

Directed Reading A

Section: Traits and Inheritance

- _____ 1. What ratio did Mendel find for dominant to recessive traits?
- 1 to 1
 - 2 to 1
 - 3 to 1
 - 4 to 1

A GREAT IDEA

- _____ 2. What are the instructions for an inherited trait?
- alleles
 - phenotype
 - albinism
 - genes
- _____ 3. Two forms of a gene, one from each parent, are called
- alleles.
 - phenotypes.
 - albinism.
 - genes.
- _____ 4. When gene pairs are written, the dominant allele has a(n)
- D in front of it.
 - capital letter.
 - bold letter.
 - underlined letter.
- _____ 5. The genotype Pp can also be written
- pP*
 - pp*
 - PP*
 - Ppp*
- _____ 6. When purple is dominant, the white offspring of purple and white parents will be
- pP*
 - pp*
 - PP*
 - Ppp*

Directed Reading A *continued*

Match the correct description with the correct term. Write the letter in the space provided.

- | | |
|---|---|
| <p>_____ 7. used to organize possible offspring combinations</p> <p>_____ 8. an organism's appearance</p> <p>_____ 9. a plant with one dominant and one recessive gene</p> <p>_____ 10. condition that causes colorless hair, skin, and eyes</p> <p>_____ 11. a plant with either two dominant or two recessive genes</p> <p>_____ 12. genetic makeup formed from both inherited alleles together</p> <p>_____ 13. instructions for traits passed to offspring from parents</p> | <p>a. phenotype</p> <p>b. heterozygous</p> <p>c. genotype</p> <p>d. homozygous</p> <p>e. genes</p> <p>f. albinism</p> <p>g. Punnett square</p> |
|---|---|

	<i>p</i>	<i>p</i>
<i>P</i>	<i>Pp</i>	<i>Pp</i>
<i>P</i>	<i>Pp</i>	<i>Pp</i>

	<i>P</i>	<i>p</i>
<i>P</i>	<i>PP</i>	<i>Pp</i>
<i>p</i>	<i>pP</i>	<i>pp</i>

14. Look at the Punnett square on the left. What genotype do the offspring have?

15. Look at the Punnett square on the left. What will happen to the recessive allele?

16. Look at the Punnett square on the right. Which genotypes contain a dominant allele?

17. Look at the Punnett square on the right. Which two genotypes are exactly the same?

Directed Reading A *continued*

WHAT ARE THE CHANCES?

_____ **18.** The mathematical chance that something can happen is called

- a.** genotype.
- b.** albinism.
- c.** probability.
- d.** trait.

19. What is the probability of inheriting two *p* alleles?

20. Why are the traits that Mendel studied in pea plants easy to predict?

MORE ABOUT TRAITS

21. When each allele has its own degree of influence, it is known as

22. How is a snapdragon an example of incomplete dominance?

23. Sometimes one gene can influence more than one _____.

24. Besides genes, what else can have an influence on traits?

Skills Worksheet

Section Review

Traits and Inheritance

USING KEY TERMS

1. Use the following terms in the same sentence: *gene* and *allele*.

2. In your own words, write a definition for each of the following terms:
genotype and *phenotype*.

UNDERSTANDING KEY IDEAS

- _____ 3. Use a Punnett square to determine the possible genotypes of the offspring of a $BB \times Bb$ cross.

a. all BB

c. BB, Bb, bb

b. BB, Bb

d. all bb

4. How are genes and alleles related to genotype and phenotype?

5. Describe three exceptions to Mendel's observations.

MATH SKILLS

6. What is the probability of rolling a five on one die three times in a row? Show your work below.

Section Review *continued*

CRITICAL THINKING

7. Applying Concepts The allele for a cleft chin, *C*, is dominant among humans. What are the results of a cross between parents with genotypes *Cc* and *cc*?

INTERPRETING GRAPHICS

The Punnett Square below shows the alleles for full color in rabbits. Black fur, *B*, is dominant over white fur, *b*.

	?	?
?	<i>Bb</i>	<i>Bb</i>
?	<i>Bb</i>	<i>Bb</i>

8. Given the combinations shown, what are the genotypes of the parents?

9. If black fur had incomplete dominance over white fur, what color would the offspring be?
