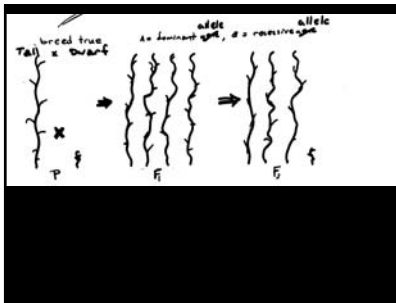
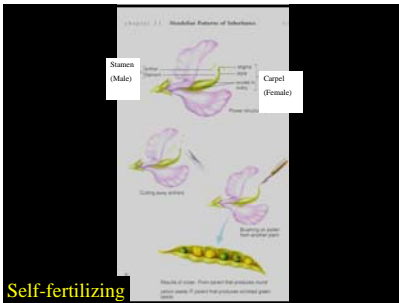
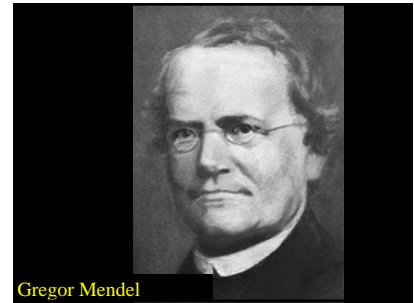


HEREDITY

A) Introduction

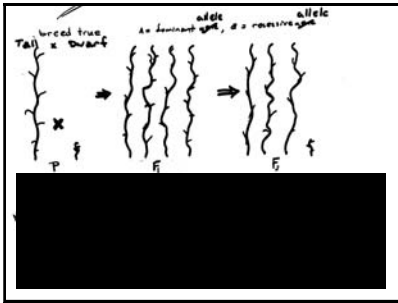
- 1) Darwin
Mendel
- 2) Early ideas
 - a) van Leeuwenhoek 1677
animacules (sperm)
homuncles → SPERMISTS
 - b) de Graaf 1670s
ovaian follicle → OVISTS

B) Blending Inheritance



C) Gregor Mendel

- gene – trait, for example, for height
- elemente (alleles)
- alleles—forms of the same gene
- pairs of alleles for each gene
- dominant/recessive
- genotype—genetic composition
- phenotype—appearance
- gamete (egg/sperm)

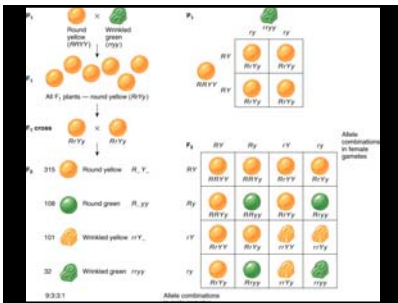


C) Gregor Mendel (cont.)

1) PRINCIPLE OF SEGREGATION

homozygous (AA, aa)
heterozygous (Aa)

Character	Dominant to recessive trait	Dominate trait	Recessive trait	Ratio
Flower color	Purple × White	100	100	0.5:0.5
Seed color	Yellow × Green	6022	2001	0.75:0.25
Seed shape	Round × Wrinkled	5474	1850	0.75:0.25
Pod color	Green × Yellow	428	142	0.75:0.25
Pod shape	Inflated × Constricted	882	299	0.75:0.25
Flower position	Midaxillary × Axillary	625	207	0.75:0.25
Plant height	Tall × Dwarf	787	277	0.75:0.25



C) Gregor Mendel (cont.)

2) PRINCIPLE OF INDEPENDENT ASSORTMENT

Mendel's Contribution

- Particulate inheritance
- Dominance & Recessive alleles
- Principles
 - Principle of Segregation
 - Principle of Independent Assortment

