

## Reproduction and Cells

Name \_\_\_\_\_

**Introduction:** In this activity you will draw cells from two organisms that undergo different types of reproduction. Asexual reproduction occurs when animals can either divide in two to form two new individuals or a part of their bodies can grow into a new organism. Some asexual reproduction occurs in plants that produce **spores**, which are produced during mitosis, or simple cell division.

Sexual reproduction requires cells from two organisms which combine to form the new offspring. The cells required are called egg and sperm and are produced in specialized reproductive organs in a process called meiosis.

In this activity you will see how sexual and asexual reproduction are alike and different.

**Materials:** “chromosomes” made from 8 strips of paper of 4 different colors. Two color pair should be the same length but different from the other pairs. Colored pencils are optional

### **Procedures:**

1. On the back of this paper are two pathways of cell division. You will model the cell division on your desk and then draw it on the paper.
2. Listen as your teacher tells you how to place the chromosomes and make your drawing as you go. If you have colored pencils, use them for the chromosomes.
3. Answer the questions and complete the Venn Diagram when you are finished.

### **Analysis:**

1. What is an organism that reproduces asexually? Sexually?
2. How are the two processes alike?
3. How are they different?
4. How does meiosis produce an organism with all 4 chromosomes?
5. Why is meiosis sometimes called “reduction division”?

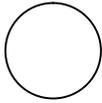
**For Homework.** Find or make sets of chromosomes (see materials) Explain and show an adult and a peer (someone around your age) how mitosis and meiosis look, using your materials. Have them sign below to indicate you explained and showed it carefully.

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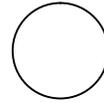
Adult

