

CF2++	Name	Section Day(s)	Section start time
Component Computer Fundamentals		Module Basic data gathering and manipulation	
Work commenced on:		Work wrapped up on:	
Module Overview: Computers are great at storing and manipulating structured data--meaning information that is organized in a consistent way. Many great tools exist for sorting through, finding patterns, and presenting structured data. This module explores the process of creating a data schema (structure), gathering data using that schema, processing, and finally analyzing that data in a spreadsheet.			
Learning objectives As you review each objective, pause to fill in any gaps in understanding you have			
Mastery?	Objective	Type	
	Formulate "thick" research questions that can be explored using numeric data analysis tools	Data brain	
	Design a data schema (structure) in a spreadsheet to capture data related to the research questions.	Data brain	
	Investigate trends in a dataset using spreadsheet functions: sum(), average(), sumif(), correl(), stdev()	Spreadsheet	
	Visualize finding from the data using various kinds of charts and make conclusions related to the RQs	Presentation	
Hamburger Contents: Check 'em off! Assemble all of these items and slide them into this document folded <i>hamburger style</i> . Place on the right pocket of your folder, please.			
Got it?	Description		
	One-page description of your research questions, your data gathering plan, and a data guide for your data schema		
	Your field data collection forms (not digitized)		
	A printout of your digitized data in a well-formatted spreadsheet		
	A description of the analysis tools you used their results, and a discussion of what the analysis means for your question		
	This hamburger – thoughtfully completed!		

Analysis Functions

Spreadsheets allow us to use data in cells as inputs and outputs of various functions, such as the sum() function with adds together values in the specified cells. Make little module diagrams with inputs and outputs for 3-4 functions you used in your analysis:

The Heart of the Matter

1) What conclusions about your research question was your data able to support? Give an example and provide evidence from your actual data analysis.

2) What are the limitations of our data analysis in this exercise? What kinds of conclusions are we unable to make given our sampling and collection methods? Hint: Do some reading on Wikipedia about "statistical significance" and "establishing causality".