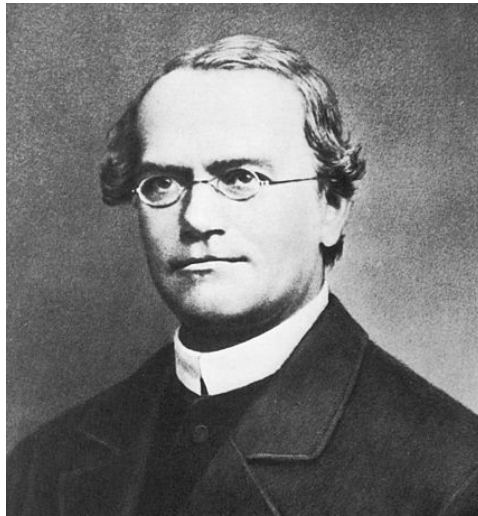


Gregor Mendel

Born: July 20, 1822, Hynčice

Died: January 6, 1884, Brno, Czech Republic



Overview:

Gregor Mendel is considered in Biology circles to be the **Father of Modern Genetics**. After being unable to attend college due to financial difficulties, he continued to strive for knowledge. He experimented on rats, bees, and pea plants, and had a great love for meteorology and astronomy. Although Mendel's discoveries did not receive acknowledgment until many years after he died, he was a humble man and put much more importance on his research than on himself. He would be satisfied to know that his work made a difference.

History of His Life:

Johann Mendel, who would change his name to "Gregor" after joining the monastery, was born in 1822 in modern-day Czech Republic. He was born to Moravian peasants, and often helped work on the family farm. He briefly attended college for Philosophy, but he and his family did not have the money to pay for his schooling. Mendel became a monk because it would allow him to get an education for free. At age 21, he joined the St. Thomas monastery.



Czech Republic - Attribution: David Liuz

Mendel did some work studying heredity in bees and rats, while at the monastery. However, the bishop found Mendel's experimentation with the rats to be inappropriate. Also, his experiments

with the bees led to many of the other monks becoming irritated with so many bees around. As a result, Mendel had to find something else to experiment on. He would later choose peas, which would lead to the great findings he is famous for today.

Struggles:

Ecobottle Sample

TWF

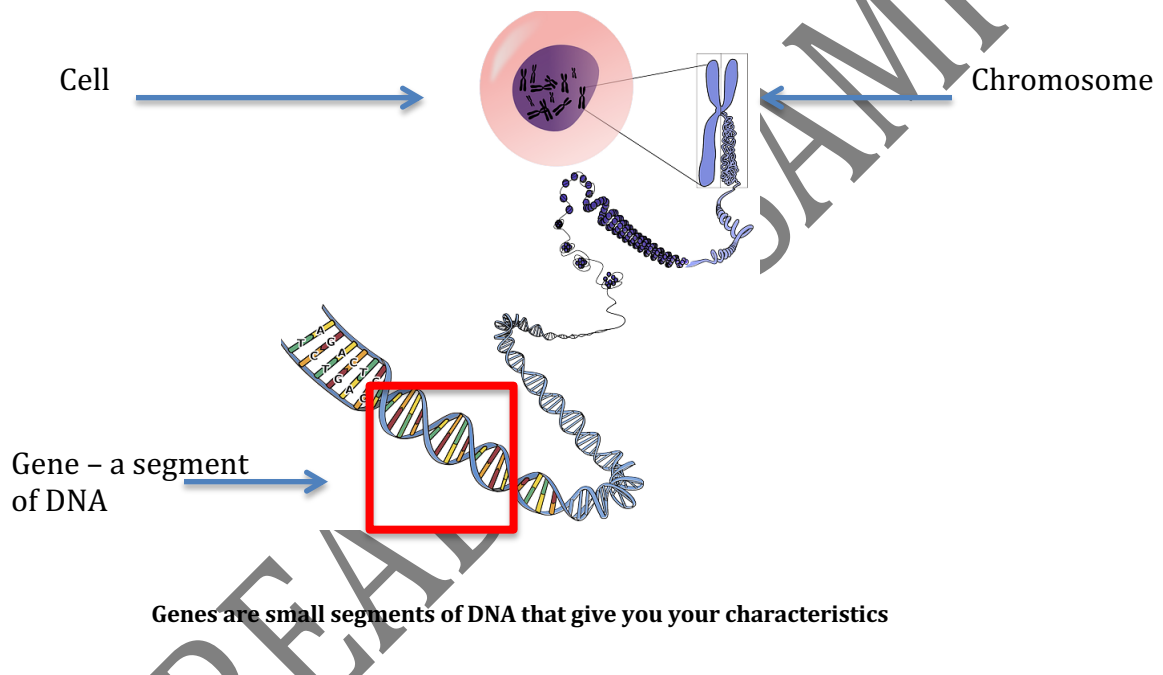
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Mendel ran his experiments on pea plants in the monastery garden from 1856-1863. He used a paintbrush to swipe the pollen of one pea plant onto another for fertilization. Although he studied **seven** different characteristics of the plants, Mendel's main focus was on **seed shape**, either round or angular. The other six characteristics Mendel studied were: plant height, pod shape and color, seed color, and flower position and color. From these experiments came the Law of Segregation and the Law of Independent Assortment, which today we call **Mendel's Laws of**

Inheritance. Although Mendel published his data in 1865, his findings were not given serious consideration until 35 years later.

The Law of Segregation explains how “offspring inherit one genetic allele from each parent when sex cells unite in fertilization.” From this discovery came Mendel’s understanding of **alleles**, **which** are different versions of the same gene, although the concepts of genes were still unknown in his day. The Law of Independent Assortment explains how “genes from different traits are sorted separately from one another so that the inheritance of one trait is not dependent on the inheritance of another.”



Ecobottle Sample

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For example, if you are the only family member since your great-grandfather to have blond hair, then blond hair is a “hidden” trait in your family. The hidden trait in the example below is “aa.”

Mendel's findings on pea plants were revolutionary for genetics and heredity. Today, we can use his findings to predict the possible presence of diseases in certain people, which allow individuals to be treated early in life.

Surprisingly, the bulk of Mendel's work was done in **meteorology**, and he was also very interested in astronomy. However, his greatest findings were done in genetics.

Controversy:

Mendel's findings faced strong criticism and his work only really impacted the world in 1900, 16 years following his death and 34 years after he first published. One scientist accused Mendel of being biased and showing faulty data. Although Mendel's data was not completely accurate, his findings have stood the test of time and allowed us to make great strides in genetics. Furthermore, Mendel's Laws of Inheritance remain accurate.

Reading Comprehension Questions

1. Who is the Father of Modern Genetics? What plant did he study to make him the Father of Modern Genetics?
2. What
3. How many different pea characteristics did Mendel study? Which characteristic was his main focus?
4. What
5. What are dominant and recessive traits?
6. In what
7. Have Mendel's Laws of Inheritance remained accurate to today?

Extension Questions

8. What do you think of Mendel's work ethic? Had Mendel given up science due to hardship, do you think we would have the great findings in genetics that we have today?
9. Purely

Watch the following video to answer the remaining questions. You can access it through the URL or



the QR code: <http://goo.gl/I81IHR>

10. What
11. When we bred the resulting round offspring together what did he find?
12. The
13. Each

Ecobottle Sample



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TWF READING

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