WENDY SRINIVASAN

Contact Information:

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Professional Information:

Math teacher and department chair at Corinth Holders High School in Wendell, NC

Other Role:

Co-Director for Johnston County Division A Tournament
EVENT DESCRIPTION

Teams will demonstrate their understanding of metric measurement by estimating and measuring length, mass, fluid volume, angles, and temperature and be able to make calculations based on these measurements.
<table>
<thead>
<tr>
<th>HIGHLIGHTS OF THE RULES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teams of up 2</td>
</tr>
<tr>
<td>Maximum time of 60 minutes</td>
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<tr>
<td>Students should bring NOTHING with them. Writing instruments will be provided.</td>
</tr>
<tr>
<td>Station format</td>
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<tr>
<td>Points awarded for accuracy of responses.</td>
</tr>
<tr>
<td>Ties broken accuracy or quality of answers on pre-determined questions by the event leader.</td>
</tr>
</tbody>
</table>
WHAT SHOULD TEAMS MEASURE?

ANGLE
DEGREE

MASS

FLUID
VOLUME

LENGTH

AREA

TEMPERATURE
WHICH MEASUREMENTS ARE APPROPRIATE?

- mg
- g
- kg
- mm
- cm
- m
- km
- ml
- l
- kl
- ° C
- K
- cm²
- cm³
TOOLS TO USE

rulers, calculators, protractors, meter tapes, meter sticks, electronic and/or triple beam balances, beakers, Erlenmeyer flasks, graduated cylinders, thermometers, calipers
HOW TO USE CALIPERS
LINES, ANGLES, AND SHAPES
Measure and calculate the volume of a rectangular prism, a liquid in a container, or an irregularly shaped object given water and a graduated cylinder.
HOW TO PREPARE

- work with your Data Crunchers group- have MM group do the measurements and provide the data to DC to make their charts
- measure ALL KINDS of objects especially irregular objects
- expect accuracy, to smallest degree possible- PRECISION counts! Have each teammate measure the item and compare for accuracy
- give students experience working with all possible tools, in various sizes
- students should make sure to use correct unit- many tools have multiple units
- multiple tools may be available- must know which tool to use
How many pieces of candy corn are in the bag?

USEFUL LINKS

- Measurement activities and games: https://www.education.com/activity/measurement/
- Videos and games about measurement: https://www.neok12.com/Measurements.htm
- Estimation 180 http://www.estimation180.com/
- Measurement activities: https://www.mtiinstruments.com/knowledge-center/15-measurement-activities-for-students/
DATA CRUNCHERS

HTTPS://WWW.SCIENCENC.COM/RESOURCES/ELEMENTARY/DATA-CRUNCHERS/
EVENT DESCRIPTION

Teams should be able to create and interpret data tables, bar graphs, line graphs, pie charts, and pictographs and perform simple experiments to collect data, graph their results and make predictions.
HIGHLIGHTS OF THE RULES

- Teams of up 2
- Maximum time of 60 minutes
- Students should bring writing utensils with them.
- Station format
- Points awarded for accuracy of responses.
- Ties broken accuracy or quality of answers on pre-determined questions by the event leader.
STUDENTS SHOULD BE ABLE TO...

- Plot data points, make and interpret data tables
- Draw and interpret graphs, including what trends can be predicted from the data shown.
- Make estimates of data between or beyond the data points given.
- Identify types of questions when collecting data
- Calculate fractions or percentages based on charts, tables, data or objects.
- Calculate the mean, median, mode, and range for a set of data.
- Identify outliers in a set of data.
- Distinguish between accuracy and precision.
**Birthday wishes by channel**

- e-mail
- skype
- phone
- sms
- facebook
- twitter

**Average Daily Temperatures**

Day

**Student’s Favorite Color**

<table>
<thead>
<tr>
<th>Number of Students</th>
<th>25</th>
<th>20</th>
<th>15</th>
<th>10</th>
<th>5</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favorite Color</td>
<td>Red</td>
<td>Blue</td>
<td>Green</td>
<td>Black</td>
<td>Pink</td>
<td></td>
</tr>
</tbody>
</table>

**Chart**

<table>
<thead>
<tr>
<th>Chips</th>
<th>Chocolate</th>
<th>Candy</th>
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</thead>
<tbody>
<tr>
<td><img src="image" alt="Chips" /></td>
<td><img src="image" alt="Chocolate" /></td>
<td><img src="image" alt="Candy" /></td>
</tr>
<tr>
<td>=10 items sold</td>
<td>=10 items sold</td>
<td>=10 items sold</td>
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</tbody>
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QUESTION TYPES

- **Numerical**
- **Categorical**
- **Data that changes over time**
USEFUL LINKS

TUVA: Data sets, graphing, analysis: https://tuvalabs.com/

EMOJI Data: https://www.easel.ly/blog/make-data-literacy-fun-students/

Graphing Activities: http://www.mathblaster.com/parents/math-activities/graph-activities

Making different types of graphs: https://nces.ed.gov/nceskids/createagraph/

Digital bar graphs: http://www.shodor.org/interactivate/activities/BarGraphSorter/

CODAP graphing: https://codap.concord.org/help/basics/graphs
USEFUL LINKS

Variety of graphs to discuss and describe https://www.nytimes.com/column/whats-going-on-in-this-graph

Lessons and activities for graphs https://www.mathgoodies.com/lessons/toc_vol11


Legos for Mean, Median, Mode and Range https://bit.ly/2Idp7Lo

Bar graph activities: http://www.softschools.com/math/data_analysis/bar_graph/activities/

Accuracy vs Precision: https://manoa.hawaii.edu/exploringourfluidearth/physical/world-ocean/map-distortion/practices-science-precision-vs-accuracy
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<th>HOW TO PREPARE</th>
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<tbody>
<tr>
<td>Work with the Metric Mania team to collect data.</td>
<td>Graph anything the Metric Mania team has measured.</td>
</tr>
<tr>
<td>Predict</td>
<td>Bring in graphs from the news, magazines, ads, etc. Ask questions!</td>
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<tr>
<td>Name</td>
<td>Height in CM</td>
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Thank You