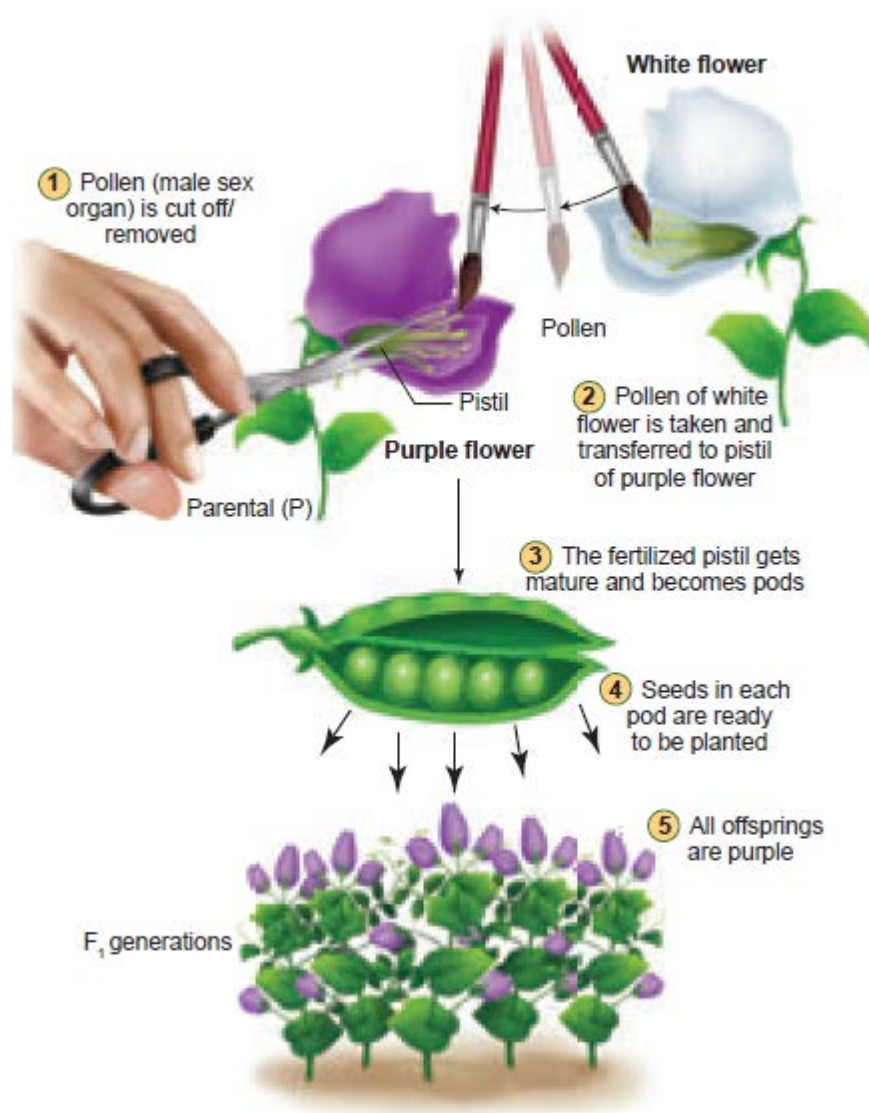


## Mendel's Experimental System - The Garden pea.















He chose pea plant because,

- It is an annual plant and has clear contrasting characters that are controlled by a single gene separately.
- Self-fertilization occurred under normal conditions in garden pea plants. Mendel used both self-fertilization and cross-fertilization.
- The flowers are large hence emasculation and pollination are very easy for hybridization.

Mendel's theory of inheritance, known as the Particulate theory, establishes the existence of minute particles or hereditary units or factors, which are now called as **genes**



Seven characters of *Pisum sativum* studied by Mendel.

Character	Dominant Trait	Recessive Trait
Stem length	 Tall	 Dwarf
Pod shape	 Inflated	 Constricted
Seed shape	 Round	 Wrinkled
Seed colour	 Yellow	 Green
Flower position	 Axial	 Terminal
Flower colour	 Purple	 White
Pod colour	 Green	 Yellow

Seven characters of *Pisum sativum* with genes

Character	Gene	Dominant Trait	Recessive Trait
Plant Height	Le	Tall	Dwarf
Seed Shape	R	Round	Wrinkled
Cotyledon colour	I	Yellow	Green
Flower colour	A	Purple	White
Pod colour	GP	Green	Yellow
Pod form	V	Inflated	Constricted
Flower position	Fa	Axial	Terminal

Mendel's seven characters in Garden Peas, shown on the plant's seven chromosomes

