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**Non-Disjunction Review Activity**

**Purpose:** This assignment is a review of non-disjunction. Do as much as you can without your notes, but use them if you need to.



**Journal Set-Up:**

1. Draw the image to the right twice into your journal, on two separate pages. Each set of circles should take up nearly an entire page.
2. Label each circle on both pages with the correct phase of Meiosis
3. Draw a key, identifying separate colors for the DNA from the organism’s dad and mom
4. Label the first set of circles “Non-Disjunction 1” and the second set of circles “Non-Disjunction 2”

**Directions:**

1. In the first set of circles labeled “Non-Disjunction 1” diagram Meiosis when non-disjunction occurs in one pair of chromosomes during **anaphase 1.**
   * Begin with a **diploid (2n)** cell, with **6 chromosomes** total
   * Be sure to show chromosomes from each parent
2. In the second set of circles labeled “Non-Disjunction 2” diagram Meiosis when non-disjunction occurs in one pair of chromatids during **anaphase 2.**
   * Begin with a **diploid (2n)** cell, with **4 chromosomes** total
   * Be sure to show chromosomes from each parent

**Analysis questions:**

1. What percentage of the daughter cells from “Non-Disjunction 1” displayed a form of **aneuploidy?**
2. More specifically, of the daughter cells from “Non-disjunction 1”:
   1. How many displayed **monosomy?**
   2. How many displayed **trisomy?**
   3. How many were **normal?**
3. What percentage of the daughter cells from “Non-Disjunction 2” displayed a form of **aneuploidy?**
4. More specifically, of the daughter cells from “Non-disjunction 2”:
   1. How many displayed **monosomy?**
   2. How many displayed **trisomy?**
   3. How many were **normal?**
5. Define **aneuploidy** in your own words.