

Student Worksheet

We have seen how *dry times* are important to know within industrial and other professional settings. Your task is to calculate how long it will take for a spritz of water to evaporate.

Each group will be given water bottles, along with various equipment for data collection. Your task will be to measure and calculate the exact time, to the nearest second, for one full and complete spritz of water from the provided water bottle, under known atmospheric conditions (that is, inside the classroom).

Equipment (suggested but not limited to): test tubes, petri dishes, paper towel, sponges, triple beam balance and/or electronic scale.

Complete the task using the seven engineering practices below:

1. Asking Questions and Defining Problems.

What is the exact dry time (to the nearest second) for one full and complete spritz of water?

2. Developing and Using Models

Draw or write an explanation of how the team expects to solve the problem. Be sure to note constraints and equipment.

Name: _____ Date: _____ Class: _____

3. Planning and Carrying Out Investigations

- How will your group collect the water?
- How much water is needed to get a good reading from the scales?
- What is the mass of one full and complete spritz of water?

4. Analyzing and Interpreting Data

Use this space for the data and measurement collected.

Name: _____ Date: _____ Class: _____

5. Using Mathematics and Computational Thinking

Use this space for the mathematical calculations and unit conversions.

6. Constructing Explanations and Designing Solutions.

Use the models and explanations developed. The data and mathematical calculations will prove the deduced solutions.

Name: _____ Date: _____ Class: _____

7. Engaging in Argument from Evidence

Discuss your model, explanation, and data with two other groups. All three data sets must compare the mass of water per spritz and the dry time of spritz.