**Global Temperature Visualization Data**

**Introduction:**

The ECH20 junior class has taken data from globe.gov and produced a compiled graph to visualize the temperatures in different parts of the world. Trend lines were inserted in order to observe the message of the readings for that particular area. Another significant thing learned is the importance of dates lining up so that the data makes sense. As is observed from the compiled graph, temperatures can vary significantly depending on where the location is on the globe, the trend lines help a lot to visualize it. For example Florida can hit colder temperatures while New Zealand hits warmer temperatures.

**Data Key**

SA – Saudi Arabia FL – Florida, U.S.A. Temp – Temperature N/M – No Measurement

NZ – New Zealand C – Celsius Benicia – Benicia, CA, U.S.A.

**Global Temperature Visualization Data Table**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Benicia Temp C** | **SA Temp C** | **NZ Temp C** | **FL Temp C** |
| 3-Dec | 12.6 | 21.3 | 19.6 | 2.4 |
| 4-Dec | 11.3 | 21.8 | 20.7 | -1.3 |
| 5-Dec | 10.5 | 20.2 | 17.6 | -0.5 |
| 6-Dec | 19.4 | N/M | 21.6 | 0.9 |
| 7-Dec | 8.9 | N/M | 19.4 | -2.8 |
| 8-Dec | 8.0 | 19.5 | 16.8 | -5.7 |
| 9-Dec | 8.7 | 19.8 | 18.9 | -6.8 |
| 10-Dec | 9.4 | 19 | 17.7 | -6.4 |
| 11-Dec | 11.4 | 16 | 19.1 | 4.1 |
| 12-Dec | 12.1 | N/M | 12.2 | 4.1 |
| 13-Dec | 13.6 | 17.9 | 22.3 | -0.4 |
| 14-Dec | 13.8 | N/M | 22.3 | -6.6 |
| 15-Dec | 14.2 | N/M | 22.3 | -1.8 |
| 16-Dec | 16.2 | 19.3 | 22.7 | 2.2 |
| 17-Dec | 14.1 | 19 | 23 | 3.4 |
| 18-Dec | 14.2 | 19.7 | 19.7 | 0.5 |
| 19-Dec | 15.7 | 18.7 | 20.2 | 1.4 |
| 20-Dec | 15.1 | N/M | 20.6 | 1 |
| 21-Dec | 13.4 | N/M | 19.6 | 1.9 |
| 22-Dec | 13.8 | N/M | 15.4 | 4.8 |
| 23-Dec | 15.7 | 9 | 20.8 | 3.2 |
| 24-Dec | 16.7 | N/M | 19.8 | 1.8 |
| 25-Dec | 13.7 | 11.8 | 19.8 | 5.2 |
| 26-Dec | 15.5 | N/M | 18.8 | 5.5 |
| 27-Dec | 13.4 | N/M | 20.5 | 2.7 |
| 28-Dec | 16.6 | N/M | 19.8 | 5.1 |
| 29-Dec | 17.0 | N/M | 20.1 | 4.6 |
| 30-Dec | 15.7 | N/M | 21.1 | 3.5 |
| 31-Dec | 13.5 | N/M | 22.1 | 2.1 |
| 1-Jan | 15.0 | N/M | 20.2 | 4.3 |
| 2-Jan | 15.9 | N/M | 20.5 | 0.7 |
| 3-Jan | 15.3 | N/M | 19.1 | -0.2 |
| 4-Jan | 18.2 | N/M | 21.4 | 1 |
| 5-Jan | 17.6 | N/M | 18.8 | 1.3 |
| 6-Jan | 13.6 | N/M | 21.8 | 1.5 |
| 7-Jan | 14.0 | N/M | 17.3 | 2.8 |
| 8-Jan | 14.6 | N/M | 20.9 | 1.9 |
| 9-Jan | 15.5 | N/M | 18.6 | 3.3 |
| 10-Jan | 15.7 | N/M | 21.9 | 0.3 |
| 11-Jan | 13.5 | N/M | 21.1 | -8.2 |
| 12-Jan | 14.3 | N/M | 18.5 | -11 |
| 13-Jan | 15.9 | 18 | 20.8 | -12.4 |
| 14-Jan | 15.9 | 21 | 20.1 | -11.7 |
| 15-Jan | 18.3 | 24 | 20.9 | -12.1 |
| 16-Jan | 18.4 | N/M | 19.8 | -14.4 |
| 17-Jan | 16.5 | N/M | 19.7 | -13.1 |
| 18-Jan | 17.3 | N/M | 20.1 | -17 |
| 19-Jan | 16.9 | N/M | 20.7 | -11.7 |
| 20-Jan | 18.1 | N/M | 19.7 | -13.9 |
| 21-Jan | 16.3 | N/M | 15 | -10.8 |
| 22-Jan | 18.2 | N/M | 13.2 | -12.7 |
| 23-Jan | 19.2 | N/M | 19.6 | -18.4 |
| 24-Jan | 22.3 | N/M | 21.3 | -18.9 |
| 25-Jan | 20.6 | N/M | 22.3 | -5 |
| 26-Jan | 18.2 | 21.5 | 20.6 | -6.7 |
| 27-Jan | 14.3 | 19.6 | 16.4 | -10.7 |
| 28-Jan | 16.9 | 19.3 | 18.9 | -11.5 |
| 29-Jan | 16.9 | 18.7 | 20 | -13.7 |
| 30-Jan | 15.7 | N/M | 20.7 | -13.7 |
| 31-Jan | 14.7 | N/M | 22 | -13.3 |
| 1-Feb | 13.5 | N/M | N/M | N/M |
| 2-Feb | 7.7 | 18.7 | N/M | N/M |
| 3-Feb | 12.1 | N/M | N/M | N/M |
| 4-Feb | 12.5 | N/M | N/M | N/M |
| 5-Feb | 12.5 | N/M | N/M | N/M |
| 6-Feb | 10.5 | N/M | N/M | N/M |

**Results Discussion:** From the graph on the first page, weather patterns on or possibly even around the given location are predictable. An example is New Zealand, it has its average temperature marked around 20 degrees Celsius for the documented winter given. From the map on globe.gov website, it is seen that New Zealand is near Australia, which has heated deserts – thus being capable of hitting those higher temperatures. The maximum and minimum values can tell the temperature range of that location. For example, the graph tells us that Florida’s range of temperature is quite varied. From the graph Florida’s maximum value is about 5° C and its minimum is about -15° C. Again, the trend lines helped quite a bit to determine the main points of the data. There are not a lot of outliers in this graph, though we observe something very interesting – the recorded temperature spikes that somewhat line up around the 28th of January. These similarities may suggest something that happened internationally, worldwide – which was related to temperature readings. Now concerning errors, which the graph may contain, are the errors that occurred as the people took their measurements. Some may have put down the wrong number maybe even the wrong unit of measure in the wrong place. Significantly, much has been learned from producing this graph and report, from the good value of having correct and logical data, to the diverse temperature ranges found in different parts of the world.