

# Regional Science Consortium

## Temperature Tracker

### Background

The Regional Science Consortium operates multiple buoys and weather stations in Erie, PA which provide information on various parameters such as wind speed, wave height, air temperature, rainfall, etc. This data is then used in predictive modeling, weather, forecasting, and numerous research projects.

### Objective

Students will apply their knowledge of buoy and weather data and its importance by collecting their own air temperature readings using a thermometer for 31 days and comparing it to data from the previous year for the same dates.

### Instructions

1. Place your thermometer outside and allow it to adjust to the outdoor temperature while you begin filling in your student worksheet.
2. Begin by filling in the "Date" column of your worksheet with the month(s) and days that you will be measuring air temperature.
3. Fill in the "Air Temperature Last Year" column by locating each of your dates in the "2019/2020 Air Temperature Data" table attached. This tells you what the air temperature was exactly one year ago from your sample date.
4. Once you have filled in these two columns of your worksheet, your thermometer should be adjusted to the outdoor temperature and ready for you to take your first air temperature reading! Record the reading in the "Air Temperature This Year" column of your student worksheet in the appropriate row.
5. Continue taking air temperature readings every day until you have completed your table.
6. Once you have taken your final reading, answer each question in the "Analysis of Results" section of your worksheet.

**2019/2020 Air Temperature Data**

Air Temperature (F) at 12:00 pm										
Day	Month									
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June
1	72.5	81.6	37.9	39.7	31	32.7	35.9	38.6	43.5	58.1
2	67.8	70.5	43.5	34.3	43.5	36.6	46.7	40.8	61.3	64.9
3	72.6	57.7	42	33.6	46.7	43.7	53.2	39.9	59	69.9
4	67.2	51.9	52.8	37.5	34.7	35.7	36.1	42.2	43.5	78.9
5	65.4	54.3	45.6	36.3	33.4	27.5	41	41.1	42	70.5
6	67.4	69	43.3	39.9	35.9	31.1	33.9	40.8	44	64.5
7	66.3	60.8	35.9	32.7	38.3	24.8	29	57.3	55.5	62
8	65.4	63.1	33.4	44.2	26.5	27	48.9	43.5	37.2	61.1
9	65.6	61.7	36.3	48.7	28.3	36.1	60.8	40.4	34.3	71.9
10	79.3	62.9	44.7	35.9	48.5	35.2	47.1	35.6	56.4	85.2
11	76.1	69.6	35.4	24.8	67.2	33.4	39.2	39.3	37.5	65.8
12	64.4	53.2	26.1	29.3	31	33.9	37	59	43.1	61.5
13	72.1	57.9	27.5	40.2	41.7	31	38.6	50.1	42.4	55.5
14	68.3	51	34.3	33.6	50.3	15.7	33.9	38.4	64.4	59.3
15	71.6	55.4	34.5	33.2	43.1	25.4	34.1	36.1	75	61.5
16	69.9	48.9	33	34.7	33.6	33.8	46.5	33.9	47.4	63.1
17	68	48.9	40.6	31.5	20.2	37	39	35.9	51.9	71.9
18	71.2	48	41	23.2	32.5	41	46.4	39.2	54.1	72.6
19	69.8	55	42.8	22	22.5	26.8	39	55.2	58.1	71.9
20	77	61.3	42	29.3	21.6	23	65.1	37.5	63.8	71.6
21	81.1	66.9	44.6	38.4	25	26.1	27.2	37.5	56.8	86.5
22	82.2	58.8	36.3	46.7	28.8	37	32	33	60.6	71.9
23	68.9	52.3	41.1	50.5	37.9	46.5	41.9	46	57.7	73.7
24	63.8	57	39.2	36.8	45.1	44.9	36.6	41.1	79.5	64.5
25	74.4	53.2	47.4	48	37.5	35.6	44	43.5	78	68.5
26	67.4	52.1	48.7	55	33.6	34.1	60	44.2	86.7	70.8
27	69.8	54.6	53.4	50.7	33.8	23.8	39.3	44.7	76.8	68.7
28	71.7	59.5	37.9	37.4	33.2	24.5	53.4	57.5	63.8	68.5
29	62.7	60.6	33.9	47.6	30.1	24.3	71	67.1	71.9	71
30	67.6	54.5	33.8	41.1	30.1		41.7	55.9	57.2	72.3
31		62.7		31.9	33.6		39		49.4	