

# Designcraft for experiments

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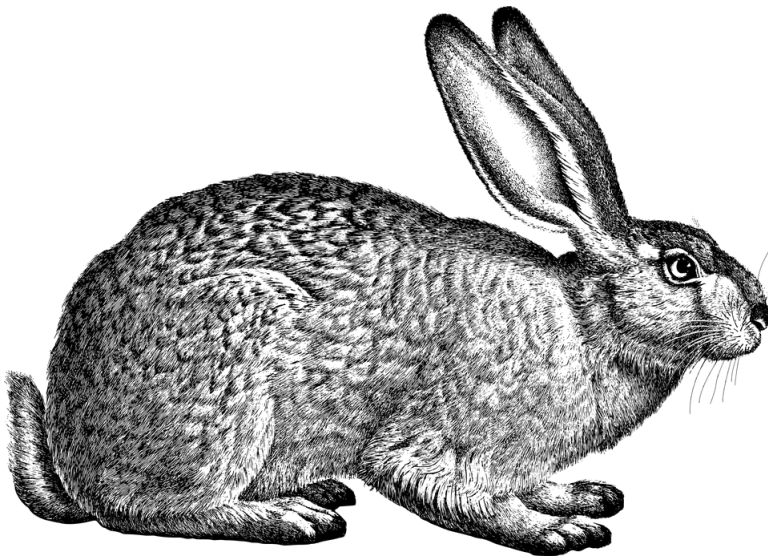
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# Chapter 1

## Introduction



Welcome to experimental design. There are two sets of three exercises provided to explore principles for better experiments. This is a simple book to support the practical, at-home learning associated with experimental design.

There are two primary modules. Field experiments comprises three outdoor experiments to explore sampling heterogeneous, complex processes in natural systems. The purpose is to provide choice. You need to try each, briefly, as a pilot experiment only. Then, select one to pursue in depth and write up. The data experiments describe the opportunity to use design thinking to structure existing data that others have already collected. The same principles for better experiments still apply in how you reuse the data. There are also three examples provided. Select only one and write up.

**1.0.0.1 Gear and prep for field experiments**

**1.0.0.2 Prerequisites for data experiment**



## Chapter 2

# Balcony birdwatching

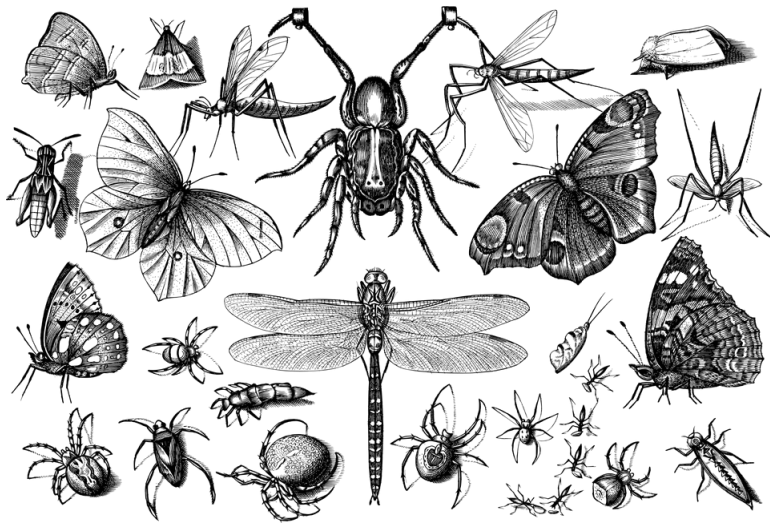


Bird observation, from a distance.



## Chapter 3

# Backyard bioblitz



A bioblitz is a biodiversity survey that is done rapidly for a specific place.





## Chapter 4

# Solo surveys



Distributed ecological networks often use surveys done by individuals or small-teams to compile data on species or communities. Transects and quadrats are typically used to structure these ‘walk-through’ surveys to estimate abundances and distributions of focal species.



## Chapter 5

### Magic data



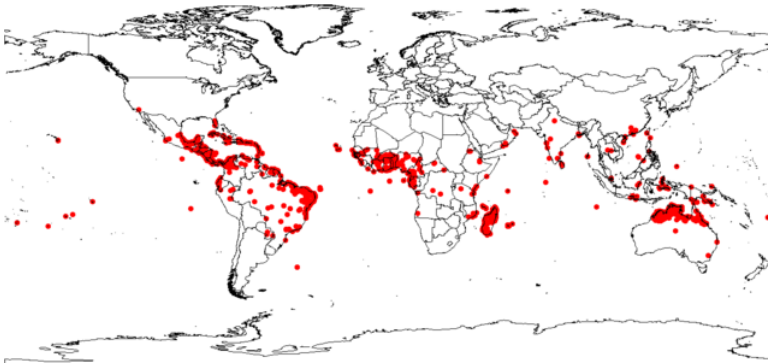
Magic the Gathering is a popular collectible card game that includes strategy and chance.





## Chapter 6

# Diversity data



Diversity data from ebird or any citizen science project.



## Chapter 7

# Human data



Data associated with humans. Fitbit steps and sleep.



## Chapter 8

# Final notes

Observations and conclusions.