

Scientific Method Project vs. Engineering Design Project vs. Meta-analyses Project

The Scientific Method	The Engineering Design Process	Meta-analyses Process
State a question or problem	Define a problem or need	State a question or problem
Gather background information	Gather background information	Gather background information
Formulate hypothesis; identify variables	Establish design statement or criteria for success	Formulate hypothesis for relationship that had not previously been explored or evaluation in broader scope; identify variables
Design experiment; establish procedure(s)	Prepare preliminary designs	Identify publicly available data sources to be utilized
Test hypothesis multiple times by an experiment	Build a prototype and test multiple times	Test hypothesis by processing and statistical analysis of data
Analyze results & draw conclusions	Analyze results; verify, test & redesign as necessary	Analyze results & draw conclusions
Present results	Present results	Present results