

1. _____ was an Austrian Monk who revealed the basic rules for inheritance.
2. Before Gregor Mendel's conclusions about inheritance from parent to offspring, biologists proposed the "**blending hypothesis**" to explain how _____ inherit _____ from both _____.
3. According to the **blending hypothesis**, a red and yellow flower would produce _____ color in their offspring blooms. This is similar to mixing paint colors.
4. Give an example of an exception to the blending hypothesis that disproved this idea.
5. The blending hypothesis could not explain how:
6. Gregor Mendel enjoyed gardening and studied _____ for seven years giving rise to **genetics**, the study of _____.
7. What does Mendel's particulate hypothesis state?
8. Mendel stressed that each heritable factor called a _____ retains its identity generation after _____.
9. Mendel identified **true-breeding** plants by allowing them to **self-fertilize**. What type of offspring are produced by these plants?

10. A true-breeding, self fertilized purple flower will produce offspring with what color of flower every generation? _____
11. Mendel tested his particulate hypothesis by crossing two **true-breeding** plants with different traits for flower color. One parent plant had **purple flowers**, the other parent plant had **white flower** color.

Mendel was SURPRISED to see that **all** the offspring from the cross between a *purple* flowered parent and a *white* flowered parent had **purple** flowers.

12. What do you think happened to the white flower gene in the offspring?

13. What does **hybrid** mean? (pg.208)

14. What are the parental plants called? _____

15. What are the hybrid offspring called? _____

16. What does the letter "**F**" mean in this context and where does it come from?

17. What is the **F₂ generation**?

18. Study the chart on page 208. Describe each generation as shown in the chart.

19. Mendel chose peas for his experiments because they **reproduce quickly** and **produce large amounts of offspring**. They also have 7 easily observed traits to study. List the 7 traits shown at the top of page 209.