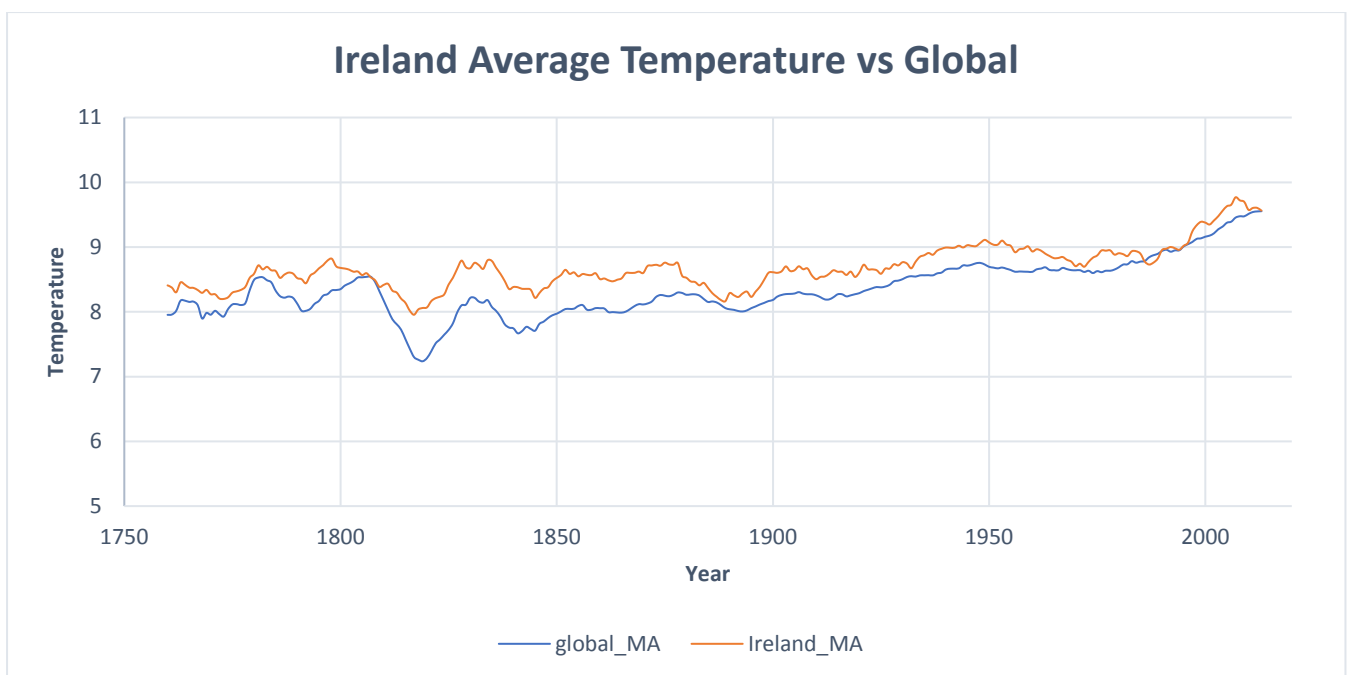# Explore Weather Trends

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Observations Made:

The average temperature of Dublin Ireland has been historically higher than the global average and that remains that way today. The biggest difference between both data points can be found around 1820 when the Irish average temperature was almost 1 degree warmer than the global average. 8.06 to 7.28 degrees. Beween 1808 and 1819 the global average temp dropped down to around 7.2. Both data points have experienced similar increases and decreases over this 250+ year span. Gradual increase in temperatures can be seen from 1918/1920 onwards, levelling out from the 1950's through to the 60's. The difference in temperature was consistent overtime, however this decades temperatures show that the gap has narrowed significantly. The overall trend shows that the world is getting hotter with a high upward surge since the start of the 1900's. The only years that the global moving average passed the dublin average was between 1987 and 1989 according to the chart below.

Steps:

I performed a select on all the data from the city_data and global_data database tables in sql using select *. The output was then exported out into CSV format for each of the tables. The years and the global average data was copied into a new sheet in excel, and I copied the Dublin Ireland average temperatures into that same sheet aswell. Two new columns were

created to calculate the moving average for both Global and Ireland for every 10 years. This moving average cell was clicked and dragged for all remaining years also. In order to create the line graph I had to hide the two average columns (B & D), leaving only year, global_MA and Ireland_MA. The x axis displays the years with a 20 yr increment and the y axis displays the temperature. The key considerations I made were to make each line plotted easily identifiable by using different colors and incrementing in .5 on the Y axis to show more clearly the difference between both data points.

▼ ⋮ ✕ ✓ *fx*   =AVERAGE(B2:B12)

	A	B	C	D	E
	year	global avg	global_MA	Ireland avg	Ireland_MA
	1759	7.99		8.82	
	1760	7.19	7.953636364	8.14	8.40818182
	1761	8.77	7.958181818	8.95	8.37454545
	1762	8.61	8.015454545	8.32	8.30181818
	1763	7.5	8.171818182	7.95	8.45363636
	1764	8.4	8.172727273	8.26	8.42
	1765	8.25	8.152727273	8.08	8.37363636
	1766	8.41	8.157272727	8.24	8.36909091
	1767	8.22	8.1	8.38	8.33545455
	1768	6.78	7.996262626	8.25	8.20373737

Input   HISTORY ∨   MENU ∨

SCHEMA   ↻   1   select * from city_data where city = 'Dublin'

city_data   ∧

   year

   city

   country

                                        Success!   EVALUATE
   avg temp

Input

SCHEMA ↻

city

country

global_data ∧

year

avg_temp

```
1    select * from global_data
```

Success!   EVALUATE