

Content Practice A**LESSON 1*****Mendel and His Peas***

Directions: *On the line before each statement, write T if the statement is true or F if the statement is false.*

- _____ 1. Genetics is the study of how traits are passed from parents to offspring.
- _____ 2. Gregor Mendel studied pea plants because they reproduce slowly and have easily observable traits.
- _____ 3. Pollination in pea plants can occur in three ways.
- _____ 4. Mendel began his experiments with pea plants that stayed the same from one generation to the next.
- _____ 5. He then crossed those plants to create true-breeding plants.
- _____ 6. In Mendel's studies of the colors of purple pea flowers, none of the first-generation crosses had white flowers.
- _____ 7. In those same experiments, about three-fourths of the second-generation crosses had white flowers.
- _____ 8. From those results, Mendel concluded that white flowers on pea plants are a dominant trait.
- _____ 9. In other studies, a trait that showed up in the same proportion of second-generation crosses as white flowers did was yellow pods.
- _____ 10. One trait that Mendel did not study in pea plants was the shape of the plants' leaves.

Content Practice B

LESSON 1

Mendel and His Peas

Directions: Answer each question or respond to each statement on the lines provided.

1. What is genetics? _____

2. **State** three reasons why Gregor Mendel chose pea plants for his experiments.

3. What did Mendel produce when he cross-bred different true-breeding plants?

4. When Mendel crossed plants that had always produced only purple flowers with ones that had always produced only white flowers, what was the outcome of the first-generation cross?

5. What happened when he crossed those plants to produce a second-generation cross?

6. What conclusions did Mendel draw from these results and from experiments with other pea-plant traits? **Describe** genetic factors and the principle of dominant/recessive.

Copyright © Glencoe/McGraw-Hill, a division of The McGraw-Hill Companies, Inc.