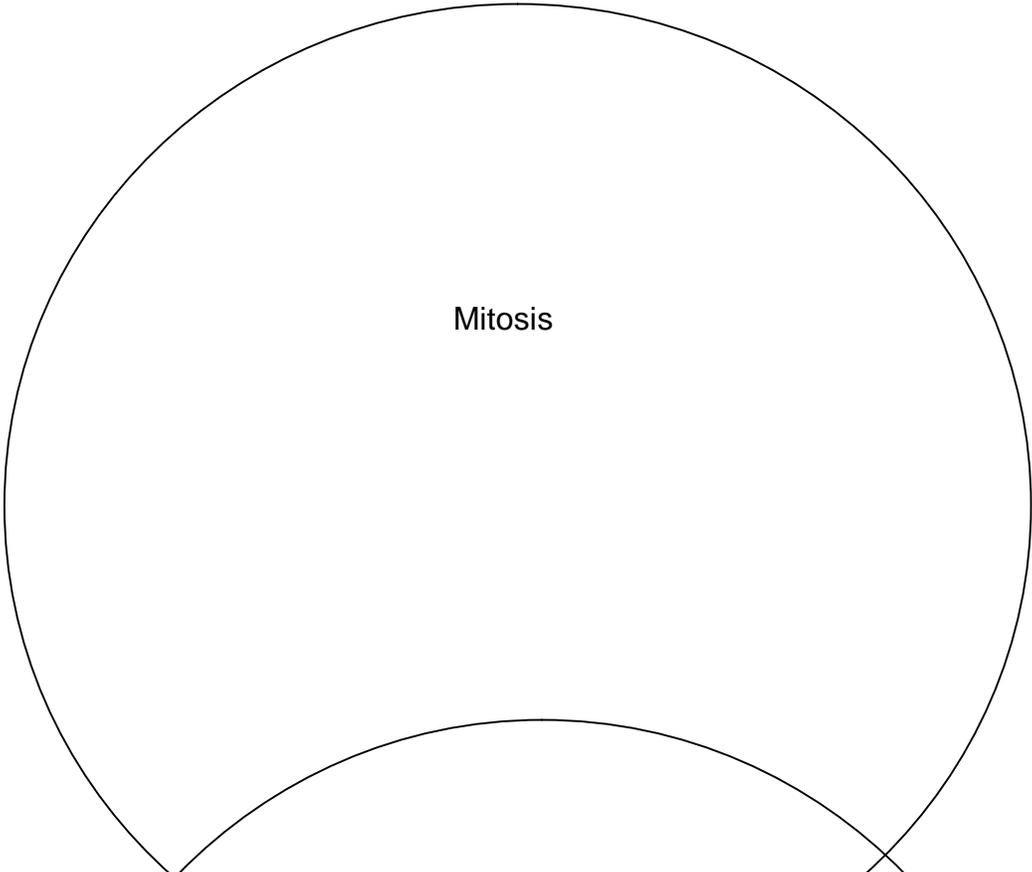
peer

**Mitosis**

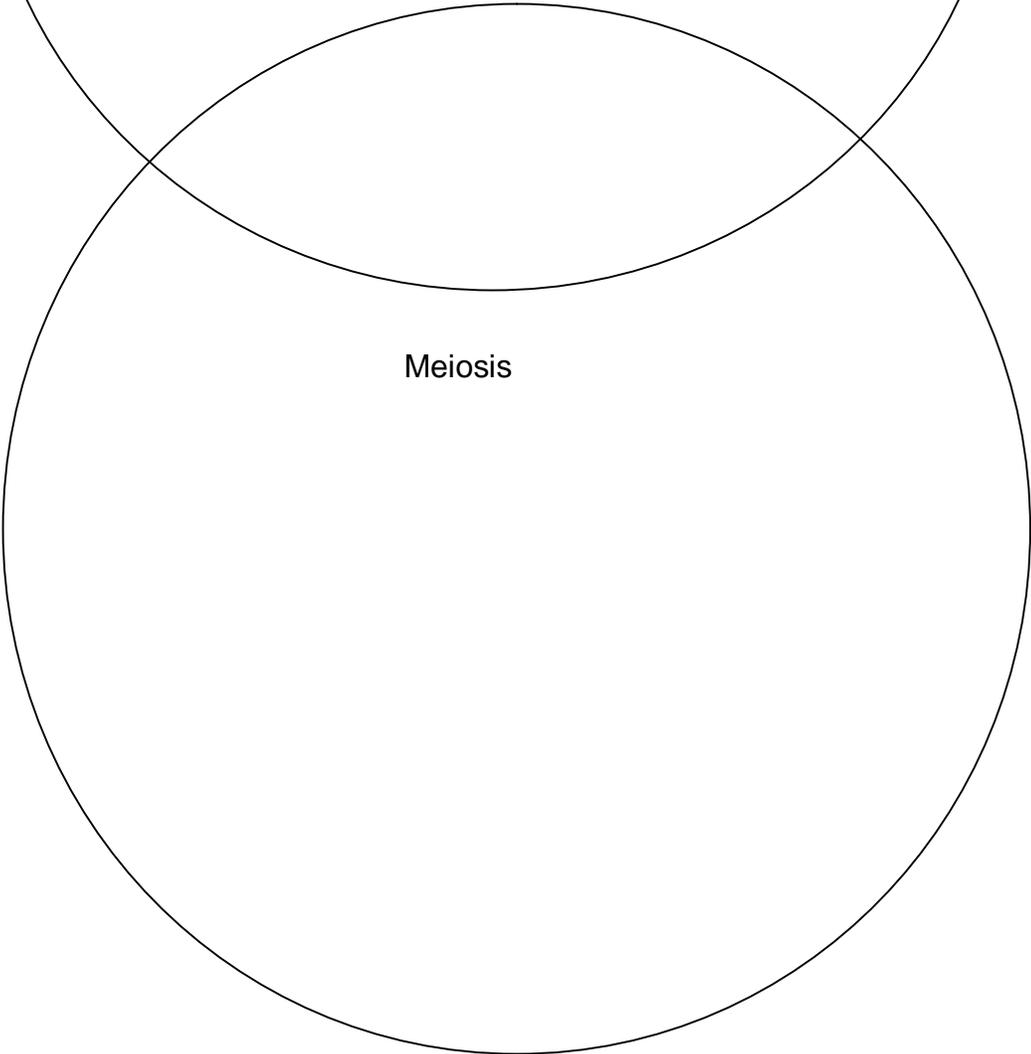


**Meiosis**





Mitosis



Meiosis