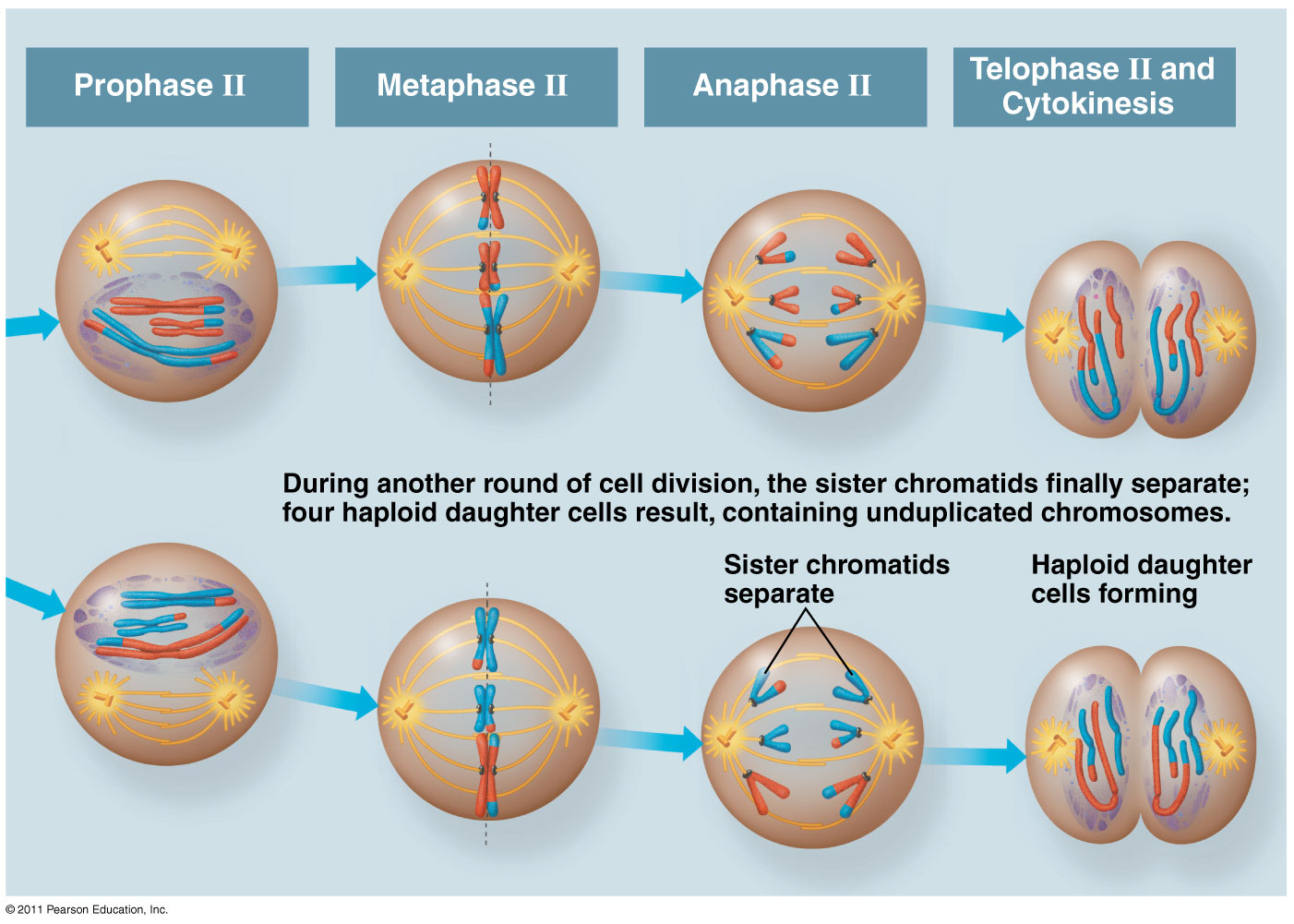
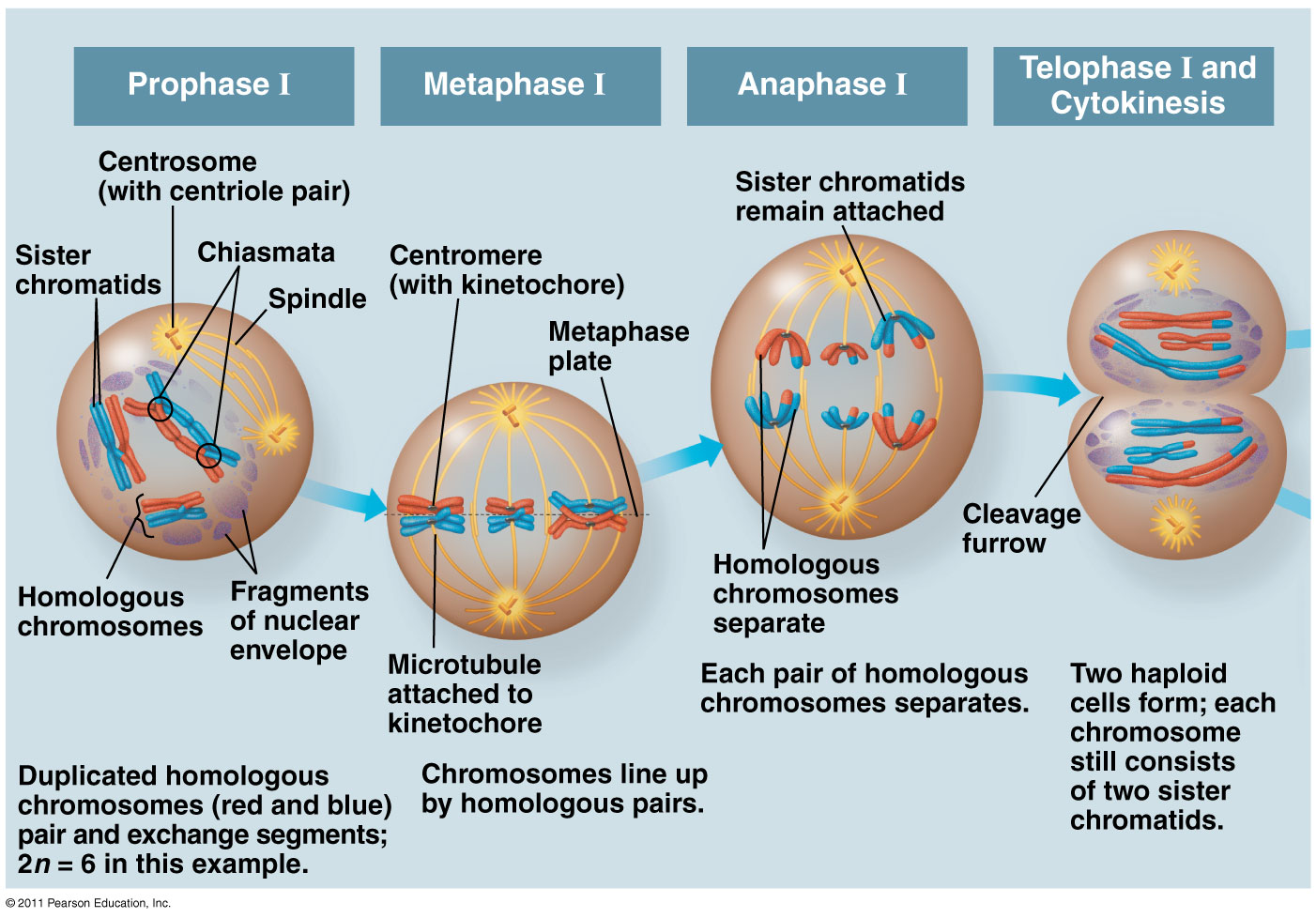
**Ch. 13: Meiosis and Sexual Life Cycles**

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| **Questions** | **Notes** | |
|  | **http://www.elishean.org/wp-content/uploads/2012/11/genes.gifGenes**:  Offspring acquire genes from parents by | |
| **2 Types of Reproduction** | |
| **ASEXUAL**   * Produces * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ parent * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in population - only through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Eg. | **SEXUAL**   * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_produces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * \_\_\_\_ parents: male/female * Lots of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Eg. |
| Chromosomes  **Somatic (body) cell:**  **Homologous chromosomes:**  **Autosomes**:  **Sex chromosomes:**  **Gametes:** | |
| 13_04DescribChromosomes-L.jpg | |
|  | **Karyotype**:  13_03_KaryotypePrep-L.jpg  During what stage of the cell cycle are the pictures usually taken of the chromosomes?    Male or Female?    Male or Female?  http://sun.menloschool.org/~dspence/biology/genetics/images/karyo_abnormal.jpg  Male or Female?  Describe the “abnormality” and how it was formed.  **HeLa Cells**  What?  Who?  Why are they important? | |
| **SUMMARY:** | I have learned | |
|  | **Life Cycle**  *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* and *\_\_\_\_\_\_\_\_\_\_\_\_\_\_* alternate in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **Meiosis**:  **Fertilization**:  **Human Life Cycle Animal Life Cycle**  13_05HumanLifeCycle-L.jpg 13_06aSexualLifeCycles-L.jpg | |
