

# Unit 1 INVENTION AND DESIGN



## WHAT

are we learning?

- The 7 Steps of Invention Process
- Inventions
- Technique and posture



## WHY

are we learning it?

- Inventions are all around us!
- It will help strengthen critical thinking and creative skills



## HOW

will I know I learned it?

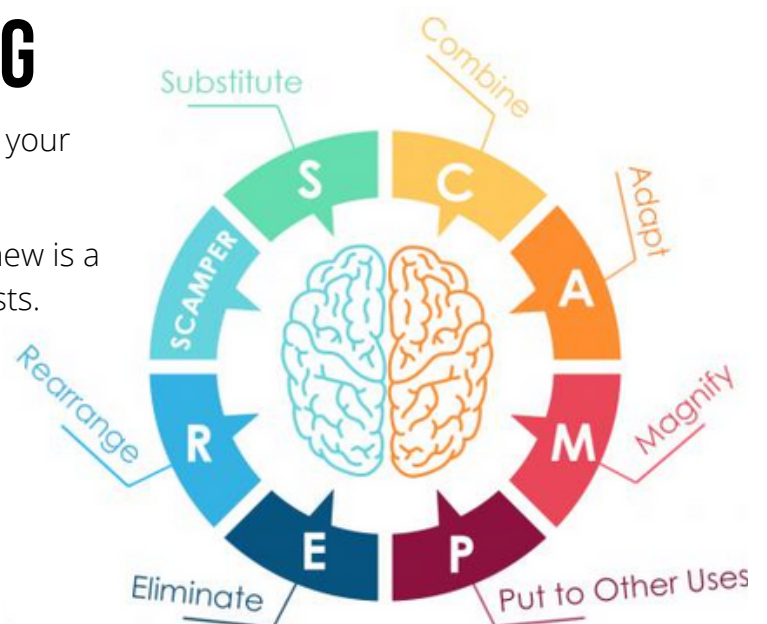
1. I can identify a problem and come up with a solution
2. I can brainstorm an invention
3. I can design a prototype of my invention

## STEP 1: IDENTIFYING

The SCAMPER is a method you can use to ignite your creativity and help you overcome any problem

It is based on the assumption that everything new is a modification of something that already exists.

**SUBSTITUTE**  
**COMBINE**  
**ADAPT**  
**MAGNIFY**  
**PUT TO OTHER USE**  
**ELIMINATE**  
**REARRANGE**



## STEP 2: UNDERSTANDING

Does my invention already exist?

Researching search engines and patent sites to discover causes of problems and to determine if a solution is unique

GOOGLE

TARGET.COM

AMAZON.COM

WWW.USPTO.ORG

BEST BUY.COM

BING.COM

ETSY.COM

## STEP 3: IDEATING

IDEATING is the process of forming an idea

## STEP 4: DESIGNING

Draw a Model of your invention. Label all the important parts and features. Explain how it works.

## STEP 5: BUILDING

What materials will you need? How much will a prototype cost?  
Is your prototype cost effective? How much could you sell it for?

## STEP 6: TESTING

What are some potential problems you see your invention having? What could you do to solve those?

## STEP 7: COMMUNICATING

Naming, explaining your invention and presenting to others.

## VOCABULARY TO KNOW

**BRAINSTORM:** to produce an idea or way of solving a problem

**ENTREPRENEUR:** a person who organizes and operates a business

**7 STEPS OF THE INVENTION PROCESS**

**PATENT-** a government license conferring the sole right to exclude others from making, using, or selling an invention.

## ASSESSMENT

Fully completeing INVENTION AND DESIGN WORKBOOK (35 points)

Presenting your invention to your class (20 points)

Evaluating Inventions (10 points)