

Talcott Mountain Science Center

Topic Bioengineering

Home School Science

Instructor Pellino

Home Links

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Here's some information about the activities your student did with us. Links at the bottom will help you explore further. Enjoy!

What did we do (content, skills, data collection)?

Parameters, dimensions, measurement

We walked through

- how many things can you know about something you are engineering
- how do you identify and name the things you want to measure and compare
- what units do you use and how can you be sure it's worth measuring

Construction

- create a model human foot
- evaluate how your own foot operates
- evaluate the foot along several dimensions

How did we do it (materials & methods)?

Parameters, dimensions, measurement

- we calculated the amount of heat the human body gets from the environment, how much it burns, and how much it loses, and calculated
- we calculated units of power and work for the human body compared to other devices
- we looked at how scientists determine averages and normal ranges for things when measuring them and engineering solutions for them - height, weight, IQ (with a healthy skepticism)

Construction

- we used a synthetic skeleton to see the skeletal anatomy of the foot
- we used LEGO classic and Technic pieces to construct a model of the foot
- we presented the completed foot and reviewed the joints, the arch and the heel

Where can we find out more?

<https://sportsfootankle.com/extremity-conditions/>