

## Paper Clip Creatures



*Essential Question: How do births and deaths affect the size of a population?*

### Overview

In this activity, you will play a counting game with paper clips. Pretend that when two paper clips are connected, they become a living “paper clip creature.” When paper clips are separated, the creature dies. In a fixed time period, called a “year,” the “storks” in your group will try to give birth to as many paper clip creatures as possible by fastening paper clips together. At the same time, the “grim reapers” will try to destroy as many paper clip creatures as possible by separating paper clips.

### Materials

For each group:

- 1 empty pie tin or pie pan
- 1 box of 100 jumbo paper clips
- 1 stopwatch

### Safety Concerns

When finished, return all materials as instructed by your teacher.

### Procedure

#### **Part 1**

1. In your group of five, assign the following roles: two storks, two grim reapers, and one timer.
2. Count the number of unconnected paper clips and write the number in Data Table 1 by year 0. There should be no living paper clip creatures (connected paper clips) at the beginning.
3. The timer should announce “start” and amount of time for a “year.” For this activity, a year will last 30 seconds. Storks should try to fasten together as many paper clips as possible and return the pairs to the pile. Grim Reapers should try to separate as many paper clips as possible. Continue working until the time runs out.
4. Count the number of living paper clip creatures and unconnected paper clips in the pile. Record your results on the data table. Do not disconnect any connected paper clips at this time.
5. Repeat Steps 3 and 4 until you have run five years total.