

Famous Thinkers: Da Vinci and Mendel

Crack the easy-level codes and explore their lives

Concept: Geoffrey R. Lorenz
Author: Heather Knowles
Author: Jonathan Gross
Author: Bonnie J. Krueger
Editor: Barbara S. Meeks
Book Design: Jeff Richards

~~9@ \$#/\$& \$&~~

ISBN: 978-0-7877-1966-1

Release Date 2015

Copyright © 2009 [Lorenz Educational Press], a Lorenz company.
P. O. Box 802
Dayton, OH 45401-0802
www.LorenzEducationalPress.com
All rights reserved.

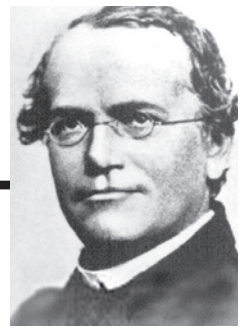
The pages in this packet were originally published in
The Einstein Code (ELE90/1024).

Permission to print or photocopy the student activities in this book is hereby granted to one teacher as part of the purchase price. This permission may only be used to provide copies for this teacher's specific classroom setting. This permission may not be transferred, sold, or given to any additional or subsequent user of this product. Thank you for respecting copyright laws.

 Lorenz

Lorenz Educational Press
Milliken Publishing Company
Teaching and Learning Company
Show What You Know® Publishing
LEP interactive

Gregor Mendel



Eureka!

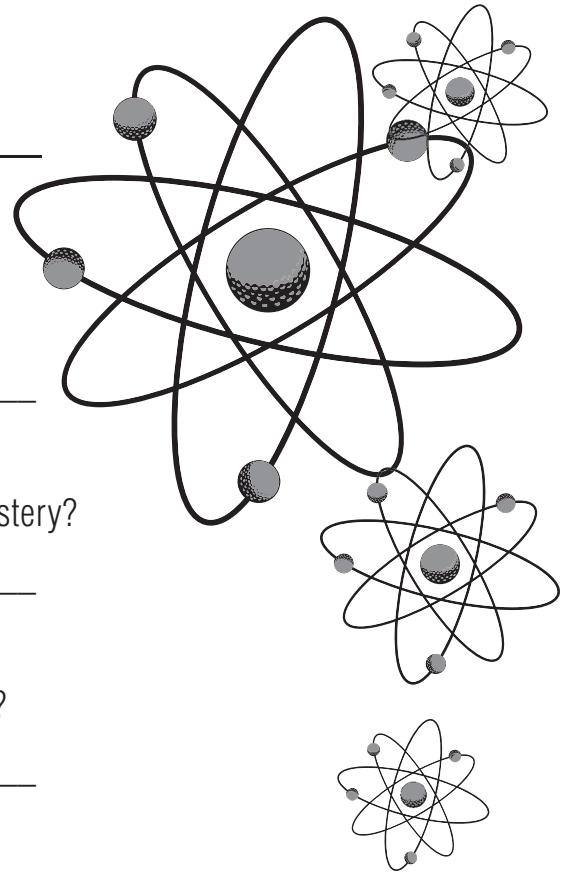
Can you see anything unusual about this article? Look carefully at the numbers you see. What do they stand for? Rearrange the coded letters within each set of parentheses to find your answer.

(Have you ever wondered where your eye color, freckles, or hair color comes from? You actually inherited them from your parents. More specifically, these characteristics were transferred to you from their genes. Gregor Mendel is the man who discovered how the concept of heredity works, and is known as the father of genetics. He was born on July 22, 1822, in modern day Czech Republic, the only son of a poor farmer.) When he was a child, Gregor worked in the garden and studied beekeeping. As he got older, he realized that the only way to escape a life of poverty was to join a monastery.

(Gregor joined a monastery in Brunn, Austria. In 1847, Gregor was ordained into the priesthood. At first, Gregor was given pastoral duties in the monastery. Some priests thought he was more suited for teaching, however, and in 1849 he was assigned to teach at a secondary school in a nearby city.) In 1851, he enrolled in the University of Vienna, where he took classes in mathematics and biology. While at the university, Gregor developed many skills he would use in the future.

