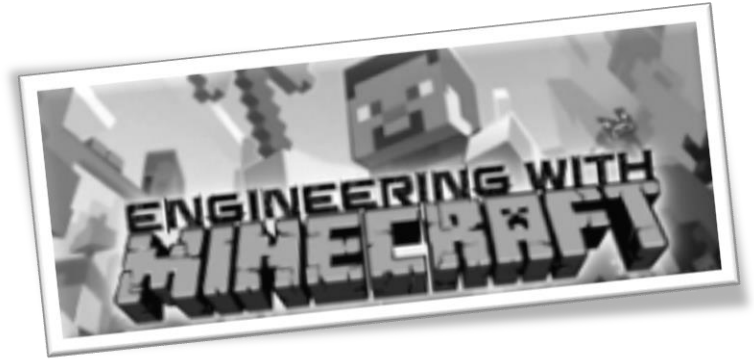
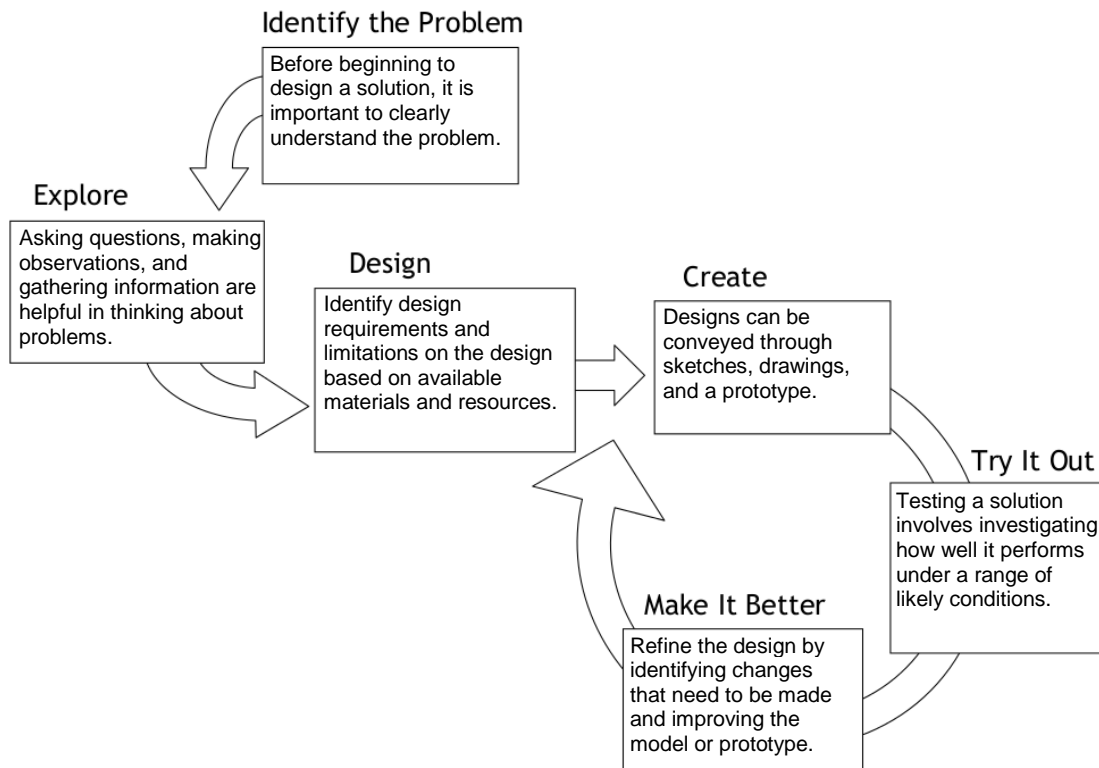


# ENGINEERING DESIGN PROCESSES



A situation that people want to change or create can be approached as a problem to be solved through engineering. Possible solutions to a problem are limited by available materials and resources. Anything that is built must first be engineered, or designed and manufactured according to an engineering practice. The field of engineering is divided into branches such as civil, electrical, mechanical, and chemical engineering. An engineer is a person who designs and builds complex products, machines, systems, or structures. The engineering design process is a series of steps that engineers use to guide them as they solve problems.

