

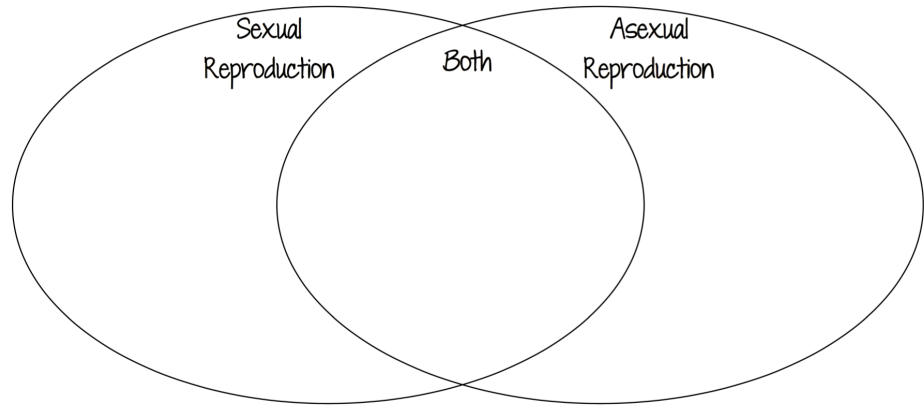
Monday January 30th

Quiz 5.1 Reproduction on Thursday/Friday!

Thurs/Fri Packets Due Tomorrow!

Starter:

Complete this
Venn Diagram!



5.2 Meiosis & Genetic Recombination

Standard Objectives:

- I can describe the general process and outcome
 - I can diagram and describe the phases
- I can describe the potential outcome of the new gamete cells
 - I can identify the TWO events that result in genetic variation in sexually reproducing organisms

5.2 Meiosis Vocabulary

Haploid Cell

- Cell with ONE chromosome set
- Humans = 23; Fruit flies = 8
- Typically sex cells (sperm/egg)



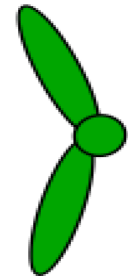
Male Parent

Diploid Cell

- Cell with TWO chromosome sets
- Humans = 46; Fruit flies = 16
- Typically body (somatic) cells



Male Parent



Female Parent

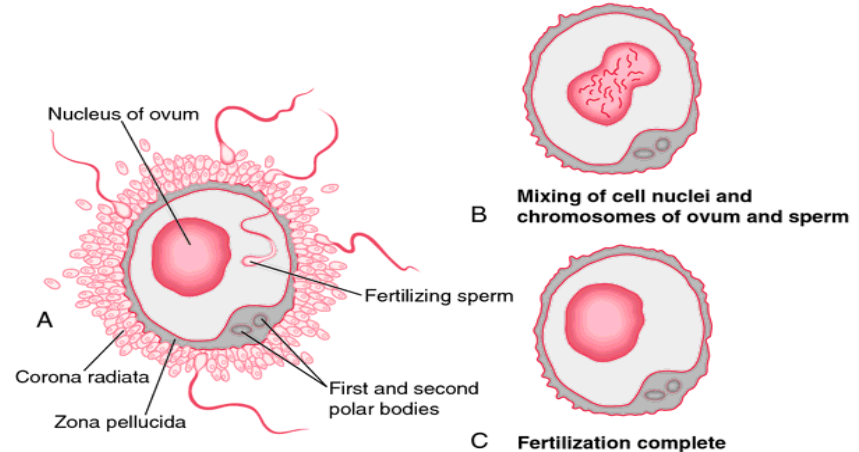
5.2 Meiosis Vocabulary

Gamete

- Haploid sex cell produced via meiosis
- Male = sperm; Female = egg

Zygote

- Diploid cell produced from fertilization
- Sperm + Egg



5.2 Meiosis Vocabulary

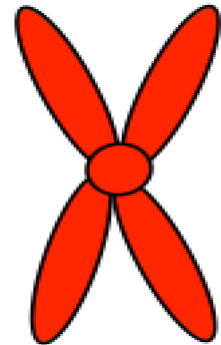
Meiosis

- Production of haploid sex cells
- Cell division in ovaries or testes
- Requires two stages: Meiosis I & II

Sister Chromatids

- Two identical copies of a chromosome
- Sister = copy

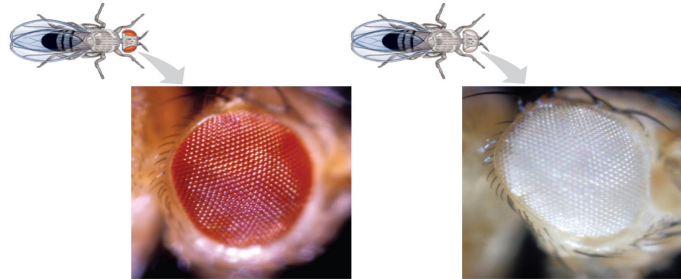
Sisters!



