Math at Work 10 - Measurement

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Exploring Measurement Activity

1. Find a partner or two to work with. You will get a dowel in the length of your special unit of measurement. What would you like to name your unit of measure?

2. Create a subdivided unit of measurement based on your dowel. How many of your smaller units are in each original unit? What are you going to name your smaller unit?

3. Create a composed unit of measurement based on your dowel. How many of your original units are in each composed unit? What are you going to name your larger unit?

4. Let’s measure some stuff with your unit. Express each measurement in (1) partitioned units only, (2) original units only, and (3) composed units only:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Unit Name | Length of Table | Width of Classroom Door | Length of your cellphone |
| Partitioned Unit |  |  |  |  |
| Original Unit |  |  |  |  |
| Composed Unit |  |  |  |  |

When finished record your measurements on the class whiteboard.

5. Time for a switch! Pass your original unit with instructions for creating a partitioned and composed unit (and the names of these) to another group. Make a prediction; If you were to measure things with these new units, would you end up with a great or lesser value than when you measured in your own units?

6. Calculate the relationship between your units and these new units (e.g. 1 Shroydelshnop = 5/4 Schticky)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (partitioned unit)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (original unit)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (composed unit)

7. Compute measurements in this new unit using your relationships from above

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Unit Name | Length of Table | Width of Classroom Door | Length of your cellphone |
| Partitioned Unit |  |  |  |  |
| Original Unit |  |  |  |  |
| Composed Unit |  |  |  |  |

8. How do your three units compare to a standard measurement system (e.g. Imperial or Metric)?

9. How is using someone else’s units like (or unlike) converting between standard and metric systems?

10. How did your choices for partitioning, composing and naming support or impede your work?