

## The IMRD form

IMRD stands for Introduction, Methods, Results, Discussion. It is a standard format for practically all published scientific journal papers today. The IMRD format works great for physical experiments, and with some adaptation it can work for most technical business writing.

Introduction – in a business setting, the overview structure described before can function as the introduction. It needs to establish context and summarize results. In academic writing, the overview often appears in the form of an abstract and the introduction discusses related studies on the topic and explains why the experiment in the paper is unique by establishing a research “gap”. It would usually say things like “Smith tested X and found Y, but that experiment did not consider Z. To address Z, Jones tested A and found B, but still left open the possibility of C. This experiment addresses C by doing D.”

Methods – what you did in the lab or experiment. This assumes an audience who knows generally how to do the experiment, so this section needs to convey the details that a reader would not know, such as how many trials were done, what specific equipment was used, the measurement uncertainties, and actions taken to avoid some potential problem such as waiting for equipment to reach equilibrium. Write this in past tense - what you did. This is not a set of directions (which would typically be written in imperative).

Results – the immediate results. Briefly reiterate the method: “To determine fluid density, we measured volume and mass. We found X had a density of  $A \pm B$ ”. Include uncertainties. This section would typically have figures. Figures include anything that is not a table. Convention is to put captions below figures and above tables (but note the IMRD example does not do this). Captions should orient the reader and ideally provide the key conclusion from the figure or table. “Y vs. X” or equivalent is NOT a useful caption.

Discussion – the interpretation and implications of the results. Summarize the results briefly, then analyze them. This might include comparing results to published values (with citations of course). If you are making an argument, it will appear here, referring to the results as evidence or backing. The last paragraph should be a conclusion and may be similar to the second paragraph of the overview as described before.

Task letter:

To: Interns

From: Paul Kominsky, Director  
Ann Arbor Association Advancing STEM

Subject: Company car distribution

Date 18 Oct 2021

Your work will involve some driving up to 200 miles per week. At our discretion, we will either reimburse you at the standard rate per mile for work use of your personal car or provide a company vehicle. To help decide, we would like you to test and report the mpg of your personal car.

Please respond with a short report by midnight, 28 Oct 2021.

(If you drive an electric, or don't drive, or consider this private information, you are welcome to make up plausible numbers. This assignment is not about your car, but about writing a report in IMRD form.)