# Lab 2: Sternberg lecturer’s notes

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These lab classes were developed at the University of Nottingham as part of the first year course in BSc (Hons) Psychology, with support from the Higher Education Association Psychology Network (HEA-PN). The materials provided here may be distributed freely, but please acknowledge the University of Nottingham and the HEA if you use them.

## Learning objectives for this class

* The basic components of the PsychoPy Builder view
* Sternberg’s study of short-term memory
* The need for more trials and/or subjects

## Basic structure

* Talk pt 1:
  + The components of PsychoPy Builder view
  + Sternberg – parallel, serial and serial exhaustive searches
* Break
* Run the Sternberg task (this takes longer than Stroop and needs good attention for good data)
* Talk pt 2:
  + More trials, or more subjects?
  + Excel analysis (filtering, sorting, auto-filling)

## Lecture slides pt 1

These are fairly self-explanatory. I would recommend using the screenshots rather than going through the elements yourself (but get the students to view the actual Builder window as you do so).

## Lecture slides pt 2 - analysis

The analysis is much more involved, so make sure you read it through thoroughly before running the class.

* Excel – sort all data by target presence

Obviously you need to make sure that students sort all data together (not just one column, which results in shuffling). Either get them to “Select All” or to select none.

* Excel - filter out incorrect RTs

I don’t actually much approve of this practice and don’t think it makes any difference in this instance. But others disagree. (Could skip).

* Excel – repeat for all trials

Check that the students have got this and wait for hands to go up – they often don’t click correctly on the corner and need a demonstrator to show them

* Excel – using auto-fill

Could get students to have a go at some variants of this

* Excel – create columns for present/absent
* Excel – calculate averages by set size

The slide suggests typing, but you could use the formula menu if you prefer?

* Excel – repeat for the other conditions
* Plot a graph of your data

Given that Excel moves the plotting functions with every new version, make sure you’ve checked how to do this on the same version as in the class!

* Compare with the predictions
* Some example (real) data

If the student’s data didn’t work (especially if it’s noisy) then this shows what *normally* happens