5.2 Meiosis Vocabulary

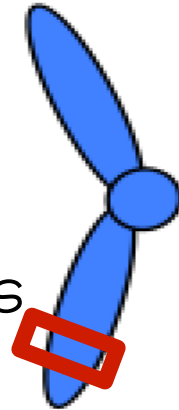
Homologous Chromatids

- Two chromosomes with similar info
- One from male parent
- One from female parent



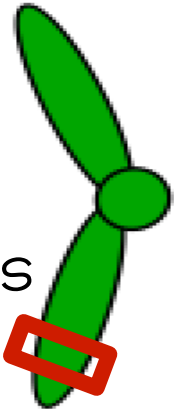
White Eyes
Gene

Male Parent



Red Eyes
Gene

Female Parent



5.2 Meiosis Vocabulary

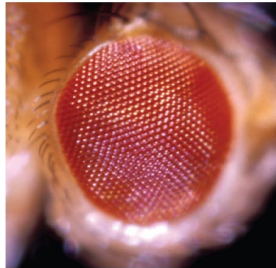
Alleles

- One or more different forms of a gene

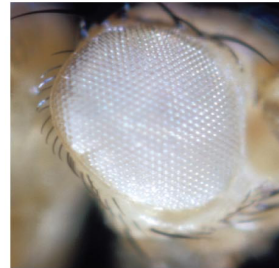
Example:



Red Eyes
Gene



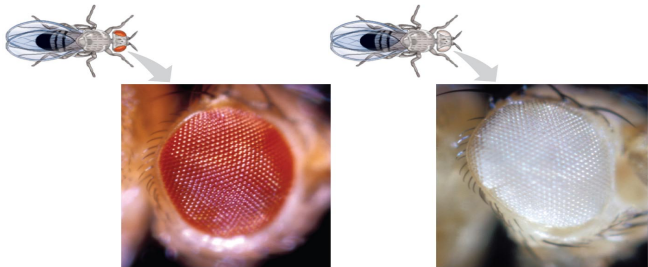
White Eyes
Gene



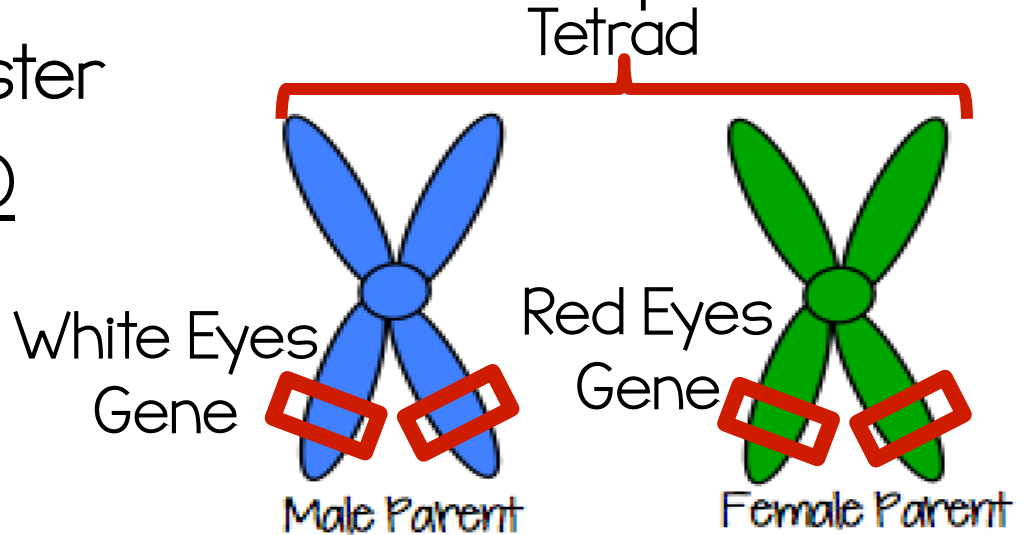
5.2 Meiosis Vocabulary

Homologous Sister Chromatids

- Chromosomes from male and female parents
- AND each have sister
- Creates a TETRAD



