

# Student Data Table

## Exploring a Chemical Reaction in a Toy

Weight of unknown solid \_\_\_\_\_ g

Volume of "magic water" \_\_\_\_\_ mL

Well	1	2	3	4	5	6	7	8	9	10
Color										

Well 11

- Observations —
- Universal indicator color —
- pH —

Well 12

- Observations —
- Rainbow indicator color —
- pH —

## Post-Lab Questions

- What was the purpose of using two different indicators in this lab? *Hint:* See the pH color charts below for the indicators.
- Use the following keys to fill in the pH values for the 10 wells in the table below.

Universal indicator — Wells 1, 3, 5, 7, and 9

pH	≤4	5	6	7	8	9	10
Color	red	orange	yellow	green	green-blue	blue	purple

Rainbow indicator — Wells 2, 4, 6, 8, and 10

pH	1	2	3	4	5	6	≥7
Color	red	orange	yellow	pale green	forest green	green-blue	blue

Well	1	2	3	4	5	6	7	8	9	10
pH										

- Did you notice any trends or patterns for the pH values in the wells?
- What purpose did wells 9 and 10 serve, which only contained water and indicator?
- Based on the indicator color changes in wells 1–10, what chemical appears to be present in the "magic water" solution?
- Is the pH of unknown solid acidic or basic? Identify the solid based on the results of other wells.