

Measurement Lab

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7th Technology

Goals

- Learn about the history of the English measuring systems.
- Learn how to correctly measure using two common household measuring devices.
- Design a measuring device.
- Perform a measuring activity.
- Intense practice of reading a ruler practice.

Group Discussion:

Measurement, English System Of

Early measurements of length were based upon parts of the human body, which for a long time were accurate enough for daily calculations. It is still common for us to use hand, finger, and arm movements to accompany statements regarding size or dimension.

Lengthy History

The first known standard length was used around 3000 B.C.E. in Egypt. The Egyptians created the cubit, which was the distance between the elbow and the tip of the extended fingers. The Egyptians overcame the variation from one person to another by making a standard cubit equal to what is now 20.62 inches.

The Greeks adopted the Egyptian cubit as the basis of their system, but also had their own measure of length, the fathom, which was the distance from fingertip to fingertip with arms outstretched. The Greek historian Herodotus (484 B.C.E.–424 B.C.E.) stated that the fathom was equivalent to four cubits (or six feet). From Plutarch (46 C.E.–120 C.E.) it is known that the Parthenon of Pericles in Athens had a platform length of 100 feet. When measured with modern units, it is found that the Greek foot was 12.14 of today's inches. The foot was passed to the Romans who subdivided it into 12 equal parts that they called the *uniciae*.