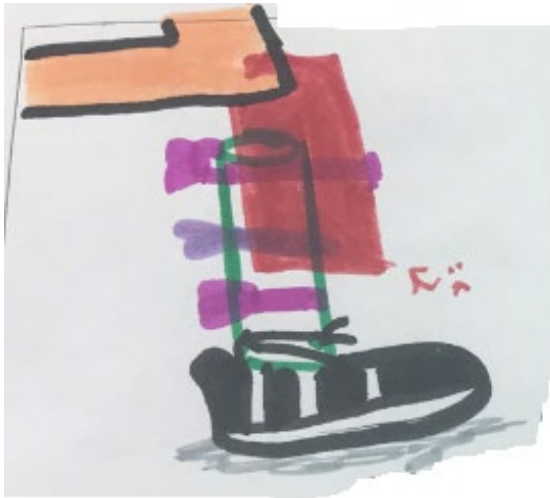


Engineer's Name: EXAMPLE

Date: \_\_\_\_\_

Plan your design by drawing a sketch of your prosthetic leg below.



**What materials will you need for...**

- a. Leg structure: *PVC pipe with holes at the ends*
- b. Comfort piece: *Styrofoam + piece of cloth*
- c. Attachment piece: *String and masking tape*
- d. (Optional) Clothing: *Piece of leggings*

## Evaluate

As each team presents its prostheses, consider which one functioned best. Fill out the table for the materials and which material worked best for each function.

Function	Material
<i>Support the weight of the body</i>	<i>PVC pipe and tennis shoe</i>
<i>Hold everything together</i>	<i>Thick flexible string</i>
<i>Joint restrictions</i>	<i>Cardboard pieces secure by tape</i>
<i>Comfortability</i>	<i>Foam piece</i>

Can you make a connection between the materials used in your prosthetic to the body system they fit into? (ex: A wooden dowel would function as part of the skeletal system.)

*PVC pipe = bone, string/tape = ligaments*

How do these materials work together to serve the purpose of supporting the essential life functions of the body?

*They provide structure to do everyday task*

## Improve

What would you change about your prostheses? How could you improve the design for future prosthetics?

*Use more precise dimensions to the patient*