**STAT 441/541 Statistical Methods II**

**Fun with Experimental Unit**

**Experimental Unit**

The smallest physical entity to which a treatment can be randomly assigned.

**Scenario**

Consider a situation where someone wants to evaluate polluted stream water for its effect on fish lesions. They set up 2 aquaria, each with 50 fish. They randomly assign a water treatment (polluted vs. control) to each of the aquaria. After 30 days, they catch 10 fish from each aquarium and count the number of lesions.

What are the treatments?

What is the experimental unit?

What is the response variable?

What is the treatment design?

What is the experiment design?

What type of analysis can be performed?

See the following website for the answers to these questions:

<https://onlinecourses.science.psu.edu/stat502/lesson/6/6.1-0>