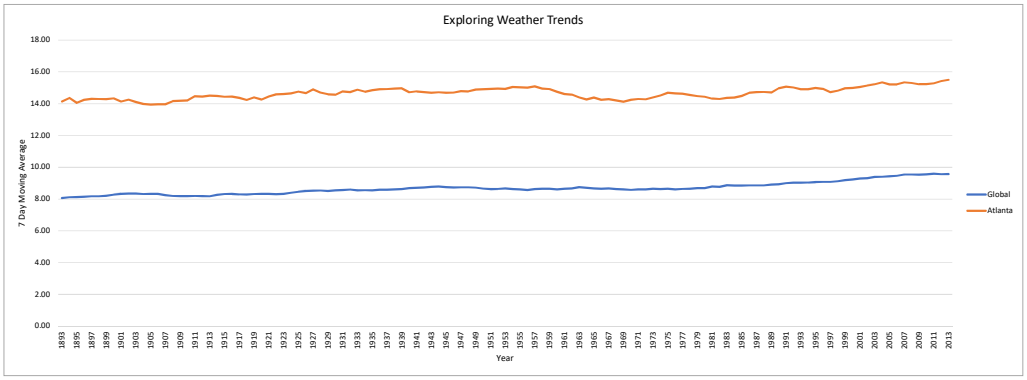
| | 7 Day Moving Average | |
|---|---|---|
| year | Global | Atlanta |
| 1893 | 8.06 | 14.14 |
| 1894 | 8.11 | 14.36 |
| 1895 | 8.12 | 14.05 |
| 1896 | 8.15 | 14.25 |
| 1897 | 8.17 | 14.30 |
| 1898 | 8.18 | 14.30 |
| 1899 | 8.21 | 14.29 |
| 1900 | 8.27 | 14.33 |
| 1901 | 8.32 | 14.14 |
| 1902 | 8.35 | 14.25 |
| 1903 | 8.35 | 14.11 |
| 1904 | 8.32 | 13.98 |
| 1905 | 8.33 | 13.95 |
| 1906 | 8.32 | 13.97 |
| 1907 | 8.24 | 13.96 |
| 1908 | 8.19 | 14.16 |
| 1909 | 8.18 | 14.19 |
| 1910 | 8.18 | 14.21 |
| 1911 | 8.19 | 14.48 |
| 1912 | 8.18 | 14.45 |
| 1913 | 8.17 | 14.51 |
| 1914 | 8.26 | 14.48 |
| 1915 | 8.32 | 14.44 |
| 1916 | 8.33 | 14.45 |
| 1917 | 8.30 | 14.37 |
| 1918 | 8.29 | 14.24 |
| 1919 | 8.32 | 14.40 |
| 1920 | 8.33 | 14.26 |
| 1921 | 8.33 | 14.46 |
| 1922 | 8.30 | 14.59 |
| 1923 | 8.33 | 14.61 |
| 1924 | 8.40 | 14.65 |
| 1925 | 8.45 | 14.76 |
| 1926 | 8.50 | 14.67 |
| 1927 | 8.53 | 14.91 |
| 1928 | 8.54 | 14.69 |
| 1929 | 8.51 | 14.59 |
| 1930 | 8.54 | 14.57 |
| 1931 | 8.57 | 14.77 |
| 1932 | 8.60 | 14.74 |
| 1933 | 8.54 | 14.88 |
| 1934 | 8.56 | 14.76 |
| 1935 | 8.54 | 14.85 |
| 1936 | 8.59 | 14.91 |
| 1937 | 8.60 | 14.92 |
| 1938 | 8.62 | 14.94 |
| 1939 | 8.62 | 14.96 |
| 1940 | 8.68 | 14.72 |
| 1941 | 8.70 | 14.77 |
| 1942 | 8.73 | 14.73 |
| 1943 | 8.76 | 14.69 |
| 1944 | 8.78 | 14.72 |
| 1945 | 8.74 | 14.68 |
| 1946 | 8.73 | 14.69 |
| 1947 | 8.74 | 14.79 |
| 1948 | 8.74 | 14.78 |
| 1949 | 8.72 | 14.89 |
| 1950 | 8.66 | 14.91 |
| 1951 | 8.63 | 14.93 |
| 1952 | 8.64 | 14.95 |
| 1953 | 8.66 | 14.93 |
| 1954 | 8.63 | 15.05 |
| 1955 | 8.61 | 15.04 |
| 1956 | 8.57 | 15.02 |
| 1957 | 8.62 | 15.09 |
| 1958 | 8.64 | 14.95 |
| 1959 | 8.65 | 14.92 |
| 1960 | 8.61 | 14.74 |
| 1961 | 8.65 | 14.61 |
| 1962 | 8.66 | 14.57 |
| 1963 | 8.75 | 14.39 |
| 1964 | 8.70 | 14.27 |
| 1965 | 8.67 | 14.39 |
| 1966 | 8.65 | 14.25 |
| 1967 | 8.66 | 14.28 |
| 1968 | 8.62 | 14.21 |
| 1969 | 8.60 | 14.13 |
| 1970 | 8.58 | 14.24 |
| 1971 | 8.61 | 14.30 |
| 1972 | 8.60 | 14.28 |
| 1973 | 8.65 | 14.40 |
| 1974 | 8.62 | 14.52 |
| 1975 | 8.65 | 14.69 |
| 1976 | 8.62 | 14.65 |
| 1977 | 8.64 | 14.62 |
| 1978 | 8.65 | 14.54 |
| 1979 | 8.68 | 14.48 |
| 1980 | 8.69 | 14.44 |
| 1981 | 8.79 | 14.32 |
| 1982 | 8.77 | 14.30 |
