



Incomplete dominance

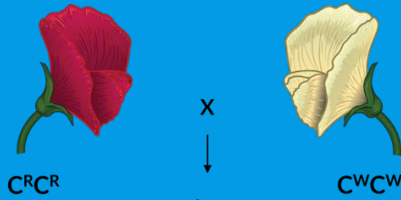


Incomplete dominance is a phenomenon in which a dominant allele or a form of a gene does not entirely hide or mask the effects of a recessive allele, and the organism's resulting phenotype shows a blending of both alleles.

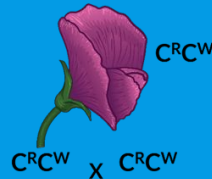
An example of incomplete dominance is seen in snapdragon (*Antirrhinum majus*). A cross between a homozygous parent with white flowers and a homozygous parent with red flowers produces offspring with pink flowers.

The allele for red color is dominant over the allele for white color, but heterozygous flowers having both alleles are pink in color.

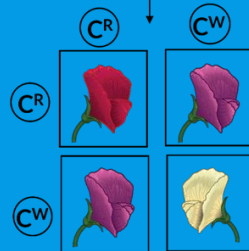
P Generation



F₁ Generation



F₂ Generation



This inheritance pattern is called incomplete dominance, meaning that the traits coded by both the alleles of the heterozygote appears in the phenotype. In such a case, we can say that the allele for red flowers is incompletely dominant over the allele for white flowers.

In this case, the F₂ genotype and phenotype ratio will be the same, i.e., 1 : 2 : 1. Thus, the mendelian monohybrid ratio of 3 : 1 gets modified.

Examples of Incomplete Dominance:

An example of incomplete dominance that is seen in humans is wavy hair. There are two alleles for the texture of hair, curly or straight.

If an individual is homozygous for either type of these alleles, they can either have curly hair or they have straight hair.

However, if a person is heterozygous for hair texture, meaning they inherit one allele for curly hair and one allele for straight hair, the person will have wavy hair.

This is because the two alleles blend to create a unique phenotype, the hallmark of incomplete dominance.

