

# Chromosomes

Objective: \_\_\_\_\_

Research: \_\_\_\_\_

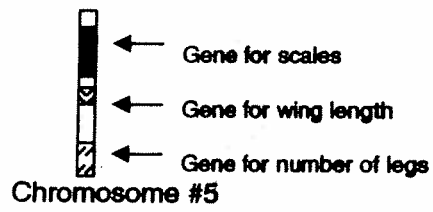
chromosome: \_\_\_\_\_

gene: \_\_\_\_\_

traits: \_\_\_\_\_

homologous chromosomes: \_\_\_\_\_

Example:



Activity:

1. Cut out each of the chromosomes on the next page.
2. Match each chromosome with it's pair and glue each pair together in it's box.
3. Complete Data Table 2 by filling in the missing numbers.
4. Use the information given in the data tables to help answer the questions about these chromosomes.

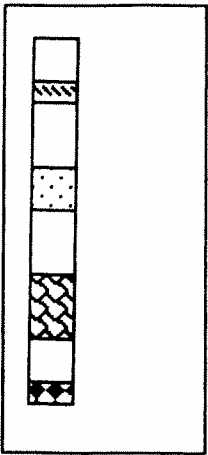
Data Table 1: Genes

eye color	wing speed	tail length
body color	body size	antennas
disease resistance	fur color	body shape
teeth	eye size	gender
type of fur	claws	leg length
venom	mouth shape	wing length
scales	number of legs	number of wings

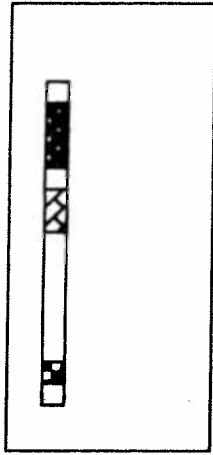
Data Table 2: Chromosome numbers of selected organisms.

Organism	# of chromosome pairs	total chromosomes
Alligator	16	32
Onion	8	16
Earthworm	18	36
Peanut	20	40
Bat	22	44
Dog		78
Cucumber	7	
Mosquito		6
Fruit Fly		8
Mouse	20	
House Fly	6	12
Sea Trout		80
Salmon	47	
Human		46

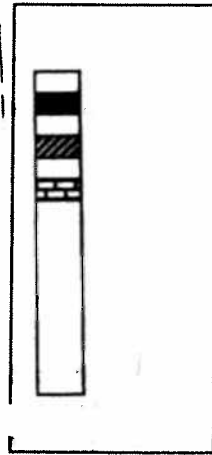
Chromosome Pairs: Cut out each chromosome and match up chromosome pairs.



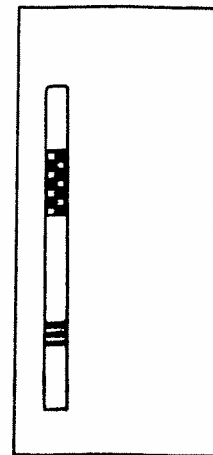
Chromosome #1



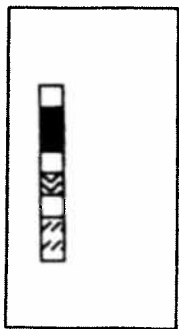
Chromosome #2



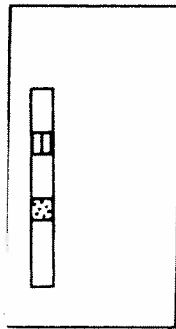
Chromosome #3



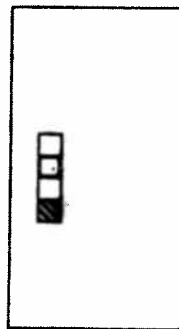
Chromosome #4



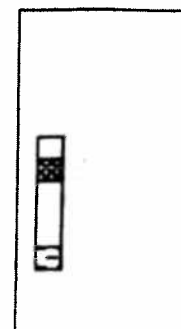
Chromosome #5



Chromosome #6



Chromosome #7



Chromosome #8

Discussion Questions:

1. How many genes are on chromosome 2? \_\_\_\_\_ On chromosomes 6? \_\_\_\_\_
2. How many chromosome pairs are in the organism in this activity? \_\_\_\_\_
3. Chromosome 7 carries the genes for \_\_\_\_\_ and \_\_\_\_\_
4. There are two of each chromosome, one coming from the egg cell of this organism and the other coming from the sperm cell of this organism. Each chromosome in the pair is similar and carries the same genes. Similar chromosomes pairs, carrying the genes for the same traits are called: \_\_\_\_\_
5. The organism in this activity is not real. What real organism shares the same number of chromosomes as the organism in this activity? \_\_\_\_\_
6. Is it true that the bigger the organism the more chromosomes it has? \_\_\_\_\_  
Provide data from data table 2 that supports your answer \_\_\_\_\_

7. A gene has many possibilities for a trait. For example, on Chromosome #3, there is a gene for type of fur. Possible traits for type of fur are: long fur, thick fur, curly fur, in whatever the gene pair shows. What would be possible traits for the genes on Chromosome #8?

Gene for \_\_\_\_\_, could have the traits of \_\_\_\_\_  
or \_\_\_\_\_.

Gene for \_\_\_\_\_, could have the possible traits of \_\_\_\_\_, or \_\_\_\_\_, or \_\_\_\_\_