| 1983 | 8.87 | 14.37 |
| 1984 | 8.85 | 14.39 |
| 1985 | 8.84 | 14.49 |
| 1986 | 8.86 | 14.68 |
| 1987 | 8.86 | 14.73 |
| 1988 | 8.86 | 14.74 |
| 1989 | 8.90 | 14.70 |
| 1990 | 8.93 | 14.97 |
| 1991 | 9.00 | 15.08 |
| 1992 | 9.03 | 15.02 |
| 1993 | 9.03 | 14.92 |
| 1994 | 9.04 | 14.92 |
| 1995 | 9.06 | 14.99 |
| 1996 | 9.08 | 14.94 |
| 1997 | 9.07 | 14.73 |
| 1998 | 9.12 | 14.82 |
| 1999 | 9.19 | 14.97 |
| 2000 | 9.23 | 15.00 |
| 2001 | 9.29 | 15.04 |
| 2002 | 9.32 | 15.14 |
| 2003 | 9.39 | 15.23 |
| 2004 | 9.41 | 15.34 |
| 2005 | 9.43 | 15.21 |
| 2006 | 9.47 | 15.22 |
| 2007 | 9.54 | 15.35 |
| 2008 | 9.54 | 15.31 |
| 2009 | 9.54 | 15.22 |
| 2010 | 9.56 | 15.22 |
| 2011 | 9.59 | 15.29 |
| 2012 | 9.56 | 15.42 |
| 2013 | 9.57 | 15.50 |
| 2014 | 9.55 | |
| 2015 | 9.61 | |




**Exploring Weather Trends**

Please find below the SQL queries I used to extract the data:

```
select *
from city_data
where city = 'Atlanta';

select *
from global_data;
```

Preparation:

Here are the steps I took to prepare the data to be visualized in the chart:

1. I used SQL to run the above queries.
2. I exported those results to a CSV file.
3. I copied both results to a single sheet in Excel.
4. I then created a new column and input the formula for 7 day moving average in excel.
   > the calculation I used for moving average is I took the AVERAGE() function and highlighted seven years of data. I then clicked and dragged the formula down to susequent cells
5. I then proceeded to merge both data sets based on year.

One of the key considerations I used to decide how to visualize the trends was deciding on which type of chart would be best to use. I decide to use LINE CHART because they display relationships in how data changes over a period of time. It offers a quick visual on which direction the data is going.

Observations:

1. Atlanta is hotter on average compared to the global average.

2. Atlanta's temperatures stayed lock-stepped with the global average over time. The difference has been consistent over time with an approximate variance of 6 degrees.

3. The overall trend appears to be rising. The world appears to be getting hotter.

4. Over the last 100 years 7 day moving average temps have only increased by approximately 1 degree.