

Active Reading

Section: Mendel's Theory

Read the passage below. Then answer the questions that follow.

Geneticists have developed specific terms and ways of representing an individual's genetic makeup. Letters are often used to represent **alleles**. **Dominant** alleles are indicated by writing a capital letter. **Recessive** alleles, however, are indicated by writing a lowercase letter.

If two alleles of a particular gene present in an individual are the same, the individual is said to be **homozygous** for that character. If the alleles of a particular gene present in an individual are different, the individual is **heterozygous** for that character.

SKILL: READING EFFECTIVELY

Read each question, and write your answer in the space provided.

1. How are dominant alleles often represented?

2. How are recessive alleles often represented?

3. A particular plant is said to be *homozygous* for seed color. What does this mean?

4. Another plant is said to be *heterozygous* for flower color. What does this mean?

Active Reading *continued*

5. The allele for yellow peas is dominant to the allele for green peas. How would you represent the alleles of a plant that is heterozygous for seed color?

6. The allele for purple flowers is dominant to the allele for white flowers. How would you represent the alleles of a plant that is homozygous recessive for flower color?

7. How would you represent the alleles of a plant that is heterozygous for flower color?

In the space provided, write the letter of the phrase that best completes the statement.

- _____ 8. A plant with *YY* alleles for seed color is
- a. heterozygous dominant for this character.
 - b. homozygous dominant for this character.
 - c. homozygous recessive for this character.
 - d. Either (a) or (b)