# Using WG t-test instead of WG ANOVA to do ANOVA SPSS Hw

With all the different versions of and vendors for SPSS, you might have ended up with an SPSS that doesn't have the "GLM: Repeated Measures" module that is needed to do a WG ANOVA. But, there is a work-around if the version of SPSS you have doesn't have that module!

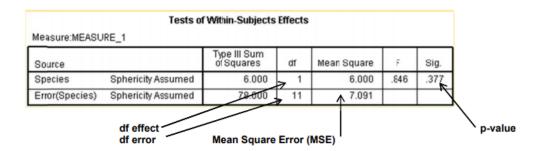
The thing is that a 2BG ANOVA and a BG t-test are slightly different mathematical approaches to comparing the DV means from the conditions of a 2WG research design! So, you can run a WG t-test and then easily convert the t-test results to "F-test results"

Look at the WG t-test handout to see how to run the analysis: http://psych.unl.edu/psycrs/statpage/2wgt\_spss.pdf

Here's how to convert the t-test results into the answers for the WG ANOVA homework questions...

## **WG ANOVA results**

Descriptive Statistics							
	Mean	Std. Deviation	N				
rating of reptile quality - 1- 10 scale	5.67	2.498	12				
rating of fish quality - 1-10 scale	6.67	2.146	12				



# WG t-test results

#### Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	rating of reptile quality - 1- 10 scale	5.67	12	2.498	.721
	rating offish quality - 1-10 scale	6.67	12	2.146	.620

### Paired Samples Test

		Paired Differences					
		Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pair 1	rating of reptile quality- 1- 10 scale - rating of fish quality- 1-10 scale	-1.000	3.766	1.087	·.920	11	.377

Notice the ns, means and standard deviations all match!!

To computehe various reporting values for the WG F questions on the assignment

ANOVA F =  $t^2 = .920^2$   $\rightarrow$  .864 ANOVA df effect  $\rightarrow$  always = 1 ANOVA df error = t-test df  $\rightarrow$  11

All of which match the values from the ANOVA output!