

6.1 Chromosomes and Meiosis

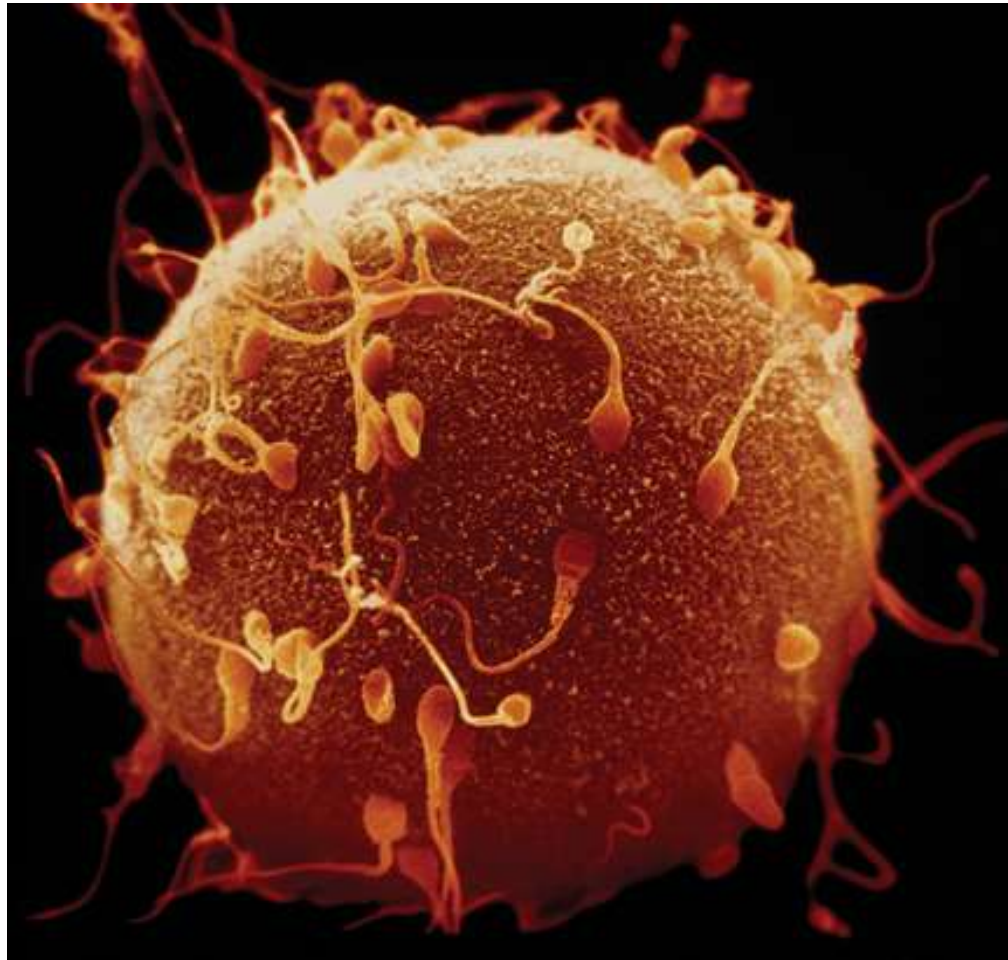
Answer the following questions on a separate piece of paper. You will turn these in put your name on it!!

1. How many languages do you speak? Which ones?
2. What class do you like the most and the least in school?
3. What type of reader are you? Strong, weak or middle of the road?
4. What is your favorite holiday?
5. What is the one hobby/activity you enjoy most?
6. How many siblings do you have? Are you younger or older?
7. Are you a visual learner? More hands on? Prefer lecture? Group activities? You can pick more than one.
8. What bugs you most about school?

