**Activity 3: Unit Conversion and Dosage Calculations**

***Learning Objectives***

*Part 1 Convert units using equivalent units*

*Part 2 Calculate dosages using equivalent units*

**Estimated Completion Time** 60–75 Minutes

**Instructor Information**

Completion times may vary based on the math skills of the students. Students tend to fine this activity difficult, yet useful since they see how it relates directly to their health career.

Activities 2 and 3 could be performed during a laboratory period.

**ANSWERS TO QUESTIONS**

**Part 1. The Metric System**

1. (answers in bold)

|  |  |  |
| --- | --- | --- |
| **Physical Quantity** | **Customary Unit** | **Metric Unit** |
| Mass | **Pound** | **Gram** |
| Volume | **Fluid ounces** | **Liter** |
| Length | **Inches** | **Meter** |
| Energy | **Calorie** | **Joule** |
| Temperature | **Fahrenheit** | **Kelvin** |
| Pressure | **Psi** | **Pascal** |

2. Gram

3. Milliliter

4. 2000 mL

5. a. 15,000 g b. Vitamin E

**Part 2. Dosage Calculations**

1. 166 lb

2. 6.2 miles

3. 

Tell the mother to give the child 2 teaspoons every 4 hours.

4. 



5.

Divided into four doses, this would be ½ tablet per dose.

**Activity 3: Skill Development**

1. 

2.





Total weight is 7 lb 10 oz.

3.



Or ¾ teaspoon per dose

4.





Every 6 hours means that there would be 4 doses in a day, so 2 tsp × 4 doses = 8 teaspoons per day.

5.



6. Establish the safe limits:





The child is receiving 3 × 125 mg per day, or 375 mg per day, which falls within the safe limits.