Part 1 - Data Sheet. Fill in your hypothesis and describe the scenario for each trial you run. Record the volume of water in the bottle before and after the trial, calculate the amount of water added, record the amount of water collected in the tray, and calculate the runoff ratio.

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| Trial | Hypothesis | Scenario | Volume of Water in Bottle - start | Volume of Water in Bottle - end | Volume of Water Added (start-end) | Volume of Runoff (collected in tray) | Runoff Ratio  (runoff/  added) |
| 1 | *In a dry paint tray watershed, all the water added as precipitation runs off.* | *Dry tray, no materials present.* |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |

Part 2. Answer these questions about your hypotheses and results.

1. Did you have any scenarios that had a runoff ratio of 1? If not, why not?
2. Under what conditions did you find the largest runoff ratio, and under what conditions did you find the smallest runoff ratio? Why do you think the results turned out the way they did?
3. In what ways do you think this activity and the paint tray physical models represent real-world runoff processes and principles? In what ways are these models different from the real world?
4. What are the problems with this method? Are there ways you could improve this method for future students and classes?
5. How do your results help you think about and explain the difference we observed between the actual streamflow in West Branch Herring Run after the rain event and what we modelled assuming 100% surface runoff?