

A hand holding a blue pen is writing on a piece of paper with cursive text. The background is a light, slightly blurred image of the hand and pen. A white rectangular box with a black border is overlaid on the image, containing the title and contact information. A green vertical bar is on the left side of the box, and a green horizontal bar is at the bottom.

WRITING THE METHODS

UHCL Writing Center

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STEP ONE

WRITE IT FROM MEMORY

Start off by writing what you did in the experiment from memory, without consulting your lab protocol or manual.

You'll be tempted to peek, but avoid referencing it until you have gotten to the end of the experiment in your writing.

You want it to be in your own words.

STEP TWO

CHECK FOR MISSING DETAILS

Once you have written out the process from memory, it is time to grab your protocol and make sure you didn't leave anything out.

Do not edit your writing to match the STYLE of the protocol. If the protocol is like a supper recipe, then your Methods Section needs to be like you telling someone else how you prepared it that night. You're just checking the recipe (protocol) to make sure you don't leave out a crucial ingredient (step).

The next few pages give you some reminders to check that your Methods Section has all the necessary details.

DON'T FORGET:

STUDY SUBJECT

You need to clearly mention what is studied at least once. Did you actually name it, or did you use vague terms such as “the subject” or “the solution” throughout the entire section? Calling it by those names later is fine as long as your reader knows what exactly you are referring to.

DON'T FORGET:

SAMPLE SIZE AND NUMBER OF TRIALS

The sample size refers to how many subjects you test.

The number of trials refers to how many times you repeat the experiment.

It's like the ratings and reviews when you shop online. You're probably more likely to buy something if there are reviews to read (and if they are good, but that point is not relevant here).

DON'T FORGET:

C O N T R O L S U B J E C T

Your control subject is the subject you used to establish a baseline. You measured what you are looking for (pH, growth rate, etc.) without applying the conditions of the experiment to this subject.

Some protocols don't use a control subject. If you used one, clearly point it out.

DON'T FORGET:

CONTROLLED VARIABLES

The controlled variables are things that you did not change in the experiment. Example: the temperature was kept the same for all samples throughout all trials.

Don't make your reader assume which variables were controlled.

Plus, if you are writing for a grade, these details will help you make your word and/or page count.

DON'T FORGET:

MEASUREMENTS / CRITERIA

You'll need to include what measurements you took and how you took them. DO NOT include the results. You'll put the results in the results section, but if they randomly appear with no reference to how you got them, it will look suspicious.

Example: the temperature was taken with a Grainger thermometer

If your study features animal behavior or humans and you have a set of inclusion or exclusion criteria, those criteria need to be mentioned in detail as well.

DON'T FORGET:

EQUIPMENT

For each piece of equipment you use, you need to include as much detail as you can. This applies to measuring devices, chemicals, and specimens (living organisms).

Be sure to include:

- Name (scientific name for living organisms)
- Brand (equipment/chemicals) or Supplier (chemicals/organisms)
- Version and/or Model Number
- Description of any other details you think are important but do not fall into above categories

DON'T FORGET:

ANALYSIS

Did you analyze your data?

If so, how?

DO NOT include the results of your analysis. You'll put the results in the results section, but if they randomly appear with no reference to how you got them, it will look suspicious.

Example: the mean temperature was calculated +/- standard deviation using Microsoft Excel