

(Mawer, 2006, p73)



# The Priest and the Pea

For two years, Mendel's now renowned experiment involved the garden pea, *Pisum sativum*. He selected seven different pairs of pea traits (for example smooth vs. wrinkled, tall vs. dwarf) and crossed them. The phenotypes that the hybrid of the first generation displayed were termed 'dominant' and the hidden 'recessive.' He then let the F1 generation self pollinate and some of the recessive traits reappeared in the F2 generation. After the F2 self pollination, he found that the dominant parents produced a dominant and recessive pea plants F3 in a 3:1 ratio. In addition, Mendel crossed plants with more than one trait and discovered the Law of Independent Assortment (that the pair of traits were independent).

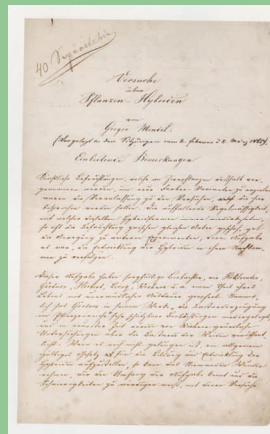
## Gregor Mendel Father of Genetics 22 July 1822– 6 January 1884

In 1822, Gregor Johann Mendel was born to peasant parents in Moravia, Austria. In his early years, he became interested in gardening, and at eighteen he attended the University of Olmutz. Mendel entered an Augustinian monastery in Brunn in 1843. It was there that his passion for nature and science reached a new height, and he started to conduct experiments with pea plants in 1854.

His work was then published in 1866 at the Natural History Society of Brunn. However, his research was ignored and Mendel died in Brunn in 1884. His work was rediscovered in 1900, and it was found that his laws of heredity could be universally applied. He is now recognized as the Father of Genetics.

My scientific studies have afforded me great gratification; and I am convinced that it will not be long before the whole world acknowledges the results of my work.'

- Gregor Mendel



(Mawer, 2006, p70)

Mendel's experiment and research on plant genetics and plant breeding relates to the work completed in DEEDI's 2011 Plant Science Competition. Mendel's phenotypic 3:1 and genotypic ratios 1:2:1 were discovered in the Lego Activity. In the Genetic variation activity, Mendel's concepts and terms of recessive and dominant traits were applied. The Chlorophyll mutant barley plants were grown and it was found that the mutants carried a recessive gene (Mendel's terms). Again, in the barley seed ratio test, the 3:1 ratio (however expressed in a different form of recessive: dominant) was determined.

Mendel left behind a legacy. His observations altered and changed how man views genetics and hereditary, by experimenting with the most basic of plants. His name is acknowledged in every science textbook as a recognition for his invaluable contribution that significantly changed plant breeding and genetics forever.

Flower Position	Flower Color	Plant Height	Pea Shape	Pea Color	Pod Shape	Pod Color
Terminal	Purple	Tall	Round	Yellow	Inflated	Yellow
Axial	White	Short	Wrinkled	Green	Constricted	Green

(Mawer, 2006, p54)

### References:

Mawer, S 2006, *Gregor Mendel: Planting the Seeds of Genetics*, Harry N. Abrams, New York

Pitman, S 2002, *The Father of Genetics*. Retrieved April 15, 2011, from <http://naturalselection.0catch.com/Files/gregormendel.html>

Gregor Mendel, 2011. Retrieved April 15, 2011, from <http://www.cartage.org.lb/en/themes/sciences/lifescience/generalbiology/physiology/fathergenetics/fathergenetics.htm>

By Ella Wherritt  
Year 11  
Gin Gin State High  
School  
30 High School Road

