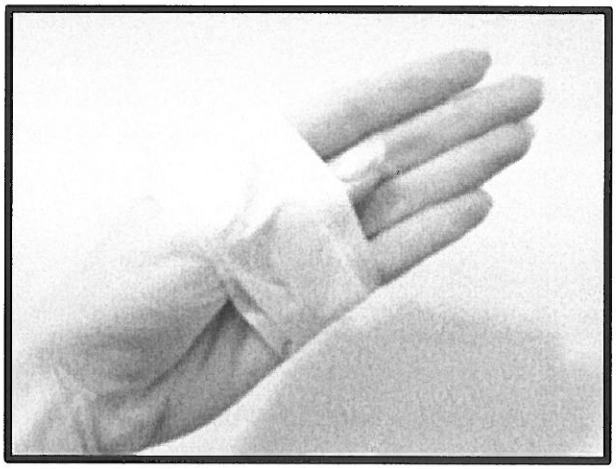
Our Adaptive Hands Demo

YOUNG SCIENTIST PROGRAM

Main Concepts

- An adaptation results from evolution by natural selection favoring a trait
- Phenotypic variation can provide populations an advantage for survival
- Distinguish adaptation from acclimation



Activity Summary

First, demo instructors will discuss with students what an **adaptation** is, and how it differs from **acclimation**. With a partner, students will then learn why the human thumb is adaptive by timing how long it takes them to do a series of activities 1) while their thumbs are free and 2) while their thumbs are taped to their hands. Students will then switch roles and repeat the activities so that both students are able to try the activities. At the end of the activity, students are asked to **chart** the time that it took them to do the activities with and without thumbs. Discussion with demo instructors at the end may include a class comparison of timed activities, as well as a period of **hypothesis-testing** where students are encouraged to go around the room and test whether they can do activities without thumbs as easily as with thumbs free.

Curriculum Standards

- Missouri Science 4.3.C
- Next Generation Science HS-LS4-1

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