

Name: _____ Period: _____

Khan Academy Article: Mendel & His Peas

Read the KhanAcademy.org article that is found here:

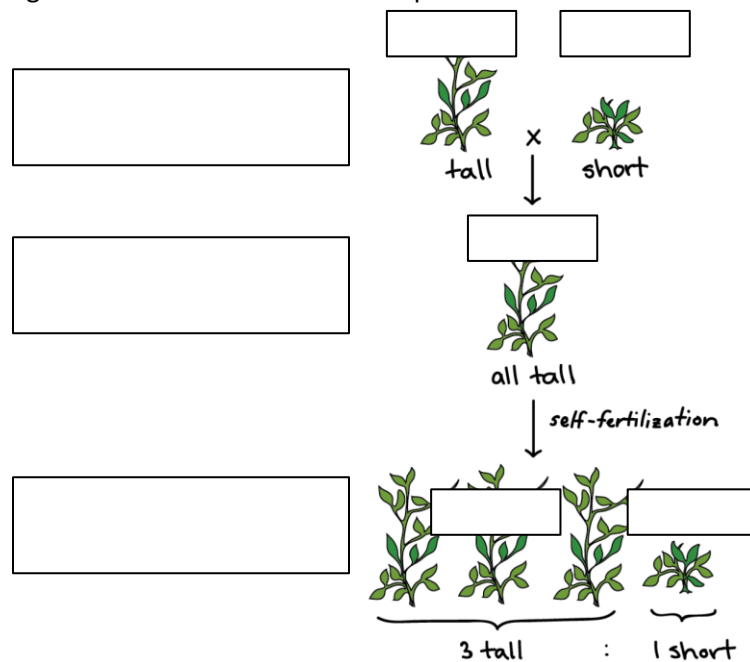
<https://www.khanacademy.org/science/biology/classical-genetics/mendelian--genetics/a/mendel-and-his-peas>

and answer the questions that follow. The article is also linked under Tuesday Feb 21st daily agenda.

- Gregor Mendel was alive for the years _____ and often referred to as the _____.
- What was a _____ at the Augustinian Abby of St. Thomas in what is now the _____.
- Mendel started his decade-long research project in _____ to investigate _____.
- He first began his research using _____, then switched to _____ and _____ . Ultimately he settled on _____ as his primary model.
- Mendel studied the following seven different characters in his model organism (found down the page in a table!)
 - _____
 - _____
 - _____
 - _____
 - _____
 - _____
 - _____
- Pea plants were a convenient system for studies of inheritance because of the following features:
 - _____
 - _____
 - _____
 - _____
- Mendel was not the first to use peas to study inheritance, but Mendel's contribution documented inheritance patterns _____ (meaning in terms of specific numbers and ratios) to try to predict patterns.

8. Peas were also useful as a model because of their system of _____ which gave Mendel control over which plants bred to one another.
9. What does self-fertilize mean?
10. How did Mendel control which plants bred to one another?
11. Mendel's experimental setup:
- a. He established _____ peas (aka pure-bred)
 - b. Then, he first crossed _____ parent to another. The plants used in this initial cross are called the _____ generation, or parental generation.
 - c. The offspring from the parental generation were called the _____ generation.

12. Complete the diagram below for Mendel's first experiment results:



13. By recording _____, calculating _____, and applying _____ Mendel was able to make discoveries that eluded or remained a mystery to many other scientists. With his models and calculations, he was able to predict patterns of inheritance with no knowledge of DNA as the genetic material!