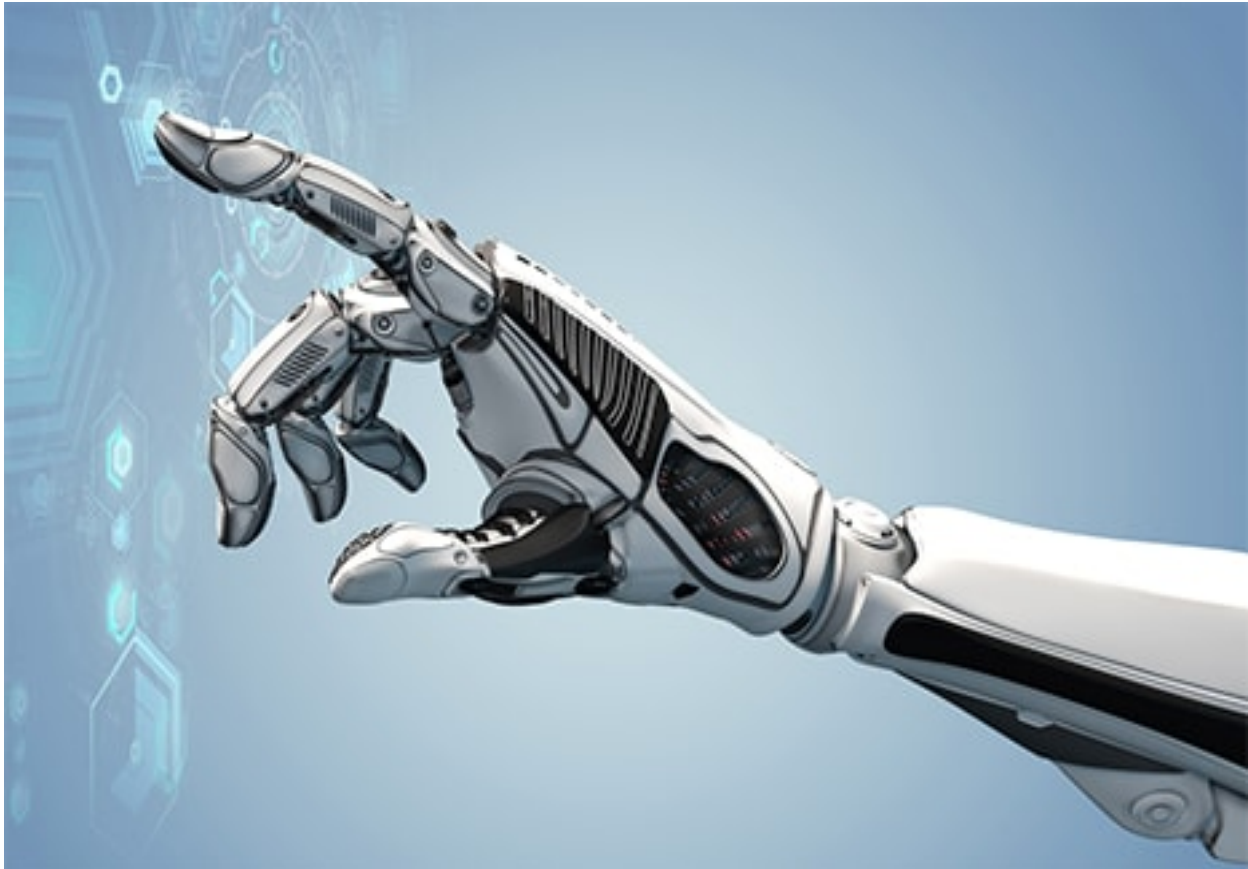


Inquiry Question

**Robotic limbs play an important role in many people’s lives.
Can you build your own robotic arm?**

Name: _____ **Date:** _____



Mechanical or robotic limbs can serve an array of purposes.

First, they can help people with disabilities live a more normal life by serving as an artificial limb.

Secondly, they can help doctors perform complex medical procedures with fine precision and accuracy.

Finally, as a new technology develops, these devices continue to improve the life of those with disabilities.

General Instructions

The end goal of this project is to be able to follow a procedure to build an apparatus and determine similarities/differences between a biomechanical finger and a human finger

Materials you'll need:

The materials that you require for this project will depend on the style of robotic hand that you choose to create. At the end of the project you will have created a robotic hand and written a report explaining how bones, muscles and tendons work together to move the human body.

Use the attached Robot write-up for your submission.

Hints and Ideas:

The method you choose to create your robot hand is entirely up to you. Some websites that may be useful in making your decisions are listed below:

<https://www.rit.edu/kgcoe/sites/rit.edu/kgcoe/files/docs/Mechanical%20Hand%20Lesson%20Plan.pdf>

<https://www.sciencetoymaker.org/robothand/index.html>

<http://www.instructables.com/id/Science-Fair---Articulated-Hand--20/>

Project submission:

Use pictures or video to show the steps you used in creating your robot hand. Assemble them into a single file and use the Robot Write-up template to write a detailed report on your project. Upload your final project to the submission folder at the end of the unit.

Science ROBOT HAND REPORT

Name: _____

Instructions:

Print out this form or complete the information on your computer for your investigation or experiment. Use the guiding questions below to write a detailed report on the

- How do you feel about your design?
- What parts of your design do you like? Dislike? Why?
- What would you do differently next time?
- Describe and explain how the bones, muscles and tendons all work together to move the human body.