Tips for Pattern Journal

Format:

1. Title of Pattern
   • Location of where the pattern was observed
   • Time and date of observation

2. Brief statement of pattern (one or two sentences)

3. Written description of pattern

4. Drawing

5. Graph

Statement of Pattern

• A pattern is recurring and has to be repeatedly observable. It is not just an observation of some phenomenon in nature.

• Think of the dependent vs. independent variable when formulating your pattern statement.

• When you state a pattern make sure you also include the negative (something is absent from an area or doesn't happen at a certain time). For example: Ice plant is found along the edge of the cliff but not further inland. To just say ice plant is found at the cliff is not a pattern.

Written description of the pattern

The written description should be sufficient to convey the pattern to someone who is not familiar with the system or who might want to go out and try to observe the same pattern themself. In light of this you should (1) begin by stating where and when you observed the pattern. Then (2) describe the pattern clearly and completely, making mention of the features which you found particularly striking. You might want to make some notes about mechanistic factors that might affect the pattern, but try to keep this part of the assignment descriptive. Do not state hypotheses in this section. Emphasize the features of the pattern that are pertinent to the goals of your future project and will help you formulate hypotheses about your observations. Describe in detail what you see, hear, feel, tastes, or smell. Conclude with (3) a separate sentence or two in which you state very succinctly the specific pattern you are focusing on. Identify the specific
parameters of interest (light intensity, temperature, plant size, height above water surface, etc) and the observed relationship(s). Reread your description and ask yourself “based on this information could a stranger go out and duplicate my observation(s)?”

• Focus on the important features of the pattern.

• For every observation you are including in your description, ask yourself: does this convey information regarding the pattern I stated?

• Do not include everything you see in front of you, but include enough information so that the pattern is understandable in the context in which you observed it.

• Include species names if you know them otherwise describe the species.

**Drawing of the pattern**

Draw the pattern you have observed. Include as much relevant information as possible (eg. labels, scale bars, distances between objects, colors etc.) to help orient the reader. Although it can be difficult with some patterns the goal of this part of the exercise is to be able to describe the pattern based solely on the illustration. Look at the drawing you have created and make sure a person could describe the focal pattern without reading your verbal description.

• Reader should be able to describe the pattern from looking at the drawing.

• Think about the way you draw your pattern – your drawing should not be a ‘photographic’ representation what you see in front of you it should focus on the important features that define the pattern.

• Leave out anything that doesn’t inform the pattern.

• Think about the perspective you use: cross sections, aerial views, etc.

• Label your drawing. If there are zones identified in the illustration, label them.

• Behavioral patterns are often tricky to draw - be creative.

**Graphic description of pattern**

The graph should clearly and quantitatively describe the pattern. There are three fundamental components to every graph. A **figure legend** describes the pattern (or
result) that the graph is trying to illustrate. It also explains the units and • Independent variable on horizontal axis, dependent variable on vertical axis.

• Orientation of axes (high to low, small to large, etc…)

• Label the axes and give the units (e.g., number of individuals, percent cover, bites per minute)

• Include a title and/or figure legend.

• Draw theoretical curves, you don’t need to draw curves that look like real data (don’t make up statistical tests).

• Remember that only continuous variables are plotted continuously (i.e. a line connecting observations over time or along a spatial gradient), whereas categorical data (e.g., number of individuals or observations in different habitats) are plotted as bar graphs.

• Think about linear vs. non-linear relationships when you draw a curve