

CHAPTER 9

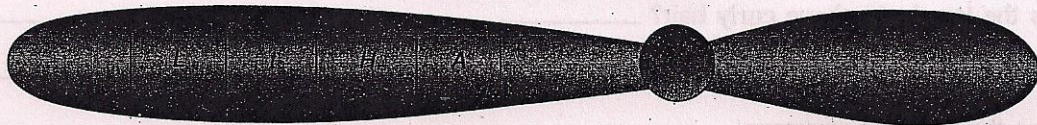
Introduction to Genetics
Section 9-3

SKILL ACTIVITY
Applying concepts

Should This Dog Be Called Spot?

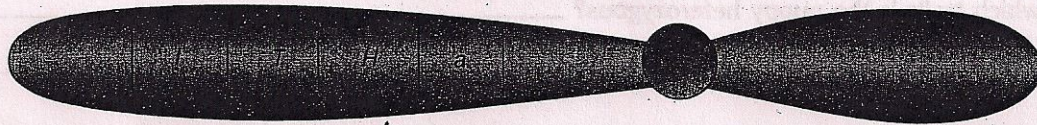
Imagine this microscopic drama. A sperm cell from a male dog fuses with an egg cell from a female dog. Each dog's gamete carries 39 chromosomes. The zygote that results from the fusion of the gametes contains 78 chromosomes—one set of 39 chromosomes from each parent. One pair of the zygote's chromosomes are shown below.

Chromosome from the Female Dog



L t H A

Chromosome from the Male Dog



l T H a

Each chromosome of the homologous pair contains alleles for the same traits. But one chromosome may have a dominant allele and the other a recessive allele. Use the drawings and the table to answer the questions.

Trait	Dominant Gene	Recessive Gene
Hair length	Short (<i>L</i>)	Long (<i>l</i>)
Hair texture	Wiry (<i>T</i>)	Silky (<i>t</i>)
Hair curliness	Curly (<i>H</i>)	Straight (<i>h</i>)
Coat pattern	Spotted (<i>A</i>)	Solid (<i>a</i>)

1. Will the new puppy have a spotted coat? Explain. _____