## ENGINEERING DESIGN PROCESS



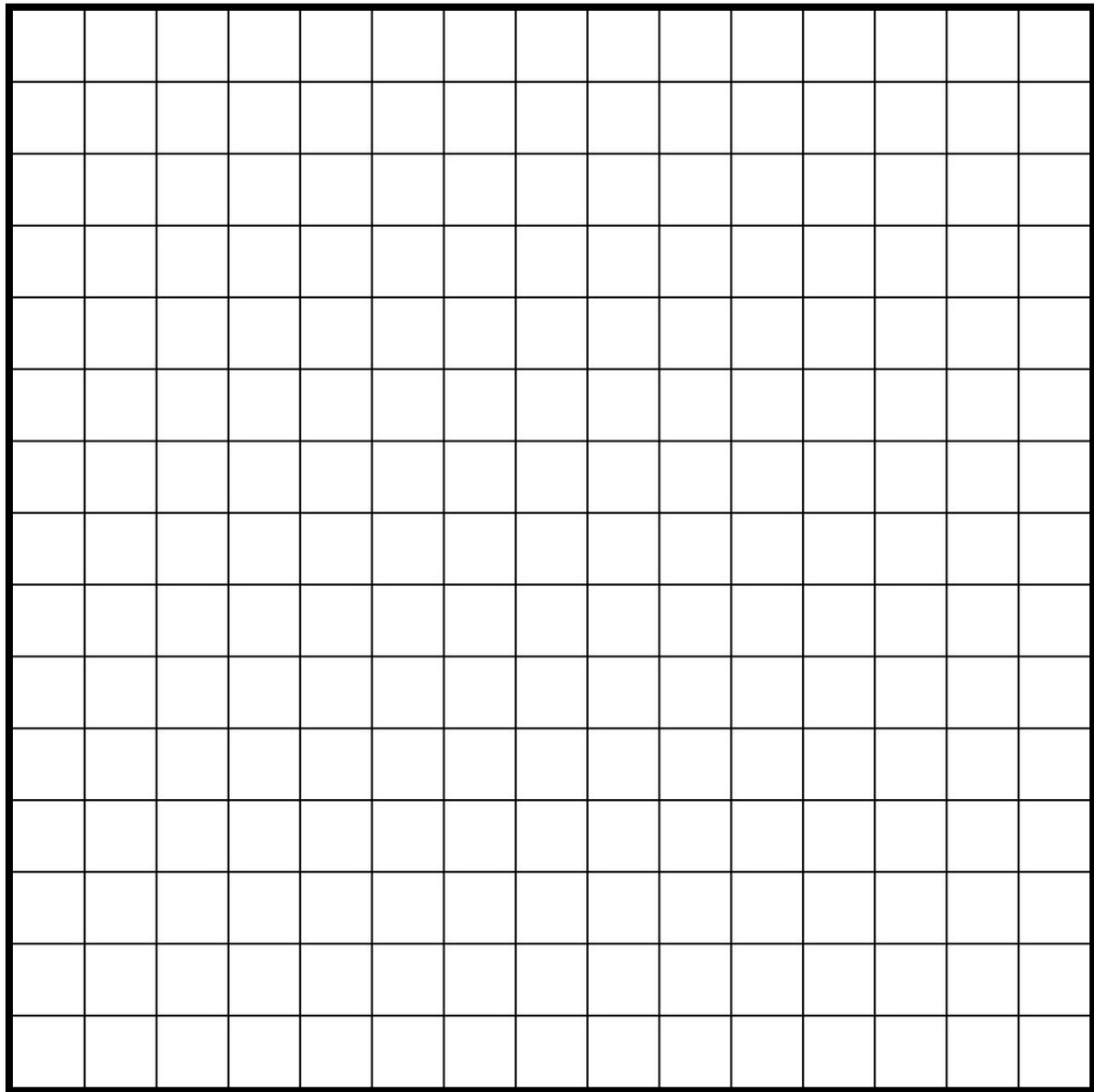
Different solutions need to be tested in order to determine which of them best solves the problem, given the criteria and the constraints. At whatever stage, communicating with peers about proposed solutions is an important part of the design process, and shared ideas can lead to improved designs. Tests are often designed to identify failure points or difficulties, which suggest the elements of the design that need to be improved.

# ENGINEERING DESIGN PROCESS

## Activity



*Using the space below, design a Minecraft creation. Once finished, use a variety of Legos to engineer your creation.*



# ENGINEERING DESIGN PROCESSS

## Quiz



Write the word(s) from the box that completes each sentence.

**ENGINEERING    PROTOTYPE  
ENGINEER  
ENGINEERING DESIGN PROCESS**

1. An \_\_\_\_\_ is a person who designs and builds complex products, machines, systems, or structures.
2. The \_\_\_\_\_ is a series of steps that engineers use to guide them as they solve problems.
3. A situation that people want to change or create can be approached as a problem to be solved through \_\_\_\_\_.
4. Designs can be conveyed through sketches, drawings, and a \_\_\_\_\_.