It all starts with a good idea or question

Is it worth pursuing? (time, energy, resources)

Can you rephrase into a question that can be tested by experiment? (a hypothesis)

Search the literature. Find out what else has been done to answer this question/hypothesis.

Everything is already known

Nothing is known

Some things are known, but there is room to work.

Clarify and focus your question/hypothesis. Use your knowledge of the literature to determine what can/should be measured, and how.

Design the experiment. Be sure to use replicates and controls.

Conduct the experiment, analyze the data.

Relate what you have found to what others have found. Identify new questions.

Repeat.

STOP – not a good topic for a class project

Is it worth pursuing? (time, energy, resources)

Can you rephrase into a question that can be tested by experiment? (a hypothesis)