Exploration
Explore concepts and phenomenons related to the problem(s) posed in the design process.

Making Sense
Explain how and why those phenomenons are happening. Students will test out their hypothesis.

Apply and Assess
Students will apply what they learned to different but related situations.

1.) DISCOVERY PROCESS

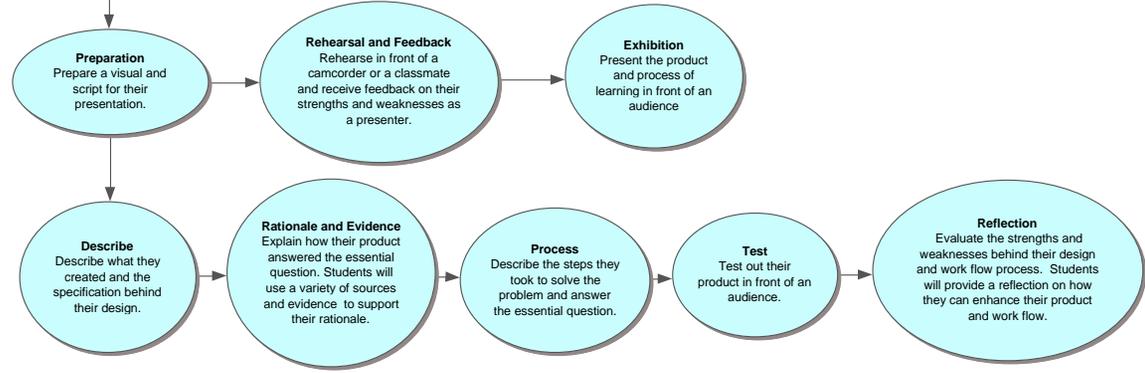# STEAM MACHINE
a.k.a - The STEAM Project Cycle

Process created by: Jacob Aringo
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Adapt from the following sources:

Dick, W., & Carey, L. (2009). The systematic design of instruction (7th ed.). Upper Saddle River, N.J.: Merrill/Pearson.

2.) DESIGN PROCESS
using the ADDIE process

3.) EXHIBITION PROCESS

Preparation
Prepare a visual and script for their presentation.

Rehearsal and Feedback
Rehearse in front of a camcorder or a classmate and receive feedback on their strengths and weaknesses as a presenter.

Exhibition
Present the product and process of learning in front of an audience

Describe
Describe what they created and the specification behind their design.

Rationale and Evidence
Explain how their product answered the essential question. Students will use a variety of sources and evidence to support their rationale.

Process
Describe the steps they took to solve the problem and answer the essential question.

Test
Test out their product in front of an audience.

Reflection
Evaluate the strengths and weaknesses behind their design and work flow process. Students will provide a reflection on how they can enhance their product and work flow.

Analysis
Gather data, analyze data, and identify the problem that we can focus on via construction of an essential question.

Evaluation
Reflect on the positive and needed improvements on their current designs and suggest possible enhancements.

Development
Brainstorm solutions and start drafting a design to solve the problem.

Implementation
Test prototype within the specified constraints and parameters.

Design
Design a prototype to answer the essential question.