

Team: _____

Mark and Recapture Bird Survey Simulation

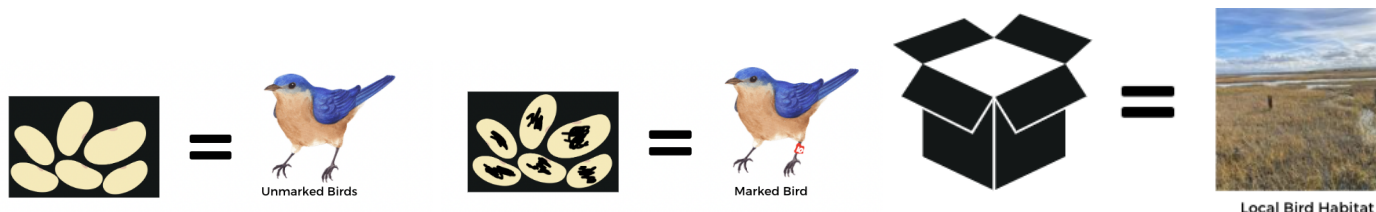
Materials needed:

- Dry beans in a container (box, bowl, etc)
- Markers
- Cups
- Worksheets

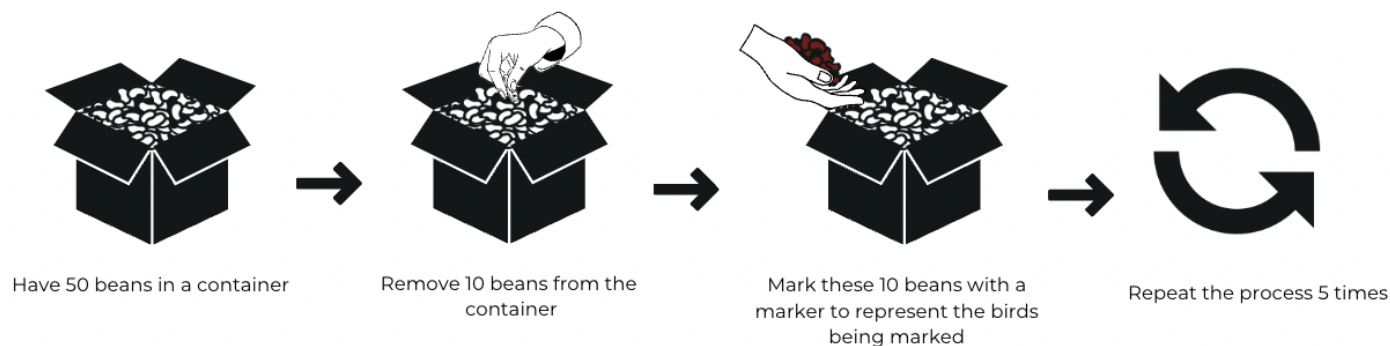
In partners or small groups: Today you will be an ornithologist at a banding station. Complete the following mark and recapture procedure to simulate bird banding.

Task #1

1. Reach into the box containing ~50 beans and remove 10.
2. With a marker, “mark” each of the 10 beans to represent the birds you have captured and banded.
3. Record the number of already and newly “marked” birds on the worksheet:
 - a. Already captured birds = beans with marker.
 - b. Newly captured birds = beans without marker.
4. Repeat the process five times.



Procedure:



$$\text{Population Estimate} = \frac{\text{First Recapture} \times \text{Recapture Total}}{\text{Recapture Marked}}$$

Calculate your population estimate. Show your work here:

Task #2

Explain why recapture is used and how it estimates population size accurately.

Task #3

Try randomly taking out or adding kidney beans between rounds to signal births and deaths. What happened? Show your work.