6.1 Chromosomes and Meiosis

KEY CONCEPT

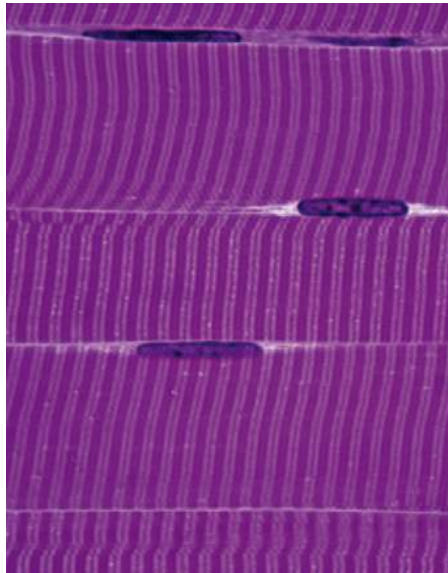
Gametes have half the number of chromosomes that body cells have.



6.1 Chromosomes and Meiosis

You have body cells and gametes.

- Body cells are also called somatic cells.
- Germ cells develop into gametes.
 - Germ cells are located in the ovaries and testes.
 - Gametes are sex cells: egg and sperm.
 - Gametes have DNA that can be passed to offspring.



body cells



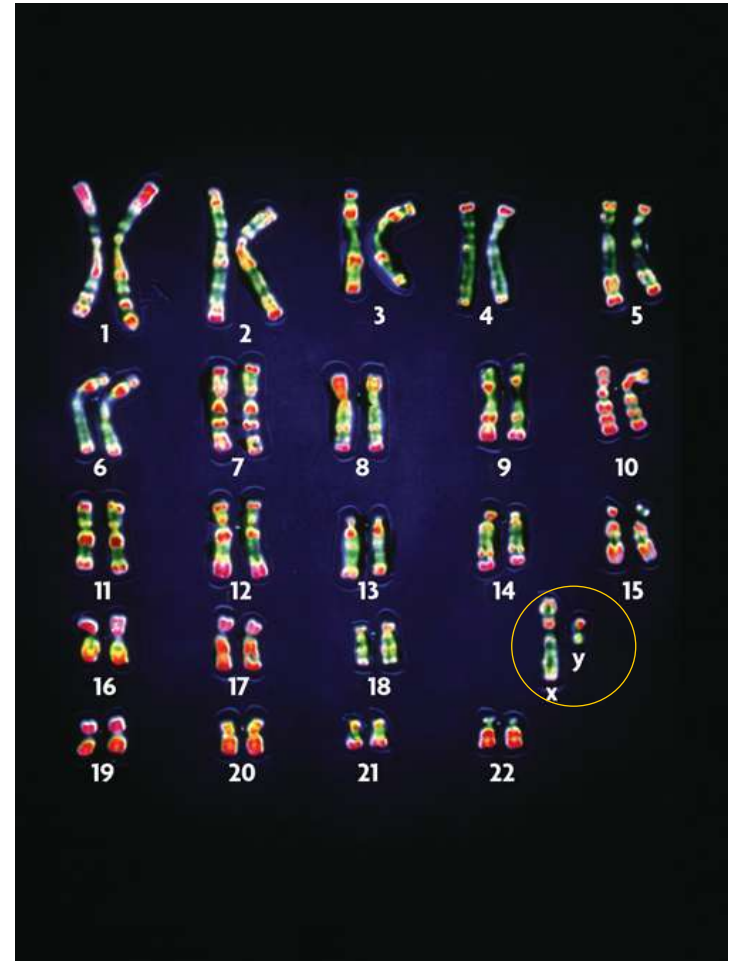
sex cells (sperm)

sex cells (egg)

6.1 Chromosomes and Meiosis

Your cells have autosomes and sex chromosomes.