(In 1854, he returned to Brunn to teach. At this time, Gregor returned to his childhood pastime: gardening. He became fascinated with the variety of plants growing in the monastery garden.) He became particularly interested in the different characteristics of pea plants. Gregor began to use these and other plants to study heredity. He took an atypical variety of a plant and planted it beside the typical variety. Then he waited to see what their offspring would look like. (Gregor found that the next generation of plants contained traits from both of the "parent" plants. Between 1856 and 1863 he cultivated and tested about 28,000 plants. He made hundreds of "crosses" (plants with different combinations of traits).)

Questions:



1) What did Gregor Mendel study as a child?

2) What was Gregor Mendel's first name before he joined the monastery?

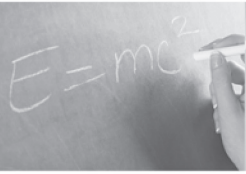
3) With what types of plants did Gregor Mendel mostly experiment?

4) What was the name of the monastery Gregor joined? (2 words)

5) Gregor's published results were titled "Experiments With _____." (2 words)

6) What is the city of Brünn known as today?

7) How many sisters did Gregor Mendel have?



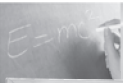
Gregor Mendel

Answers:

- beekeeping
- Johanne
- Peas
- St. Thomas
- Plant Hybrids
- Brno
- Two

Number Sequences

There are 26 letters in the alphabet. A=1, B=2, C=3, and so on until Z=26. Each set of parenthesis encloses a scrambled answer. Certain letters have been replaced with their corresponding alphabet numbers. Unscramble the appropriate letters to find the answers.



Gregor Mendel



Eureka!

Can you see anything unusual about this article? Look carefully at the numbers you see. What do they stand for? Rearrange the coded letters within each set of parentheses to find your answer.

(Have you ever wondered where your eye color, freckles, or hair color comes from? You actually inherited them from your parents. More specifically, these characteristics were transferred to you from their genes. Gregor Mendel is the man who discovered how the concept of heredity works, and is known as the father of genetics. He was born on July 22, 1822, in modern day Czech Republic, the only son of a poor farmer.) When he was a child, Gregor worked in the garden and studied beekeeping. As he got older, he realized that the only way to escape a life of poverty was to join a monastery.

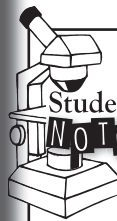
(Gregor joined a monastery in Brunn, Austria. In 1847, Gregor was ordained into the priesthood. At first, Gregor was given pastoral duties in the monastery. Some priests thought he was more suited for teaching, however, and in 1849 he was assigned to teach at a secondary school in a nearby city.) In 1851, he enrolled in the University of Vienna, where he took classes in mathematics and biology. While at the university, Gregor developed many skills he would use in the future.

(In 1854, he returned to Brunn to teach. At this time, Gregor returned to his childhood pastime: gardening. He became fascinated with the variety of plants growing in the monastery garden.) He became particularly interested in the different characteristics of pea plants. Gregor began to use these and other plants to study heredity. He took an atypical variety of a plant and planted it beside the typical variety. Then he waited to see what their offspring would look like. (Gregor found that the next generation of plants contained traits from both of the "parent" plants. Between 1856 and 1863 he cultivated and tested about 28,000 plants. He made hundreds of "crosses" (plants with different combinations of traits).)

32

(Through these experiments, Gregor developed three theories. These include the principles of segregation, independent assortment, and dominance. Gregor's work helps explain many of the similarities and differences between parents and offspring of all living things, humans included. The information guiding these similarities and differences are found in "genes." The information found in genes can help explain and sometimes even predict certain traits or characteristics of the next generation. Parents with certain traits will tend to pass on these traits to their offspring. For instance, two brown-eyed parents would probably have mostly brown-eyed children, but they might also have blue-eyed children.)

(Gregor published his findings in 1866 and presented them before the Brunn Natural History Society.) Although his peers and students respected him, they did not recognize Gregor as a great scientist. In 1868, he was promoted to abbot of the monastery and gave up his experiments. (Gregor died on January 6, 1884 but was not credited for his work until 1900. Thanks to his discoveries, however, modern scientists are learning more about genetics and heredity each day.)



Student's Notes

33