**Split Your Sides**

**Procedure**

1. **Collaborate** Work with a partner. On a large sheet of paper, draw and label six circles.

2. **Use Models** Cut six pieces of yarn of one color: two 2 cm long, two 4 cm long, and two 6 cm long. These pieces of yarn represent three pairs of chromosomes. Place the pairs in the circle labeled *immature female sex cell*.

3. Repeat step 2 with the other color of yarn and place the pairs in the circle labeled *immature male sex cell*. In the space below, draw your model and label it *Before Splitting*.

4. **Experiment** Split each pair of chromosomes in the immature female sex cell and put one chromosome in each of its egg cells. Repeat the process with the immature male sex cell and its sperm cells.

5. **Record Data** Tape the pieces of yarn to the paper in their new positions. In the space below, draw your model and label it *After Splitting*. 
Conclusion

Write the answers to the questions below.

1. **Compare** How does the arrangement of chromosomes in your model before splitting compare with that after splitting?

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2. **Infer** How are egg cells and sperm cells like the sex cells that they come from? How are egg cells and sperm cells different from the sex cells that they come from?

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**Investigate More!**

**Design an Experiment** Make a new model to explore what would happen if an egg cell and a sperm cell combined to form a new cell. How would the new cell be similar to and different from the original immature sex cells?