| Team name: Glass: Glass: | Feam name: | Date: | Class: |
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## **Relative Humidity Lab Datasheet**

## **Data Measurement, Collection and Calculations**

- To collect accurate temperatures, spin both thermometers for 60 seconds.
- Take measurements inside and outside.
- Record your values in the table below.
- Calculate the differences between the temperatures taken with different instruments.
- Refer to the relative humidity chart to determine the percentage of relative humidity.

|   | Inside | Outside |
|---|--------|---------|
| Dry bulb temperature                    |        |         |
| Wet bulb temperature                    |        |         |
| Difference between the two temperatures |        |         |
| Relative humidity                       |        |         |
| Psychrometer reading                    |        |         |

## Relative Humidity (%)

| Dry-Bulb<br>Tempera-<br>ture (°C) |     | Difference Between Wet-Bulb and Dry-Bulb Temperatures (C°) |    |    |    |    |        |    |    |    |        |        |    |               |               |      |
|-----------------------------------|-----|--|----|----|----|----|--------|----|----|----|--------|--------|----|---------------|---------------|------|
|                                   | 0   | 1  | 2  | 3  | 4  | 5  | 6      | 7  | 8  | 9  | 10     | 11     | 12 | 13            | 14            | 15   |
| -20                               | 100 | 28   |    |    |    |    |        |    |    |    |        |        |    | -             |               | - 10 |
| -18                               | 100 | 40   |    |    |    |    |        |    |    |    |        | $\neg$ |    |               |               |      |
| -16                               | 100 | 48   |    |    |    |    |        |    |    |    |        |        |    |               |               |      |
| -14                               | 100 | 55   | 11 |    |    |    |        |    |    |    |        |        |    |               |               |      |
| -12                               | 100 | 61   | 23 |    |    |    |        |    |    |    |        |        |    |               |               |      |
| -10                               | 100 | 66   | 33 |    |    |    |        |    |    |    |        | $\neg$ |    |               |               |      |
| -8                                | 100 | 71   | 41 | 13 |    |    |        |    |    |    |        |        |    | $\neg$        |               |      |
| -6                                | 100 | 73   | 48 | 20 |    |    |        |    |    |    |        |        |    |               |               |      |
| -4                                | 100 | 77   | 54 | 32 | 11 |    |        |    |    |    |        | $\neg$ |    |               | $\rightarrow$ |      |
| -2                                | 100 | 79   | 58 | 37 | 20 | 1  | $\neg$ |    |    |    |        |        |    | _             |               |      |
| 0                                 | 100 | 81   | 63 | 45 | 28 | 11 |        |    |    |    |        |        |    |               |               |      |
| 2                                 | 100 | 83   | 67 | 51 | 36 | 20 | 6      |    |    |    |        | $\neg$ |    | $\neg$        |               | _    |
| 4                                 | 100 | 85   | 70 | 56 | 42 | 27 | 14     |    |    |    | $\neg$ | $\neg$ |    |               | $\overline{}$ |      |
| 6                                 | 100 | 86   | 72 | 59 | 46 | 35 | 22     | 10 |    |    |        |        |    | -             | _             |      |
| 8                                 | 100 | 87   | 74 | 62 | 51 | 39 | 28     | 17 | 6  |    |        |        |    |               |               |      |
| 10                                | 100 | 88   | 76 | 65 | 54 | 43 | 33     | 24 | 13 | 4  |        |        |    | $\rightarrow$ |               |      |
| 12                                | 100 | 88   | 78 | 67 | 57 | 48 | 38     | 28 | 19 | 10 | 2      |        |    | $\neg$        |               |      |
| 14                                | 100 | 89   | 79 | 69 | 60 | 50 | 41     | 33 | 25 | 16 | 8      | 1      |    |               |               |      |
| 16                                | 100 | 90   | 80 | 71 | 62 | 54 | 45     | 37 | 29 | 21 | 14     | 7      | 1  | _             |               |      |
| 18                                | 100 | 91   | 81 | 72 | 64 | 56 | 48     | 40 | 33 | 26 | 19     | 12     | 6  |               |               |      |
| 20                                | 100 | 91   | 82 | 74 | 66 | 58 | 51     | 44 | 36 | 30 | 23     | 17     | 11 | 5             |               |      |
| 22                                | 100 | 92   | 83 | 75 | 68 | 60 | 53     | 46 | 40 | 33 | 27     | 21     | 15 | 10            | 4             |      |
| 24                                | 100 | 92   | 84 | 76 | 69 | 62 | 55     | 49 | 42 | 36 | 30     | 25     | 20 | 14            | 9             | 4    |
| 26                                | 100 | 92   | 85 | 77 | 70 | 64 | 57     | 51 | 45 | 39 | 34     | 28     | 23 | 18            | 13            | 9    |
| 28                                | 100 | 93   | 86 | 78 | 71 | 65 | 59     | 53 | 47 | 42 | 36     | 31     | 26 | 21            | 17            | 12   |
| 30                                | 100 | 93   | 86 | 79 | 72 | 66 | 61     | 55 | 49 | 44 | 39     | 34     | 29 | 25            | 20            | 16   |