|  | **Alternation of Generations**   * Plant and some algae * **Sporophyte (2n):** makes \_\_\_\_\_\_\_\_\_\_\_\_\_ *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* by \_\_\_\_\_\_\_\_\_\_\_\_ * **Spore** 🡪 gametophyte by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * **Gametophyte** **(n):** makes \_\_\_\_\_\_\_\_\_\_\_\_\_ *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* by \_\_\_\_\_\_\_\_\_\_\_\_   13_06bSexualLifeCycles-L.jpg | |
| **SUMMARY:** | I have learned | |
|  | 13_07MeiosisOverview_3-L.jpg**Meiosis**  Cells divide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Result: | |
|  | 13_UN02Test_Q8-L.jpg**MEIOSIS I**  **Interphase:**  **Prophase I:**   * **Synapsis**: * **Tetrad** = * 13_11aCrossingOver-L.jpg**Crossing over**   **Metaphase I:**  **Anaphase I:**   * Pairs of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ separate * (Sister chromatids still attached by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)   **Telophase I & Cytokinesis:**   * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ set of chromosomes in each cell * Each chromosome = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Some species: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| **13_08bMeiosis-L.jpgMEIOSIS II**  **Prophase II:**   * **No \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** * **No \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ forms   **Metaphase II:**  **Anaphase II:**  **Telophase II:**   * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reappear * Each daughter cell \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |



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|  | http://education-portal.com/cimages/multimages/16/Polar_Body_1.pngWhat are **polar bodies**? | |
| **Events Unique to Meiosis I (*not* in mitosis)**  13_UN01Summary_C3-L.jpg   1. Prophase I: 2. Metaphase I: 3. Anaphase I: | |
| **Sources of Genetic Variation**   1. https://www.kullabs.com/uploads/crossing-over1.jpg**Crossing Over:** 2. **Independent Assortment of Chromosomes** 3. **Random \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | |
| **MITOSIS** | **MEIOSIS** |
| Both are  DNA Replication | |
| * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells * \_\_\_\_\_ division * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ daughter cells * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * From \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to death * Purpose: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * No \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * No \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * \_\_\_\_\_ divisions * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ daughter cells * Genetically \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Females \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ birth follicles are formed. \_\_\_\_\_\_\_\_\_\_\_\_ released beginning \_\_\_\_\_\_\_\_\_\_\_\_\_ * Purpose: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |