

Genetics

Name:

More About Traits & Genetic Variation

Period:

Use Chapter 6, Section 2 of your textbook to answer the questions below. The word banks can be used to fill out the sentences below them.

allele alleles colors disorder eye fur genetic variation internal

More About Traits (p.184)

One Gene, Many Traits



1. In Mendel's studies, how many genes controlled a particular trait? _____
2. Look at Figure 5. For the tiger, one gene controls both _____ color and _____ color.
3. Look at Figure 6. Sickle-cell anemia is a genetic _____ .
4. Some genetic disorders, like sickle-cell anemia, can be caused by an error on an _____ of a single gene.

Many Genes, One Trait

- _____ 5. What causes the many shades of a single human eye color?
 - a. one gene acting alone
 - b. one gene from each parent
 - c. two genes from each parent
 - d. several genes acting together
6. Multiple genes can affect _____ traits, like how your body breaks down food.

The Importance of Environment

- _____ 7. What is one example of an internal environmental condition that influences height?
 - a. heavy clothing
 - b. nutrition
 - c. geography
 - d. exposure to sunlight
- _____ 8. Look at Figure 8. Why are the grasshoppers different colors?
 - a. they are different species
 - b. one is male and the other is female
 - c. they ate different food when they were young
 - d. the genes that control their coloring are different

Genetic Variation

9. Scientists estimate humans have approximately _____ genes.
10. People do not look identical to each other because they have different sets of _____ .
11. _____ is the differences in sets of alleles between individuals in a population.
12. Look at Figure 9. Genetic variation has caused the snakes to be different _____ .
- _____ 13. What kind of traits do genes affect?
 - a. traits caused by the environment
 - b. only traits you can't see
 - c. traits you can see and traits you can't see
 - d. only traits you can see