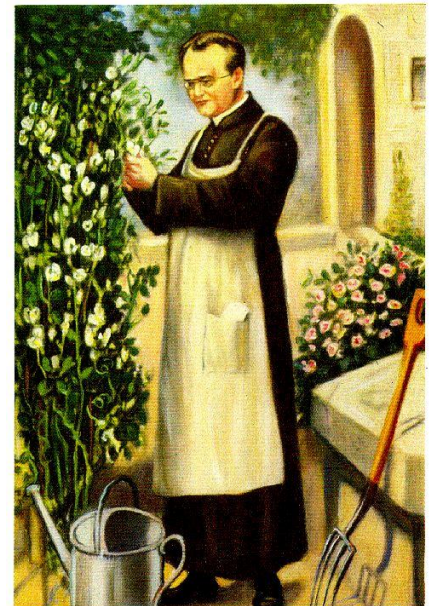


Predicting Inherited Traits

Gregor Mendel

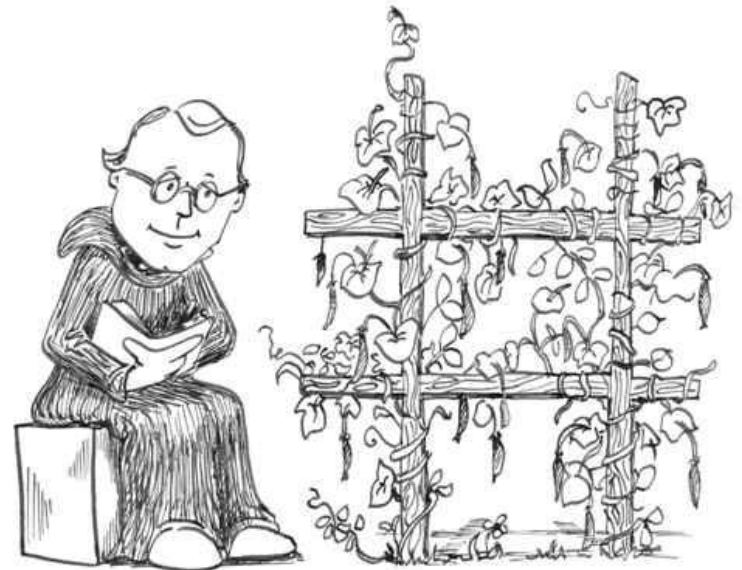
- An Austrian scientist and monk
- Discovered how traits were passed from one generation to the next



Gregor Mendel

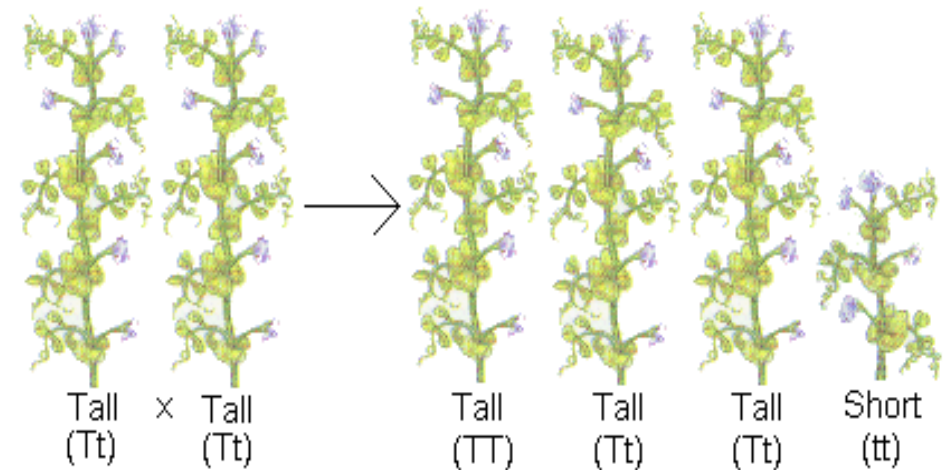
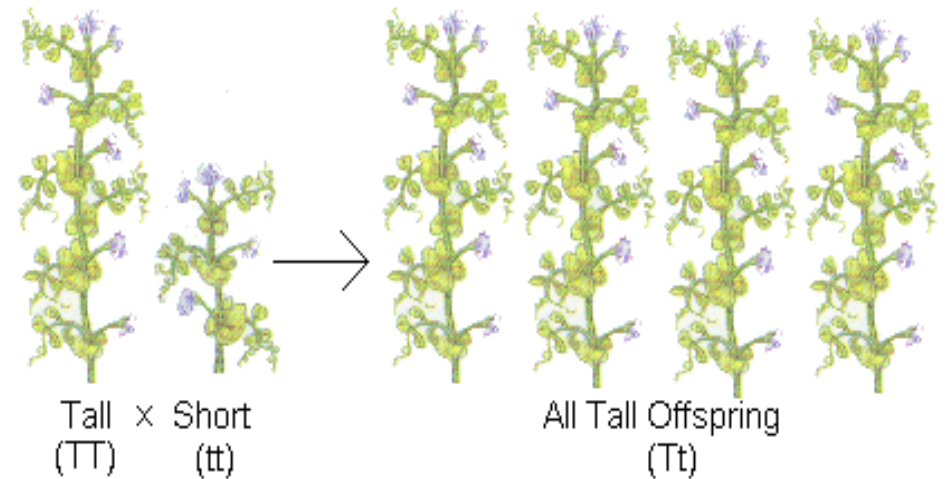
Mendel's Work

- He raised tens of thousands of pea plants
- He took careful notes on the different types of pea plants that grew



Mendel's discovery

- Mendel found that crossing a short pea plant with a tall pea plant would give all tall pea plants
- But crossing two of these tall offspring plants would yield 3 tall pea plants and 1 short pea plant



Dominant Traits

- Mendel concluded that each offspring had gotten traits from each of the parent plants
- The trait for being a tall pea plant though was stronger (dominant) over the trait for being a short pea plant

T = tall t = short

T x t = Tt (produces a tall pea plant)



Recessive Traits

- The trait for short pea plants was hidden
- If two of the tall offspring plants were bred, they could produce a short pea plant

- $Tt \times Tt = TT$ (tall pea plant)
- $Tt \times Tt = Tt$ (tall pea plant)
- $Tt \times Tt = tt$ (short pea plant)

Punnett Squares

- A simple table could be used to predict how many pea plants would be tall and how many would be short

$\frac{\text{♀}}{\text{♂}}$	T	t
T	TT	Tt
t	Tt	tt