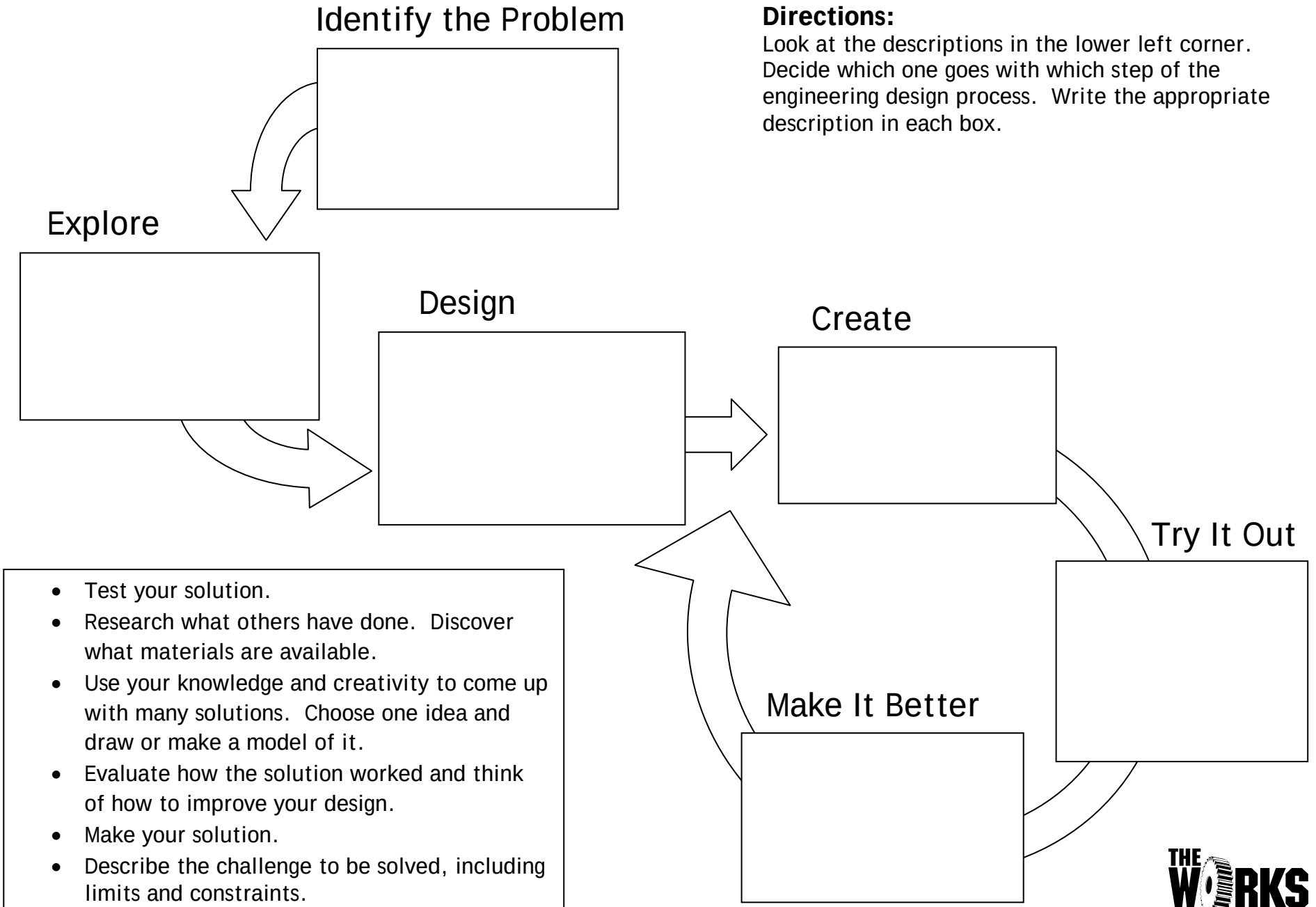
The Engineering Design Process

Name: _____

Directions:
Look at the descriptions in the lower left corner. Decide which one goes with which step of the engineering design process. Write the appropriate description in each box.



- Test your solution.
- Research what others have done. Discover what materials are available.
- Use your knowledge and creativity to come up with many solutions. Choose one idea and draw or make a model of it.
- Evaluate how the solution worked and think of how to improve your design.
- Make your solution.
- Describe the challenge to be solved, including limits and constraints.

THE WORKS
A Hands-On Museum

Name: _____ Date: _____

THE WORKS
A HANDS-ON MUSEUM

The engineering design process helps engineers and other problem-solvers come up with creative solutions. You are an engineer. Choose ONE engineering problem below, and follow the steps to invent a solution.

A. Your new pet kitten is trapped in a ten foot deep hole. You need a contraption to safely rescue your poor animal.
B. You are going on vacation for a month and can't find anyone to water your plants while you're gone. You need a device that will give your plants the right amount of water – not too much and not too little.
C. You like to read before you go to sleep, but you don't have a bedside lamp. You need a way to turn off the light switch across the room without having to get out of bed.

1. What problem did you choose? Brainstorm ways to solve the problem and list several possible solutions.

2. Choose one idea. On the back of this page, draw a detailed picture of the solution you chose. Label the drawing to explain what each part is made out of, how the parts fit together, and how it will work.

3. Where do you think you will run into problems with your solution? Where do you think the weak parts in your creation will be?