



Scientific Inquiry Using Scientific Practices

		Six Months	Four Months	Two Months
STEP 1 Select a Topic	Using the Mission Challenges, choose a topic that you and your team would like to investigate	Week 1	Week 1	Week 1
STEP 2 Identify a Problem	Choose a problem that faces your community and conforms to the topic you've chosen. Be sure to identify how solving this problem will help your community—and what parts of the community it will directly impact.	Weeks 2-3	Weeks 2-3	Week 2
STEP 3 Research the problem	Using at least ten reputable sources, research the problem you have chosen so that you have background information before you begin your investigation or design. At this time you should also determine if you need Institutional Review Board (IRB) approval or if you plan to use a survey and have the proper forms completed before you begin your work.	Weeks 4-7	Weeks 4-5	Week 3
STEP 4 Hypothesis	Make a prediction about your proposed solution to the problem that you can test by experimentation.	Week 8	Week 6	Week 4
STEP 5 Design and conduct an experiment	Create an experiment to test your hypothesis. Be prepared to conduct additional experiments if your initial findings are inconclusive.	Weeks 9-18	Weeks 7-12	Weeks 5-6
STEP 6 Collect and Analyze Data	Collect the data produced by your experiment(s) and figure out what that data tells you about your proposed solution to the problem.	Weeks 19-21	Weeks 13-14	Week 7
STEP 7 Construct a Conclusion	Based on the experimental data, write a conclusion that states whether your hypothesis was true or false.	Weeks 22-24	Weeks 15-16	Week 8