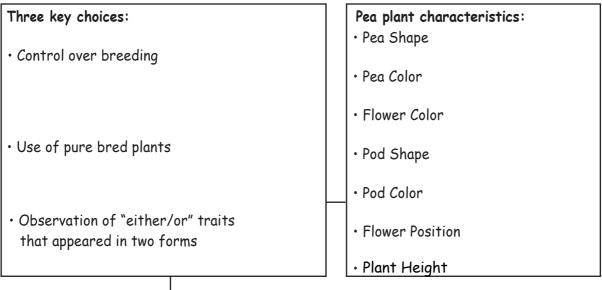
6.3 MENDEL AND HEREDITY

Mendel's Experiments



Cross: The mating of two organisms; Mendel mated purebred pea plants with purple flowers with pure bred plants.

- P: The parental generation; Mendel used purebred plants for the P generation; for example, he crossed purebred plants with purple flowers with purebred plants with white flowers
- F₁; The first generation of offspring resulting from the parental cross; for example, Mendel's F₁ plants all had purple flowers; Mendel allowed this generation to self-pollinate.
- F_{2:} The second generation; the result of the self-pollination of F₁ plants; for example, in Mendel's F₂ generation, 3/4 had purple flowers and 1/4 had white flowers

Results:	Conclusions:
For all seven traits, Mendel found that approximately 3/4 of F2 offspring had one trait and 1/4	• traits are inherited as discrete units (genes)
of the offspring had the other trait	Law of Segregation —inherit two copies of each gene, donate only one copy of each gene in gametes.