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.

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

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