Lab Directions: MASS OF A TORTOISE DIET

Background Information:

Tortoises could drink up to 40% of their own weight in water. Since finding water in the desert can be difficult, sometimes a tortoise must get their water intake from plants.

Problem: How much water (g) mass can a desert tortoise consume from 5 desert plants?

Skill Focus:
Drawing, measuring, analyzing, drawing conclusions, mathematical computation

Materials: (List, Draw and Color ALL Materials)
- Triple beam balance
- 5 Plants from a tortoise diet
- Shoe box or similar box for storing plants
- Pencil
- Crayons

Procedures: [Underline Verbs (something you DO) and Circle Materials]
Day 1:
1. Write down a hypothesis (an educated guess) on your data table.
2. Select 5 wet (fresh, not dried out) desert plants and weight them on your triple beam balance. Then record in your data table.
3. Label and store your plants in assigned box

Day 2
1. Retrieve plants from your assigned box.
2. Now re-weigh 5 dry desert plants on your triple beam balance.
3. Once you have a dry weight, you may throw away your plants.
4. Using the formula below, find the mass of water from each of your desert plants. Use the calculation section in you data table if needed.

dry plant weight – wet plant weight = H_2O mass

Data Table: Complete during lab.

Analyze and Conclude:
Measuring: For each object you tested, compare weight of the fresh food to that of the dried food.
Drawing Conclusions: Use your results to explain how much food both fresh and dry, a tortoise would need to eat to equal the 40% amount of water a tortoise could drink in a day.
Mathematical Computations: Write 3 sentences explaining how to use the math formula you used to reach your final answer and how you got to it.
Communicating: Comparison of findings will be discussed as a class. After the discussion, write 3 sentences about what the difference and what was the same and explain why you think you came to the conclusion you did. Was your hypothesis correct?

Data Table

HYPOTHESIS

Day 1

Plant Name	Wet Weight of Plant
1.	
2.	
3.	
4.	
5.	
	Total Weight:

Day 2

Plant Name	Dry Weight of Plant
1.	
2.	
3.	
4.	
5.	
	Total Weight:

Calculations Write your calculations below. You may use another sheet of paper if you run out of room

Formula for finding the water mass for each plant: **Wet Weight – Dry Weight = H20 weight of plant**	Plant 1: Plant 2: Plant 3: Plant 4: Plant 5: