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| Title | The importance of accurate measurement |
| Standards | **2.3.3.A:** Demonstrate an understanding of measurable characteristics and the need to quantify those characteristics. |
| SWBAT | ...explain how accurate a measurement can be, and why accurate tools are important. |
| Evaluation | Measurement worksheet |
| Strategies | Demonstration, prediction, think-pair-share |
| Materials | * 5 strips of paper 1 foot long. The first marked every 6 inches, the successive ones marked every 3 inches, every inch, every half inch, and the last every quarter inch.
* 1 ruler for each student
* Assessment pages with
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| Intro | If you have a tool that is not the right one for the job, how good of a job are you going to do with it? |
| Procedure | * Show an item in the room less than a foot long, such as a textbook.
* Ask the students to estimate how long the edge is.
* Ask them what kind of tool they would use to measure it. (Tell them it is a ruler if no one answers)
* Show the five strips of paper.
* Ask which one is going to do the best measurement.
	+ If there is disagreement, have the ones who think the 6 inch paper would do the better job move to one side of the room, and the ones who think the ¼ inch lines to the other side. Raising their hands, have each side try to convince the other side that they are right.
* Measure the book with the 6” paper, and have the class try to determine the length. Repeat with the other strips.
* Specifically point out that each time, you are able to make better and better approximations of the true length. With fewer lines, you need to guess more. This is called “error,” and if one person makes an error that someone else relies on, that error could get worse and worse.
* Hand out worksheets (Measurement: Inches) and have them work for a few minutes measuring the items.
* Pair the students and have them explain to each other how they did the measurement.
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| Closing | Today we saw why there are lines on rulers. They allow us to make accurate measurements without having to estimate, avoiding mistakes that creep in when you guess at the answer. |