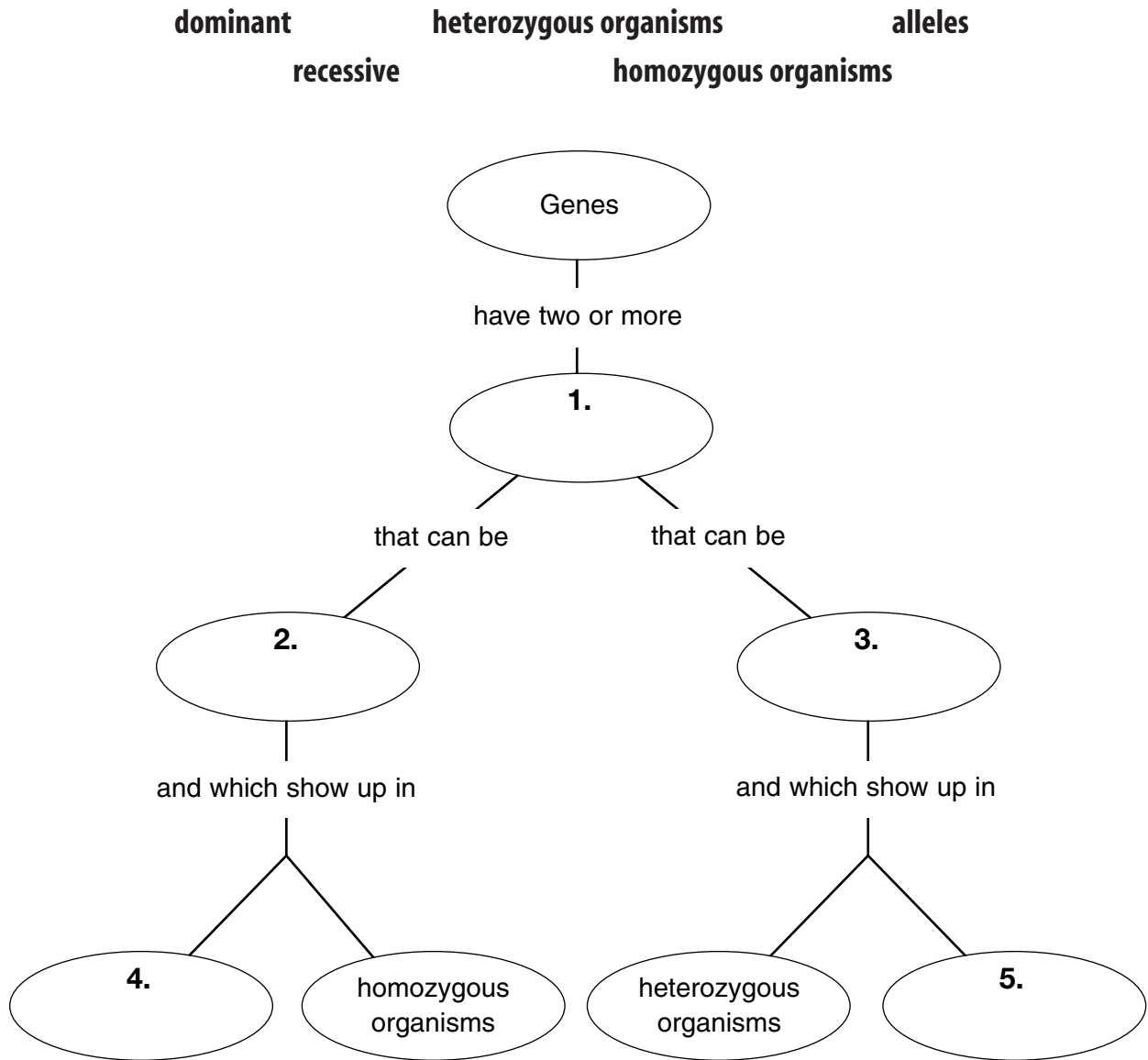




Directed Reading for
Content Mastery

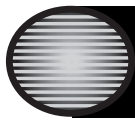
Overview Heredity

Directions: Complete the concept map using the terms in the list below.



Directions: Use the words in the concept map to fill in the missing words in the following sentences.

6. The study of how traits are inherited through the interaction of _____ is the science of genetics.
7. An allele that is dominated, or covered up, by another allele is called _____.
8. Organisms with two alleles that are the same are called _____.

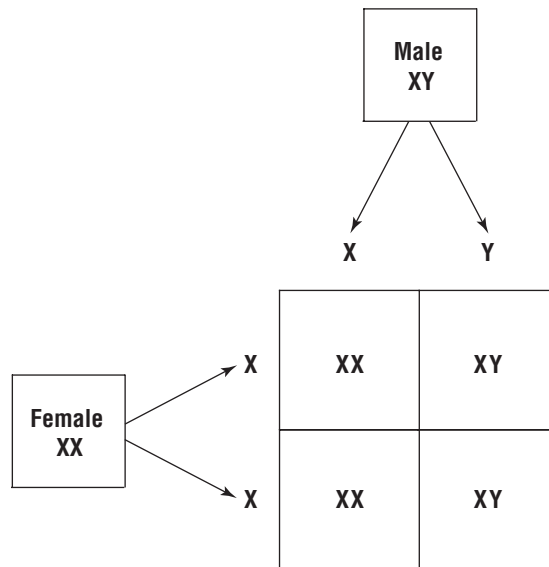


Directed Reading for
Content Mastery

Section 1 ■ Genetics

Section 2 ■ Genetics Since Mendel

Directions: This diagram shows the joining of human male (XY) and human female (XX) sex cells. Use the diagram to answer the questions below.



