# Middle School Career Investigations: Architecture and Construction Design Process

## Design Process Introduction

Like other professions, people in the Architecture and Construction Career Cluster use a design process for their projects. Drag and drop the slider to learn more about this design process in detail.

## Identify Problem/Issue

The first step in the process is to identify the problem or issue. Some examples of problems or issues to be solved are new construction of homes, renovations of existing structures, maintenance of historical buildings, and additions or redesigns of parks. As part of identifying the problem, we gather as much information as we can through research and site visits.

## Brainstorm Ideas

The second step in the process is brainstorming to generate ideas and/or solutions. We research to help us find as many solutions as possible. The goal is to not exclude any possible solutions, even if a solution seems like it might not work.

## Design a Solution

The third step in the design process is to design a solution. We look at all of the ideas that we brainstormed and select one based on variety of topics like cost, safety, and even beauty. Architects, engineers, and construction managers work together to make sure that the design matches the available material.

## Test the Solution

The fourth step is where we work together as a group to test the solution. In this step, the design is checked to make sure that it meets all of the different criteria, and that it can actually be built. One it has been approved, then Individuals build models for testing.

## Edit Solution/Design

The fifth step in the process is to edit the solution/design. If the models or testing prove that the design needed editing, the group continues to modify the design and re-test. If the design will not work at all, the group can return to Step 3 and pick a new solution.

## Build the Solution/Design

The final step is to build the design or solution. Once we have selected a final design, then the construction of the project begins. During the construction phase, the architect and engineer work closely with construction workers to make sure that they have all of the information that they need, as well as to check to make sure that the design is being followed.