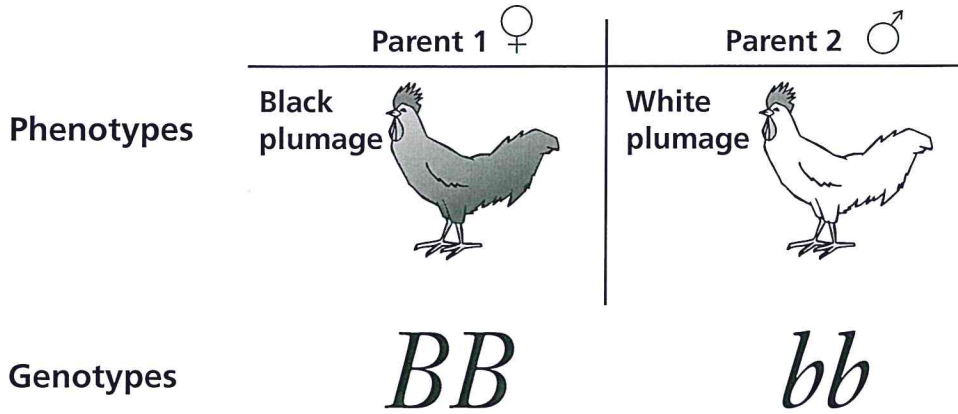


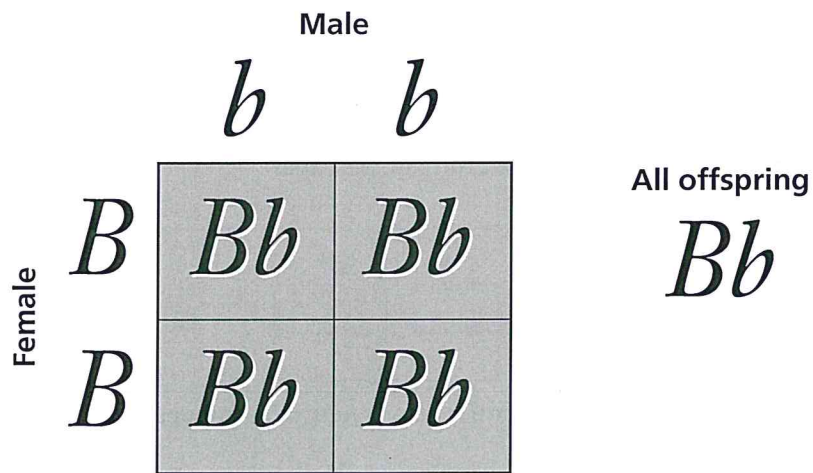
**Master  
21**

**Reteaching Skills**

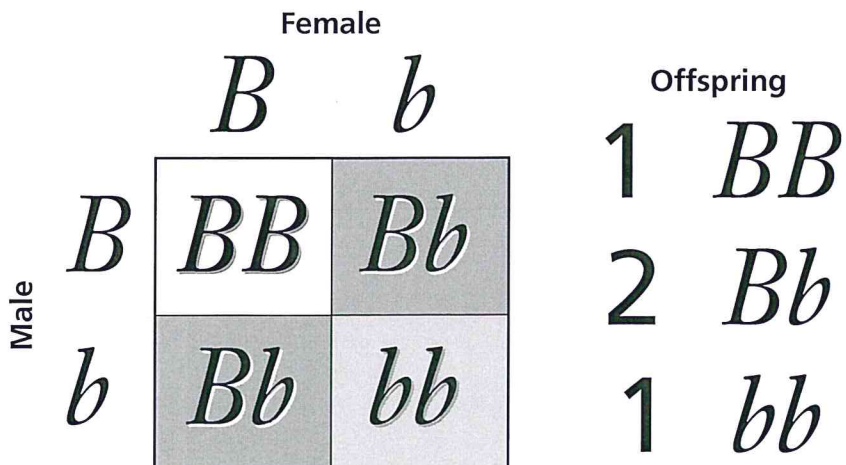
**Genotypes and Phenotypes** Use with Chapter 12, Section 12.2



Punnett square for F<sub>1</sub> offspring



Punnett square for F<sub>2</sub> offspring



# Worksheet 21

## Reteaching Skills

### Genotypes and Phenotypes *Use with Chapter 12, Section 12.2*

- Assume that  $B$  is dominant and represents black feathers; assume that  $b$  is recessive and represents white feathers, or “no-black.” Determine the feather color in the  $F_1$  and  $F_2$  generations.  
\_\_\_\_\_
- Assume that  $B$  represents black feathers,  $b$  represents white feathers, and the alleles show incomplete dominance. Determine feather color in the  $F_1$  and  $F_2$  generations.  
\_\_\_\_\_
- Assume that  $B$  is dominant and represents black feathers; instead of  $b$ , let  $W$  represent white feathers and is also dominant. Determine the feather color in the  $F_1$  and  $F_2$  generations. What pattern of inheritance do the alleles show?  
\_\_\_\_\_
- Assume that chickens can be black ( $B$ ), brown ( $B^b$ ), or white ( $b^w$ ).  $B$  is dominant to  $b^w$  and is codominant with  $B^b$ .  $B^b$  is incompletely dominant with  $b^w$ . Assume that the male parent is  $BB^b$ , and the female parent is  $B^b b^w$ .
  - What color feathers do the male and the female have?  
\_\_\_\_\_

- Fill in a Punnett square to show the genotypes of matings between these birds.

	$B$	$B^b$
$B^b$		
$b^w$		

- Describe the phenotypes of the offspring and their percentages.  
\_\_\_\_\_

- You want to breed chickens with black feathers. You have one chicken of each phenotype from question  $c$ . Decide which chickens to breed to reach your goal; then fill in a Punnett square to show the outcome of the breeding. What will be the color of the chicken's feathers?

_____	_____		
_____	_____		

#### Phenotypes

_____	_____
_____	_____