**Lab: Smile Metric Style**

**Objectives:**

- to learn how to use a metric ruler to measure length
- to accurately read and record measurements taken in centimeters (cm) and millimeters (mm)

**Materials:** rulers, yarn/string, smiles

**Procedures:**

1. Take a piece of yarn/string and measure your partner's smile straight across from corner to corner.
2. Keep your fingers on the yarn/string as you transfer the yarn/string to the ruler.
3. Record measurements, cm and mm, in **Table 1**.
4. Throw the yarn/string away.
5. Record the data from the Class Stem and Leaf.

**Data:**

**Table 1: Smile length +4**

<table>
<thead>
<tr>
<th></th>
<th>cm</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>my smile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>partner's smile</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1: **Stem and leaf** of class data - smile length - cm +5

4.
5.
6.
7.
8.
9.
10.
11.
12.
Table 2: Summary data table of class smiles - cm +5

<table>
<thead>
<tr>
<th>Largest (cm)</th>
<th>Smallest (cm)</th>
<th>Number of Students</th>
<th>Sum (add all smiles)</th>
<th>Average (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Analysis/Results:**

1. Who had the largest smile? ______ cm: __________ mm +2
2. Smallest? ______ cm __________ mm +2
3. Including everyone, how big is our smile as a class? ______ cm __________ mm +2
4. What is the connection between the amount of mm and cm? +2
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
5. How many centimeters are on the class ruler? ______ Millimeters? ______ +2

**Conclusion:** In 2-3 sentences, explain what you learned in this lab.+2
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