**Station 1. Dimensional analysis**

100 cm = 1 m, 1000 mg = 1 g, 1000 g = 1 kg, 1tsp = 4.93 ml

Show all work, use correct precision, and include units.

1. 5000 m makes up how many kilometers?
2. Convert 5 cm to meters.
3. What is the volume of an object 22.3 cm long, 4.2 cm wide, and 3.0 cm tall?
4. Convert 8.2 mg to kilograms (use two steps).
5. Convert 6.2 tsp to ml.

**Station 2.**

Measurements and Calculations

1. Measure the rectangle
   1. Length (long side)
   2. Width
   3. Area
2. Measure the triangle
   1. Horizontal edge
   2. Vertical edge
   3. Angled edge
   4. Perimeter (sum of edges)
3. Measure the aluminum block
   1. Length
   2. Width
   3. Height
   4. Calculate the volume
   5. Measure the mass on a balance
   6. Calculate the density (D = m/v)

**Station 3.**

1. Record the mass of the beaker.
2. Record the mass of the flask
3. Record the mass of the test tube
4. Record the mass of the petri dish
5. Record volumes of a, b, and c.
6. Record temperature

**Station 4.**

A. Describe measuring something at home that will give you an answer that is accurate but not precise. Explain why.

B. Describe measuring something at home that will give you an answer that is precise but not accurate. Explain why.

**Station 5.**

A group of students perform an experiment to measure the effect of acid on dissolving a sugar cube. They obtain the results below. Create a good graph of these results (be sure both axes are scaled). Then write a one sentence description of the result. Lower pH means the solution is more acidic.

|  |  |
| --- | --- |
| pH | Time to dissolve (s) |
| 1 | 36 |
| 2 | 80 |
| 4 | 110 |
| 7 | 125 |

**Station 6.**

Two students perform an experiment to test the effect of the type of paper (notebook paper, construction paper, or newspaper) on how far a paper airplane will fly.

A. Write a hypothesis for this experiment.

B. What is the IV?

C. What is the DV?

D. Results.

Notebook paper: 17.2 m

Construction paper: 14.3 m

Newspaper: 12.5 m

E. Write a one paragraph conclusion for this experiment.