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Science Shorts -7

The Father of Genetics

In 1822 Gregor Mendel was born on a farm in Austria. As he grew up, he became interested in plants. His father encouraged Gregor's fascination with plants. He knew that his son was intelligent, and he wanted him to have a good education. So he sent Mendel to high school. At that time few people attended high school, and those that did lived there. However, since his father could not pay the full tuition, Mendel received no food. He always felt hungry, but he survived because the other students gave him the scraps from their plates.

As an adult Mendel became a monk and continued his studies. He tended the gardens at the monastery where he and other monks lived. He did experiments with pea plants for more than 10 years. He wanted to prove that parents passed characteristics to their offspring. Over time he found that plants have what he called factors that control the inheritance of traits. The factors that control each trait exist in pairs. The female parent contributes one factor and the male parent contributes another factor.

Mendel went on to reason that one factor of the pair could mask, or hide, the other factor. Today scientists call the factors that control traits genes. How did he figure this out? He bred a tall pea plant with a short pea plant. Every one of the first generation of four pea plants was tall. This meant that tall was the dominant gene. Yet in the next generation of four pea plants, one plant was very short. The recessive short genes it received from both of its parent plants made it short.

In 1866, eager to share his findings with others, he wrote a paper. No one paid any attention to it. During his lifetime no one cared about what he had discovered. At the time of his death, he still felt frustrated because his knowledge went unrecognized.

Finally, his important discovery was recognized in 1900. We now know that both plants and animals have genes and that genes play a major role in how we look, how we act and whether or not we are apt to get certain diseases. Today, Gregor Mendel is called the "Father of Genetics."

1. Scientists acknowledged Mendel's discovery about genetics worldwide

- Ⓐ after his death
- Ⓑ the same year he published the paper
- Ⓒ during the 19th century
- Ⓓ just last year

2. On a historical timeline, what happened second?

- Ⓐ Mendel learned how parents pass genes to offspring.
- Ⓑ Mendel became a monk.
- Ⓒ Mendel conducted extensive plant experiments.
- Ⓓ Mendel wrote a paper to share his discoveries.

3. Mendel found out that when both parents carry a recessive gene,

- Ⓐ there is a strong chance that their child will inherit the trait.
- Ⓑ there is some chance that their child will inherit the trait.
- Ⓒ there is no chance that their child will inherit the trait.
- Ⓓ their child will definitely inherit the trait.

4. Which is an example of *tuition*?

- Ⓐ finishing a school project on time
- Ⓑ knowing something is going to happen before it happens
- Ⓒ buying food in a restaurant
- Ⓓ spending money on school courses

5. How do you think Mendel felt about the students who gave him their scraps?

- | | |
|-------------|-------------|
| Ⓐ overjoyed | Ⓒ grateful |
| Ⓑ annoyed | Ⓓ disgusted |

6. Picture Mendel writing the paper about his findings. What is he using?

- | | |
|--------------------|--------------------|
| Ⓐ a quill pen | Ⓒ a ball-point pen |
| Ⓑ a word processor | Ⓓ a marker |