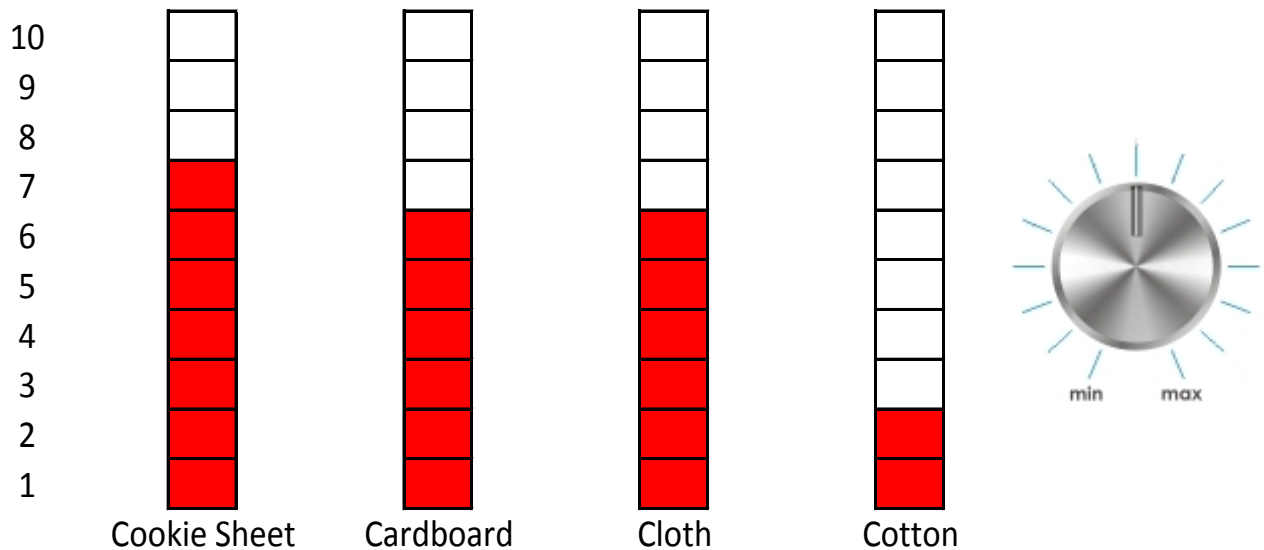


*Observations:*

Once you have listened to the watch echo off of each of the surfaces, plot the volume on the graphic below. Full volume is what the watch sounds like at the end of the tube, with no echo. No volume means that there is no sound heard.



*Discussion:*

1. What kind of material do you need to make an echo?

*To make an echo you need a solid or a liquid (solids work better).*

*A flat surface works better than a non-flat surface.*

2. What material did sound bounce off of the best? What material did sound bounce off of the worst? Can you explain why?

*Best - Cookie Sheet - This is because the cookie sheet is very flat and does not have any gaps or spaces in it.*

*Worst - Cotton Balls - this is because the cotton is not very flat, it has many edges and holes in which the sound can get caught.*

3. Look at the ceiling in the classroom, describe what you see and discuss why you think the ceiling is made the way it is?

*The ceiling is a flat surfaces, however there are many small holes and cracks in the tiles. This is so that the teacher's voice does not echo in the classroom.*

*The other sounds created in the classroom would not echo either.*