

Meiosis

Science 9

Chromosomes

- How many chromosomes do we have?

46

- How many come from mom?

23

- How many come from dad?

23

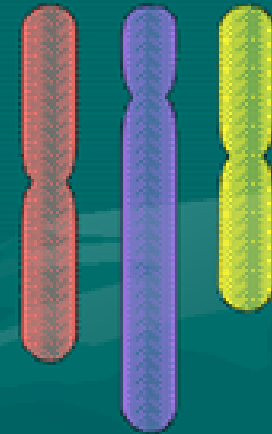
Chromosomes

- The 46 human chromosomes can be broken down into 23 pairs
- One half of each pair comes from your mother and the other half comes from your father
- **Homologous pairs:**
 - A pair of chromosomes containing a maternal and paternal chromatid joined together at the centromere

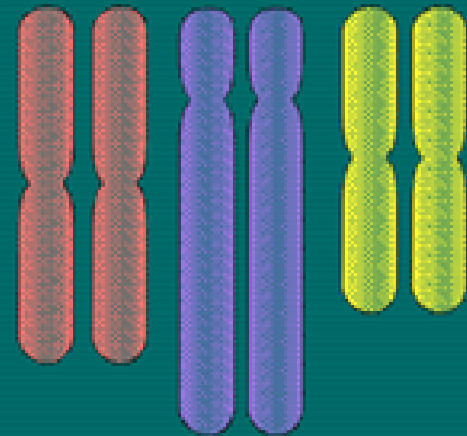
Chromosomes

- **Diploids**
 - A cell containing two complete sets of chromosomes
- **Haploids**
 - Have a single set of unpaired chromosomes

Haploid (N)



Diploid (2N)



Chromosomes

- Gametes
 - Male or female haploid cell that is able to unite with another of the opposite sex in sexual reproduction to form a diploid zygote

Meiosis

- What does mitosis do?
 - Cell growth maintaining number of chromosomes
- Meiosis: *COPY*
 - The process that ensures each gamete contains only one-half set of chromosomes
 - Ensures each gamete has a different combination of the chromosomes that were present before meiosis