results from meiosis. Each sex cell only has one copy of each gene.

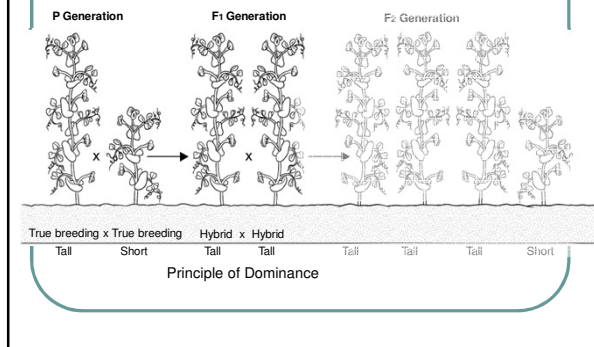
Mendel's Seven F₁ Crosses on Pea Plants

	Seed Shape	Seed Color	Seed Coat	Pod Shape	Pod Color	Flower Position	Plant Height
P	Round 	Yellow 	Gray 	Smooth 	Green 	Axial 	Tall 
	Wrinkled 	Green 	White 	Constricted 	Yellow 	Terminal 	Short 
F ₁	Round 	Yellow 	Gray 	Smooth 	Green 	Axial 	Tall 

Principles of Dominance



Principles of Dominance



Principles of Dominance

