

### Chapter 11-4, Part I Objectives: Students will

- A) Identify our genetic material and its location.
- B) Summarize the relationship between DNA, alleles, genes, chromosomes, and traits.
- C) Identify the locations of meiosis
- D) Summarize why half of an individual's genetic information comes from each parent
- E) Determine an individual's sex based on their chromosome makeup.

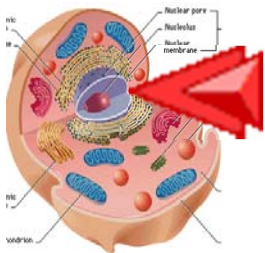
Obj. B) Summarize the relationship between DNA, alleles, genes, chromosomes, and traits.

What is this?



A) Identify our genetic material and its location.

\_\_\_\_\_



Code  
for  
\_\_\_\_\_

Obj. B) Summarize the relationship between DNA, alleles, genes, chromosomes, and traits.

### Trait



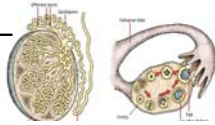
- \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
- in a \_\_\_\_\_
- Can you ID some traits on this man?

Obj. C) ID the locations of meiosis.

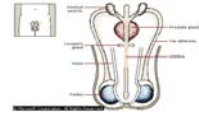
\_\_\_\_\_ in the \_\_\_\_\_

Males = \_\_\_\_\_

Females = \_\_\_\_\_



\_\_\_\_\_ make \_\_\_\_\_!

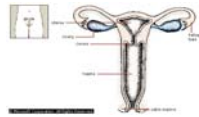


**In males** \_\_\_\_\_

**make** \_\_\_\_\_

In females \_\_\_\_\_

make \_\_\_\_\_



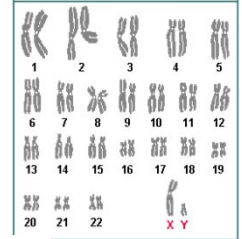
Obj. E) Determine an individual's sex based on their chromosome makeup.

**Autosomes & Sex Chromosomes**

\_\_\_\_\_ =

# \_\_\_\_\_ for all

\_\_\_\_\_ except \_\_\_\_\_



\_\_\_\_\_ chromosomes =

Pair # \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Obj D) Summarize why half of an individual's genetic information comes from each parent

- Different \_\_\_\_\_ for different \_\_\_\_\_
- \_\_\_\_\_ set = \_\_\_\_\_ = \_\_\_\_\_
- \_\_\_\_\_ = \_\_\_\_\_
- \_\_\_\_\_



If a lizard's diploid # is 36, what is its haploid #?

- 1 \_\_\_\_\_ from \_\_\_\_\_
- 1 \_\_\_\_\_ from \_\_\_\_\_
- Humans = \_\_\_\_\_

\_\_\_\_\_ chromosomes (pairs) or \_\_\_\_\_ total

Why are total chromosome numbers always even?

**Understanding Check**

1. Place these in order from smallest to largest: gene, allele, DNA, chromosome.
2. Where does meiosis occur in males and females?
3. What are homologous chromosomes? How many do humans have?
4. What is the genetic make-up of a female?
5. Why is the chromosome number usually even?