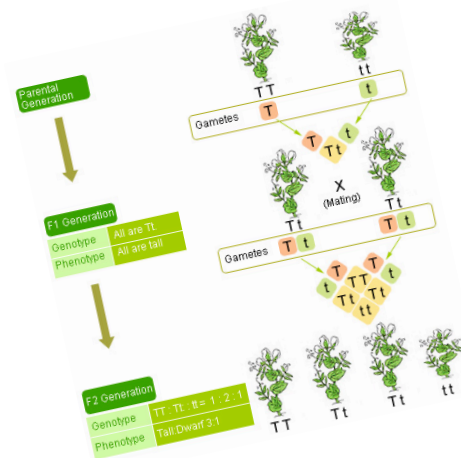


## Mendel's Three Laws

The laws of inheritance were derived by Gregor Mendel, a 19th-century Austrian priest-monk conducting hybridization experiments in garden peas (*Pisum sativum*) Between 1856 and 1863, he cultivated and tested some 29,000 pea plants. From these experiments, he deduced two generalizations which later became known as *Mendel's Principles of Heredity* or *Mendelian inheritance*. He described these principles in a two-part paper, Experiments on Plant Hybridization, that he read to the Natural History Society of Brno on February 8 and March 8, 1865, and which was published in 1866.



Answer the following questions or statements:

- Title your project Mendel's Laws and type your names below it.
- *Include a picture of the pea plant.*
- Explain what will happen if one parent is pure dominant for a trait and the other parent is pure recessive. Describe the genotype and phenotype of each offspring.
- If you take two of the offspring from the last question, what is the genotypic and phenotypic ratio of the offspring?
- List and describe Mendel's three laws with a brief example of each. Pay close attention to his law of independent assortment.
- What is the formula for determining the number of offspring in a multi-hybrid cross? Use the example of HhBbRrAaIi to show your math.
- *Include a picture of a dihybrid cross.*
- Compare and contrast incomplete dominance and codominance. *Include a picture of an organism exhibiting either codominance or incomplete dominance.*
- How is it possible for a person with type **A blood** and a person with type **B blood** to have a child with type **O blood** if A and B are dominant?

### Info:

"Mendelian Inheritance." *Wikipedia*. Wikimedia Foundation, 12 Nov. 2012. Web. 17 Dec. 2012.

### Picture:

"Scienceforhumans." *Scienceforhumans*. N.p., n.d. Web. 17 Dec. 2012