The definition of inquiry has many unique definitions. Inquiry takes on different meanings for different people. In AP Biology we focus on inquiry as the means for performing science. In order to have you think through the processes of science, we use headings and structure based on the Science Writing Heuristic (SWH) for writing lab reports.

SWH is a well-developed approach to guided inquiry experiences, and it is designed to encourage construction of conceptual knowledge. It is also based on relationships among questions, evidence, and claims. The traditional Science Writing Heuristic categories have been modified and summarized for use in each AP Biology investigation Write Up:

**Research Question**
Scientific investigations usually begin with a question to be answered by gathering data and experimenting. What was the research question for the investigation?

**Experimental Design**
Investigations require clear procedures to gather evidence and a system to -- usually a data table -- for recording the observations and measurements. Summarize the procedures in a clear and concise manner.

**Predictions**
Predict what you think will happen as you gather evidence. The prediction should be based on your prior experience and will not be evaluated for correctness.

**Data Collection & Analysis**
The core of an investigation is gathering evidence or what you can see. It contains directions, steps, or guidance for collecting data and observations. The data gathered (evidence) requires a system - usually a data table and graphs - for recording the observations and measurements further processing before the initial question can be answered. Guidance is often provided to facilitate calculations, graphing, or other analysis.

**Argumentation**
Once data have been analyzed and interpreted, you will need to answer the initial question proposed. This comes in the form of a scientific argumentation.
- **Claim** - A scientific claim is a statement about the results of your experiment that is supported by evidence gathered during the experiment and reasoning that explains how the evidence is connected to the claim.
- **Evidence** - Scientific data that supports the claim. The data needs to be appropriate and sufficient to support the claim.
- **Reasoning** - A justification that connects the evidence to the claim. It shows why the data counts as evidence by using appropriate and sufficient scientific principles.

**Reflection**
The final task is to reflect on what was done, think about how your understanding has developed, and apply what was determined to other situations. Summarize how any ideas changed after conducting the investigation?