Rationale

To have bona fide inquiry experiences, students must formulate their own questions, create hypotheses, and design investigations that test the hypotheses and answer the questions proposed. Published materials are generally too structured to provide the necessary freedom for students to engage in these important inquiry skills. However, to meet the expectations of the science standards, students need an opportunity to do self-directed inquiry learning that takes their curiosity and interest into account.

What does inquiry look like in the context of design?

Students:
• Generate a question or problem to be solved based on their needs.
• Decide on a course of action, define and carry out the procedures of an investigation.
• Collect, organize, and display data using observation and instrumentation.
• Use the data collected to make sense of their experience (frame an explanation or conclusion) based on evidence and accepted scientific theories.
• Revise their designs to probe more deeply with investigation, construct generalizations.
• Communicate the processes and results to others through student presentations.