1. What do the letters X and Y stand for?

2. Which chromosome is found only in the male?

3. Which person has two X chromosomes?

4. According to the diagram, what percentage of the offspring is female?

5. Do you think it is possible to accurately predict all male offspring for a particular mating pair? Why or why not?



Directed Reading for
Content Mastery

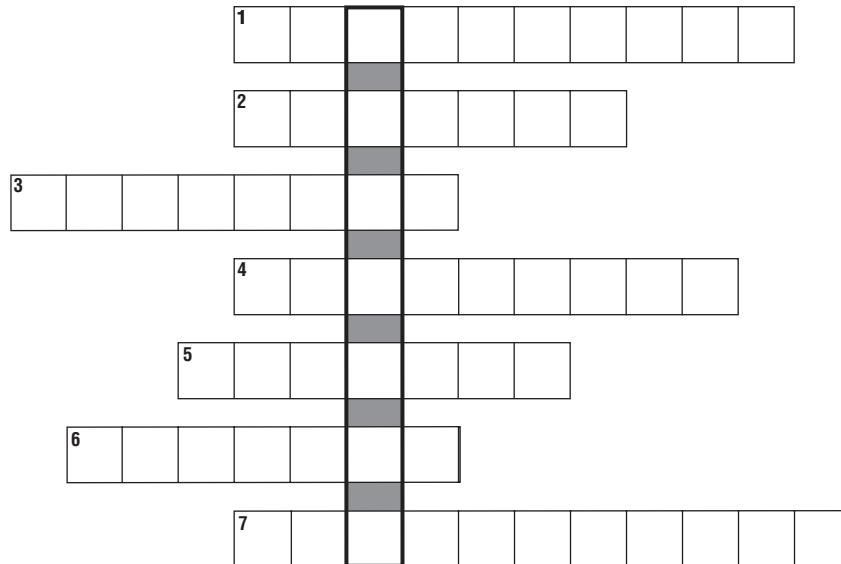
Section 3 ■ Advances in Genetics

insulin
control

therapy
recombinant

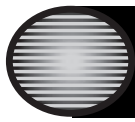
engineered
phenotype

medicine



Directions: Use the following terms to complete the puzzle below. The letters in the dark vertical box complete question 8.

- The long-term effects of consuming genetically _____ plants are not known.
- Gene _____ might be a method of curing genetic disorders in the future.
- Genetic engineering is used to help produce large volumes of _____.
- Selective breeding is done to improve the _____ of plants.
- A normal allele can be introduced into a virus to _____ cystic fibrosis.
- Recombinant DNA introduces DNA into bacteria to produce _____.
- Making _____ DNA is one method of genetic engineering.
- Through _____ engineering, scientists are experimenting with biological and chemical methods to change the arrangement of DNA that makes up a gene.



Directed Reading for
Content Mastery

Key Terms Heredity

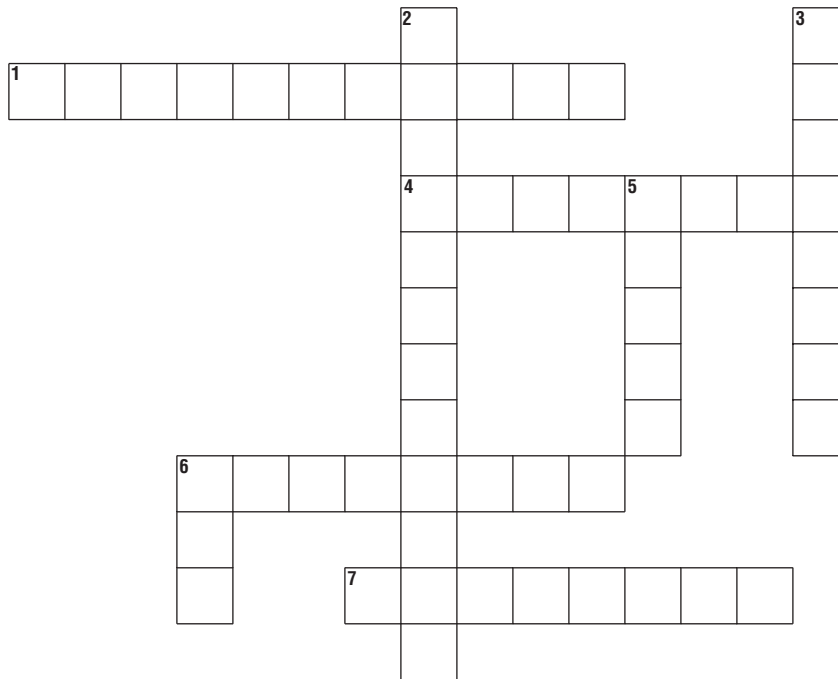
Directions: Use the clues below to complete the crossword puzzle.

**dominant
genotype**

**gene therapy
trait**

**genetics
Gregor Mendel**

**purebred
DNA**



Across

1. Type of genetic engineering
4. Genetic makeup of an organism
6. Type of trait that masks another trait
7. How traits are inherited through alleles

Down

2. Worked with pea plants to study heredity
3. An organism that always produces the same traits in its offspring
5. Another name for an inherited characteristic
6. Material from which chromosomes are made