Metric Connections

Kindergarten – Measure around the trunk of a tree. How many centimeters (cm) is it? Can you tell how many millimeters (mm) it is? How much of a meter is it? Can you tell if the tree is young or old?   Measure another tree and compare your results.

First Grade – Go on a label hunt in your kitchen. What kinds of foods are measured in grams (g)? What kinds of foods are measured in milliliters (ml)? Can you find centimeters (cm) on any labels?

Second Grade – Go outside on a rock hunt. Compare a rock to a can of food from your pantry.   If an average can of food is about ½ kilogram (kg), or 500 grams (g), can you estimate how much mass (grams) your rock has?

Third Grade – How far apart are the planets in our solar system? Convert the following distances from kilometers (km) to meters (m). Hint: one kilometer (km) is equal to 1,000 meters (m).

- ☐ Space between the Sun and Mercury: 57.9 million km
- ☐ Space between Mercury and Venus: 50.3 million km
- ☐ Space between Venus and Earth: 41.4 million km
- ☐ Space between Earth and Mars: 78.3 million km
- ☐ Space between Mars and Jupiter: 550.4 million km
- ☐ Space between Jupiter and Saturn: 648.7 million km
- ☐ Space between Saturn and Uranus: 1.444 billion km
- ☐ Space between Uranus and Neptune: 1.626 billion km

Fourth Grade – How far does the force of magnetism work? Measure the force of attraction between two magnets by determining the maximum amount of space you can create <u>before</u> the opposite poles no longer pull towards each other. How many centimeters (cm) did you measure? Can you convert this measurement into millimeters (mm)? Do all magnets pull with the same force? Try this experiment with different types and sizes of magnets.

Fifth Grade – Design a controlled experiment that uses multiple modes of measurement. Hint: think of ways to incorporate data that include measuring length, mass, volume, temperature, etc.

☐ What are the metric units used for the following measurement modes?

☐ Length:

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☐ Mass:

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☐ Volume:

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☐ Temperature:

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☐ Time:

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