

How Significant Is It?

Name _____

Question: How can correct measurements be made using common laboratory equipment?

Materials: Lab stations

Procedure: There are 12 lab stations around the room. Your job is to visit each lab station and correctly measure the item identified. Use the data table provided below to record your data. **Remember that in science we measure to the appropriate level of graduations PLUS ONE ESTIMATED decimal past the instrument!** Circle your estimated number to help solidify the concept.

1)	7)
2)	8)
3)	9)
4)	10)
5)	11)
6)	12)

Questions:

1. To what decimal place can mass be measured using a triple beam balance?
2. When measuring anything, what determines how many decimal places you will include? (What determines how many decimals are in your measurement?)
3. When are non-zero numbers considered significant?
4. A scientist reports a volume of 20.5 mL of liquid were collected. Discuss the degree of accuracy of the graduated cylinder. (What do the markings look like?)
5. List all of the rules that state when the number zero IS significant, then list all of the rules that state when the number zero IS NOT significant. **Provide an example for each situation.**