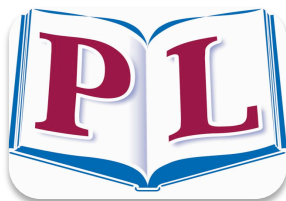
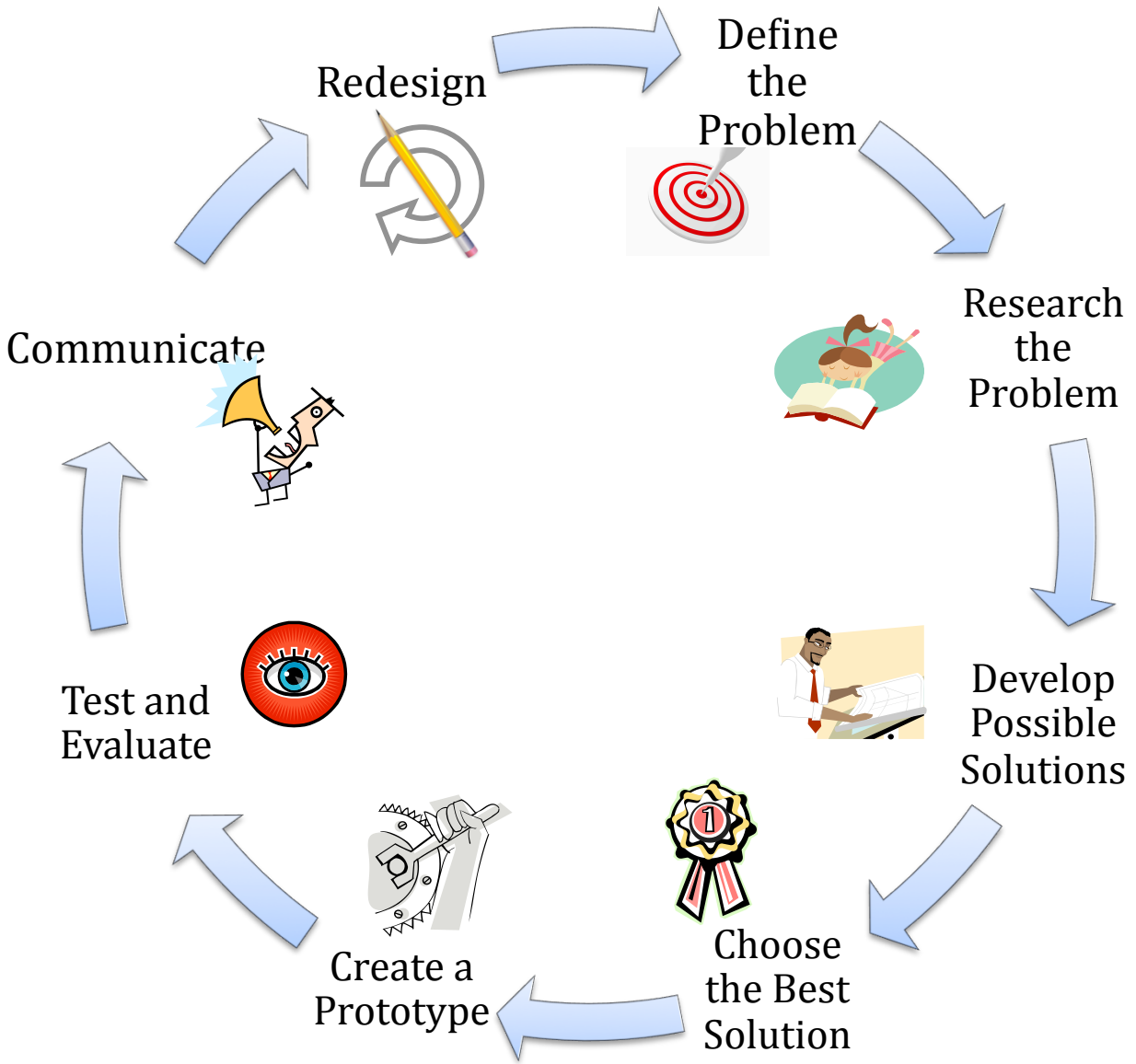


# The Engineering Design Process



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# The Engineering Design Process

## Define the Problem

The engineer must decide what is needed by society. This need is what the process will be based around and will include creating criteria, resource, and limitation statements.

## Research the Problem

This is where a lot of time is spent trying to understand the issues better. Many questions should be created and answered regarding the problem. Complete research helps cut down on mistakes and save work.

## Develop Possible Solutions

Answers to the problem are brainstormed based on the problem definition and the research that was done.

## Choose the Best Solution

Depending on main criteria a solution is picked which will fit the problem in resources including cost, materials, reliability, and time. The sketches you produce during this time make it an important communication step.

## Create a Prototype

If time allows a complete or partial pre-production model can be created to test different features.

## Test and Evaluate

This step allows observation of strengths and weaknesses of the design.

## Communicate

Reports, notebooks, presentations, and discussions help evaluate and explain findings.

## Redesign

Designs and solutions can always be improved. Often redesigning is needed even if a product is successful to help make it better.