What's in an empirical journal article?

All empirical articles in psychology share the same basic form. The beginning of the introduction describes a problem of interest to psychologists. The authors then articulate a theory (often not their own) that attempts to provide an explanation for the problem. Less frequently two competing theories are submitted and their predictions concerning the problem or issue are contrasted. Next, the authors discuss past research related to the problem introduced at the beginning of the paper. The research presented is generally an almost historical account of recent (generally up to 10 years) work that's been published on the issue under investigation. Most often the researchers' question is the next logical step in this sequence of studies. Sometimes the cited research addressed the same problem exactly, but the current authors feel that methodological problems affected the previous conclusions. In some cases, the previous findings are based on one kind of method (e.g., a naturalistic observation), and the current investigators wish to see if the results generalize when another method is used (e.g., an experiment). In this fashion, scientists gather what is called converging evidence. Another reason for investigating the same problem might be that the investigators wish to see whether some result generalizes to different populations. In the last section of the introduction the authors present the reader with a specific list of hypotheses (if a theory allows them to be specified) or, less commonly, simply research questions (This is the case when researchers have little theoretical guidance in making specific predictions. This happens most often when the issue being considered is new and the research is exploratory).

After the problem has been introduced (after they tell you WHY they're doing what they're doing), the researchers provide the reader with a detailed account of the methods they used to study the problem (here the authors tell you HOW they investigated the problem). This includes information about who the participants were, the measures, tests, or stimuli that provided data, and the conditions under which their testing was conducted. This enables other scientists to evaluate the appropriateness of the methods and replicate them on their own if they wish (scientists rarely take anyone's word for anything, and tend not to believe a research finding until more than one group has reported similar results - skepticism is our nature).

The next sections presents an analysis of the data that were collected using the method described in the methods section. Here, the data are condensed and statistics are generated. Often descriptive statistics are presented (e.g., means and standard deviations) as well as statistics that test the hypotheses presented in the introduction (e.g., t-tests and regressions). Here we get to evaluate whether the statistical techniques were appropriate to the kinds of data collected and the kinds of questions the researchers hope to answer.

Finally, the researchers put the results of their analyses in context. That is, they explain what their findings mean and how their findings relate to the theory (or theories) they hoped to either support or refute. Often only some of a researchers' hypotheses have been supported. At this point they argue why this happened and how this partial success (or failure) affects the theory mentioned in the introduction. The latter parts of the discussion generally include a description of the current study's shortcomings, caveats about over-generalizing the results, and the next steps to be taken.