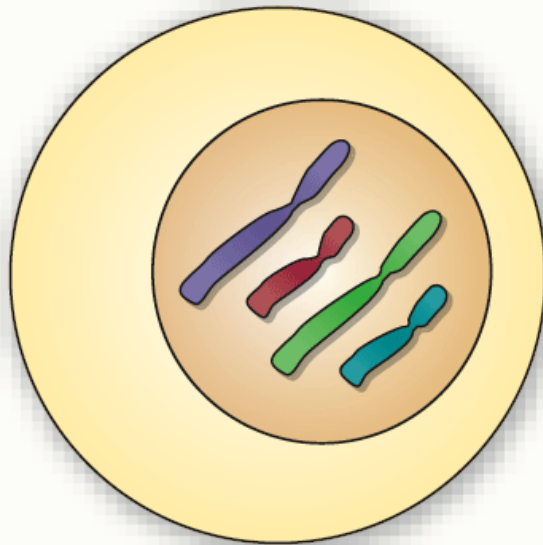
- Your body cells have 23 pairs of chromosomes.
 - Homologous pairs of chromosomes have the same structure.
 - For each homologous pair, one chromosome comes from each parent.
- Chromosome pairs 1-22 are autosomes.
- Sex chromosomes, X and Y, determine gender in mammals.



6.1 Chromosomes and Meiosis

Body cells are diploid; gametes are haploid.

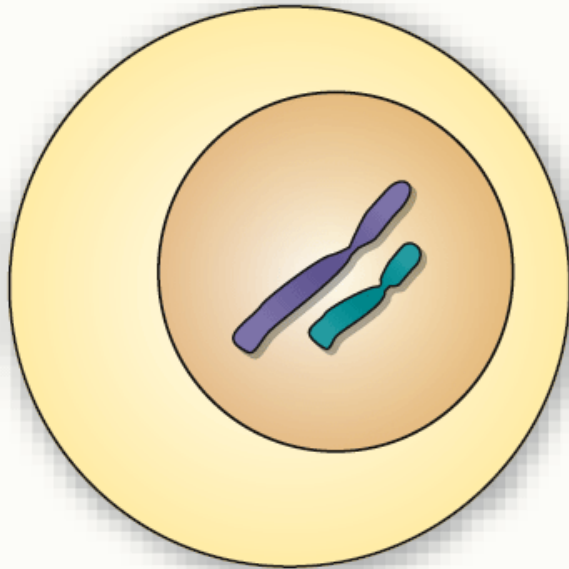
- Fertilization between egg and sperm occurs in sexual reproduction.
- Diploid ($2n$) cells have two copies of every chromosome.
 - Body cells are diploid.
 - Half the chromosomes come from each parent.



Body cells
are diploid ($2n$).

6.1 Chromosomes and Meiosis

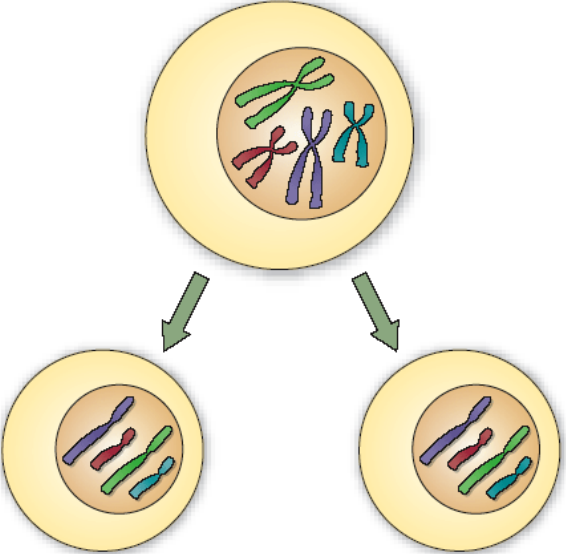
- Haploid (n) cells have one copy of every chromosome.
 - Gametes are haploid.
 - Gametes have 22 autosomes and 1 sex chromosome.



Gametes (sex cells) are haploid (n).

6.1 Chromosomes and Meiosis

- Chromosome number must be maintained in animals.
- Many plants have more than two copies of each chromosome.
- Mitosis and meiosis are types of nuclear division that make different types of cells.
- Mitosis makes more diploid cells.

MITOSIS	
	Produces genetically identical cells
	Results in diploid cells
	Takes place throughout an organism's lifetime
	Involved in asexual reproduction

6.1 Chromosomes and Meiosis

- Meiosis makes haploid cells from diploid cells.
 - Meiosis occurs in sex cells.
 - Meiosis produces gametes.

