Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Differentiation and Development Notes 1**

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| **Human Chromosomes** |
| Every human has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ pairs of chromosomes in every cell of their body!! |
| The total number of chromosomes in every normal human cell is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Th |
| The 1 special pair of chromosomes are the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ chromosomes, they determine if a  person will be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ means the person is a female.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ means the person is a male. |
| Meiosis is: |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_occurs in MEIOSIS only  Exchange of DNA information when ***homologous chromosomes*** cross each other |
| The result of crossing over is an increase of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Draw Crossing Over: |

|  |  |
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| **Mitosis** | **Meiosis** |
| End with the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  of chromosomes as the original cell | End with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  of chromosomes as the original cell |
| One cell divides into \_\_\_\_\_\_\_ identical “daughter”  cells | One cell divides \_\_\_\_\_\_\_\_\_\_ times into \_\_\_\_\_  “daughter” cells |
| **Mitosis continued** | **Meiosis continued** |
| Occurs in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_cells | Occurs in *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an organism* |
| Ending cells have \_\_\_\_\_\_\_\_\_\_of chromosomes | Ending cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have pairs of chromosomes |
| For \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and to replace cells | For the production of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| Gamete: |  | |
| **2 Types of Sex Cells** | | |
| 1. | a cell containing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ chromosomes | |
| 2. | a cell containing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ chromosomes | |
| **Where are gametes made?** | | |
| In females |  | |
| In males |  | |
|  | **Differences in Females and Males** | |
| Females | | Males |
| meiosis results in the production of \_\_\_\_\_\_ egg cell | | meiosis results in the production of \_\_\_\_\_\_\_\_\_\_\_ sperm cells |
| Babies are born with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that will become eggs (but they are immature) | | Babies are born with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that will become sperm |
| After puberty- one egg will be made every  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ until eggs run out | | After puberty, sperm is made \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ until death |
| Menopause: | | |