

# 06 Activity: Maps as Processes

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## Highlights:

This is my mini-reflection. Paragraphs must be indented.  
It can contain multiple paragraphs.

## Threshold Concepts:

threshold concept 1  
threshold concept 2  
threshold concept 3  
threshold concept 4

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## Practice Questions

Answer the following questions:

1. What is a Geographic Information System?
2. What distinguishes a statistical map from other types of mapping techniques?
3. What is a null landscape?

## Learning Objectives

In this activity, you will:

1. Simulate landscapes using various types of processes.
2. Discuss the difference between random and non-random landscapes.
3. Think about ways to decide whether a landscape is random.

## Suggested Reading

O’Sullivan D and Unwin D (2010) Geographic Information Analysis, 2nd Edition, Chapter 4. John Wiley & Sons: New Jersey.

## Preliminaries

For this activity you will need the following:

- An R markdown notebook version of this document (the source file).

It is good practice to clear the working space to make sure that you do not have extraneous items there when you begin your work. The command in R to clear the workspace is `rm` (for “remove”), followed by a list of items to be removed. To clear the workspace from *all* objects, do the following:

```
rm(list = ls())
```

Note that `ls()` lists all objects currently on the workspace.  
Load the libraries you will use in this activity:

```
library(tidyverse)
```

In the practice that preceded this activity, you learned how to simulate null landscapes and spatial processes.

### *Activity*

**NOTE:** Activities include technical “how to” tasks/questions. Usually, these ask you to organize data, create a plot, and so on in support of analysis and interpretation. These tasks are indicated by a star (\*).

1. (\*)Simulate and plot a landscape using a random, stochastic, or deterministic process. It is your choice whether to simulate a point pattern or a continuous variable. Identify the key parameters that make a landscape more or less random. Repeat several times changing those parameters.
2. Recreate any one of the maps you created and share the map with a fellow student. Ask them to guess whether the map is random or non-random.
3. Repeat step 2 several times (depending on time, between two and four times).
4. Propose one or more ways to decide whether a landscape is random, and explain your reasoning. The approach does not need to be the same for point patterns and continuous variables!