

PROSTHETIC LIMB DESIGN

BIOMEDICAL ENGINEERING

Follow the Engineering Design Process to design a replacement for your stuffed animal's amputated limb.

Things to consider: (From curriculum)

- <u>Longevity</u>: Can it survive the wear and tear of constant use?
- <u>Stability</u>: Will it move out of its ideal position?
- <u>Consistency</u>: How often/can it malfunction?

Problem: Your stuffed animal is missing a limb. It needs an artificial replacement.



Use the box above to notate your patient's injury. Make notes below regarding how the injury impacts their daily activities:

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1. Brainstorm & Blueprint- Write down and/or sketch a list of possible solutions to the problem. Choose one, then create a detailed drawing of your solution, including dimensions of your final product, list and use of materials, and other relevant information:



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2. Model, test, and improve- Take notes about your experience, including unforeseen problems and how you overcame them:

3. **Notes for next time-** Engineers learn from mistakes and use those learning opportunities to improve. If you were to try to solve this problem again, what would you do differently?

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