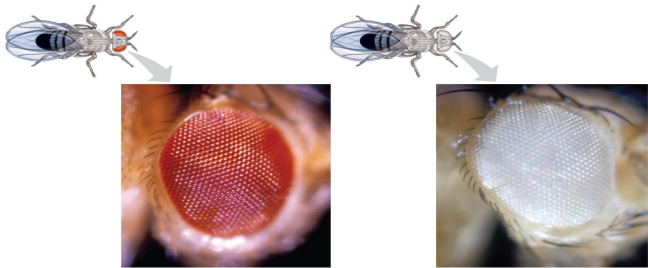
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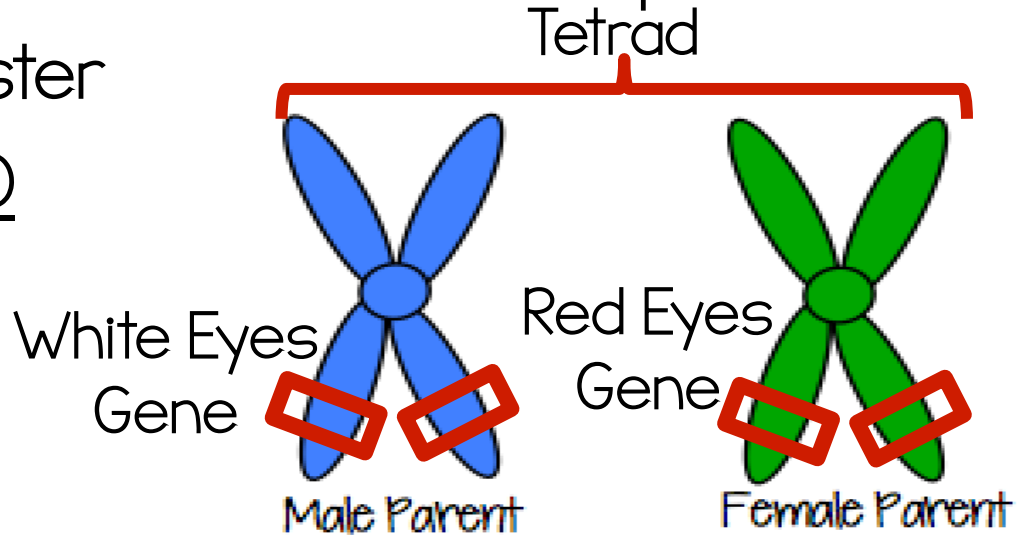
5.2 Meiosis Vocabulary

Homologous Sister Chromatids

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5.2 Meiosis Vocabulary

Reminder: Sexual Reproduction is...

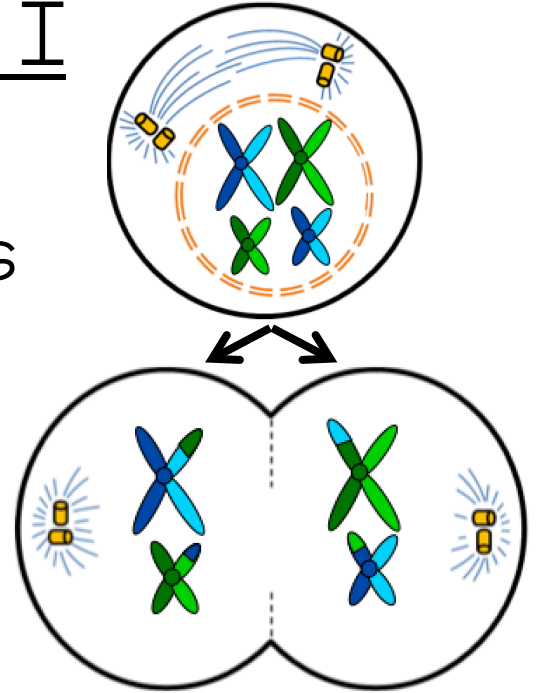
- Fertilization of egg by sperm cell
- Creates one DIPLOID zygote cell
- Creates genetic variation



5.2 Meiosis Vocabulary

Purpose & Outcome of Meiosis I

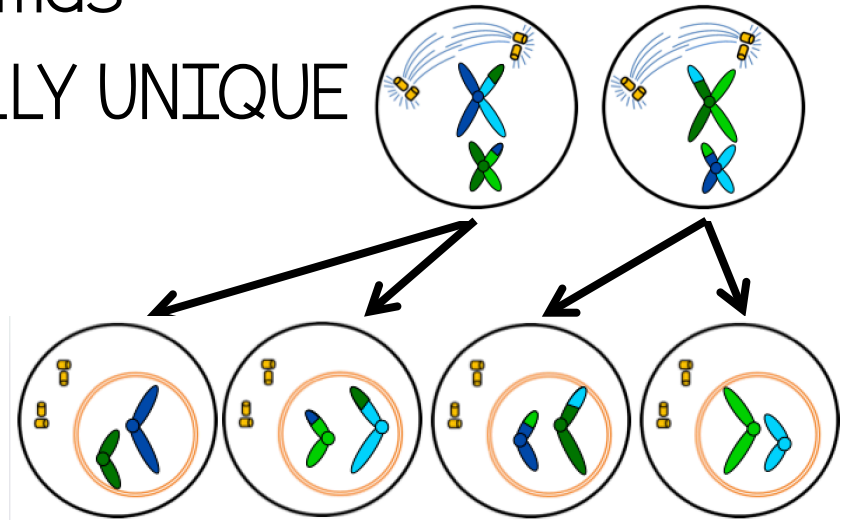
- Create genetic variation
- Separate homologous chromatids



5.2 Meiosis Vocabulary

Purpose & Outcome of Meiosis II

- Separate sister chromatids
- Create four GENETICALLY UNIQUE haploid gametes
- Male = sperm;
female = egg



5.2 Meiosis Vocabulary

Phases of Meiosis

Interphase I

Prophase I

Prophase I

Metaphase II

Metaphase I

Anaphase II

Anaphase I

Telophase II

Telophase I