

Mendel's Work

Read pages 76-81 of your science book then answer the following questions.

1. Who is Gregor Mendel?
2. What is **heredity**?
3. What are **traits**?
4. Are all of a plants' traits similar to the traits of their parents? Explain how they are or are not...
5. What is the scientific study of heredity?
6. What is **fertilization**?
7. How is *cross-pollination* **different** than *self-pollination*?
8. What is a **purebred** organism?
9. Describe what happened when Mendel crossed *purebred tall* pea plants with *purebred short* pea plants.
10. How did Mendel's experiments help to explain the inheritance of traits?
11. What do today's scientists call the factors that control a trait?

12. What is an **allele**?
13. How are an organism's traits controlled?
14. What is a **dominant** allele?
15. What is a **recessive** allele?
16. How can a recessive allele show up in an organism?
17. What is a **hybrid**?
18. Capital letter and lower case letters are used to represent alleles. What **letter** represents a dominant allele?
19. What **letter** represents a recessive allele?
20. Tall stems are dominant in pea plants. What are the alleles for a **hybrid** tall plant?
21. Can a short pea plant ever be a hybrid for the trait of stem height? Be sure to explain **why** or **why not**. As part of your explanation write the letters that represent the alleles for stem height of a short plant.
22. How did Mendel's work change scientists' ideas about heredity?