

Temperature Measurement Worksheet

Station 1

	Prediction
Which box will have the highest temperature?	
Which box will have the lowest temperature?	
Box color	Temperature
Black	
Blue	
Red	
White	

Station 2

	Prediction
Will salt lower the freezing point of water?	
	Temperature
Ice–water mixture	
Salt–ice–water mixture	

Station 3

Heat of solution						Endothermic or Exothermic?
Temperature	Initial	30 s	60 s	90 s	120 s	
Ammonium nitrate						
Calcium chloride						

Station 4

	Trial 1	Trial 2	Trial 3	Average
Dry-bulb temperature (°C)				
Wet-bulb temperature (°C)				
Temperature difference (°C)				

Station 5

Temperature of the catalyzed decomposition of hydrogen peroxide (°C)					
Initial	1 minute	2 minutes	3 minutes	4 minutes	5 minutes

Post-Lab Questions (*Use a separate sheet of paper to answer the following questions.*)

1. Which box actually had the highest temperature in the activity at Lab Station 1, and why?
2. Did adding salt to ice in the activity at Lab Station 2 increase or decrease the temperature? Based on this result, what is the effect of salting icy streets?
3. The dissolution of which substance at Lab Station 3 could be used to make a cold pack? Which one could be used to make a heat pack?
4. Use the following Relative Humidity Table to determine the relative humidity of the classroom from the wet-bulb and dry-bulb temperature readings taken at Station 4.

Relative Humidity Table in Percent (%)

Dry-Bulb Temperature °C	Difference between wet-bulb and dry-bulb temperatures in degrees Celsius (°C).									
	1	2	3	4	5	6	7	8	9	10
10	88	77	66	56	45	35	26	16	7	2
11	89	78	67	57	47	38	28	19	11	2
12	89	79	68	59	49	40	31	22	14	5
13	89	79	69	60	51	42	33	25	16	9
14	90	80	70	61	52	43	35	27	19	11
15	90	80	71	62	54	45	37	29	22	14
16	90	81	72	63	55	47	39	31	24	17
17	91	82	73	64	56	48	41	33	26	19
18	91	82	73	65	57	50	42	35	28	21
19	91	82	74	66	58	51	44	37	30	24
20	91	83	75	67	59	52	45	38	32	26
21	91	83	75	68	60	53	47	40	34	27
22	92	84	76	69	61	54	48	41	35	29
23	92	84	77	69	62	56	49	43	37	31
24	92	84	77	70	63	57	50	44	38	32
25	92	85	77	71	64	57	51	45	40	34
26	92	85	78	71	65	58	52	46	41	35
27	93	85	78	72	65	59	53	47	42	37
28	93	86	79	72	66	60	54	49	43	38
29	93	86	79	73	67	61	55	50	44	39
30	93	86	80	73	67	61	56	50	45	40

5. What gas is given off in the decomposition of hydrogen peroxide at Lab Station 5?