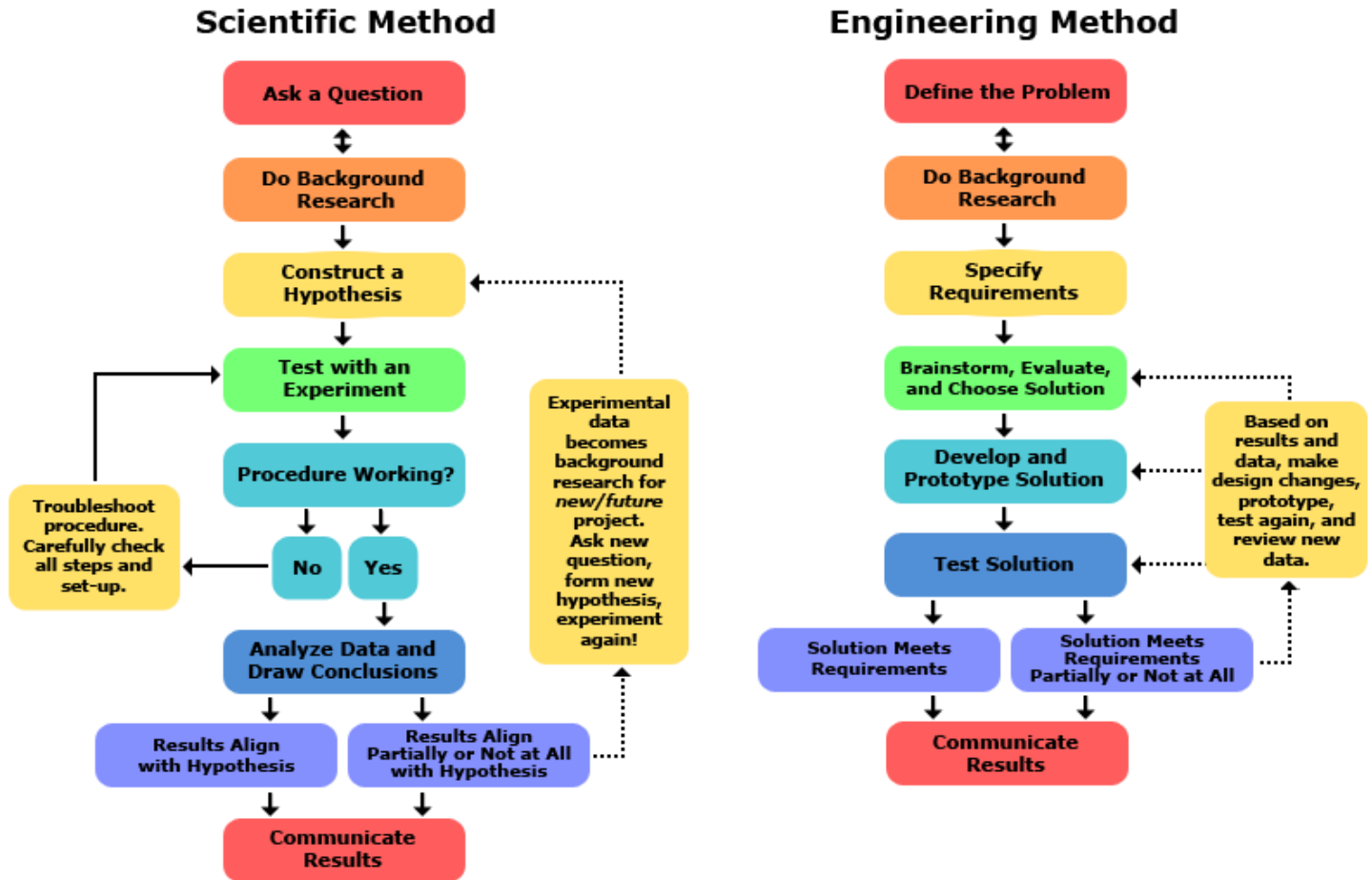


# Comparing the Engineering Design Process and the Scientific Process\*

While scientists study how nature works, engineers create new things, such as products, websites, environments, and experiences. Because engineers and scientists have different objectives, they follow different processes in their work. Scientists perform experiments using the **scientific process**; whereas, engineers follow the creativity-based **engineering design process**.

Both processes can be broken down into a series of steps, as seen in the diagram and table.



The Scientific Method	The Engineering Design Process
State your question	Define the problem
Do background research	Do background research
Formulate your hypothesis [ <i>testable question</i> ], identify variables	Specify requirements
Design experiment, establish procedure	Create alternative solutions, choose the best one and develop it
Test your by doing an experiment	Build a prototype
Analyze your results and draw conclusions	Test and redesign as necessary
Communicate results	Communicate results

Keep in mind that although the steps are listed in sequential order, you will likely return to previous steps multiple times throughout a project. It is often necessary to revisit stages or steps in order to improve that aspect of a project.

\*<https://www.sciencebuddies.org/science-fair-projects/engineering-design-process/engineering-design-compare-scientific-method>