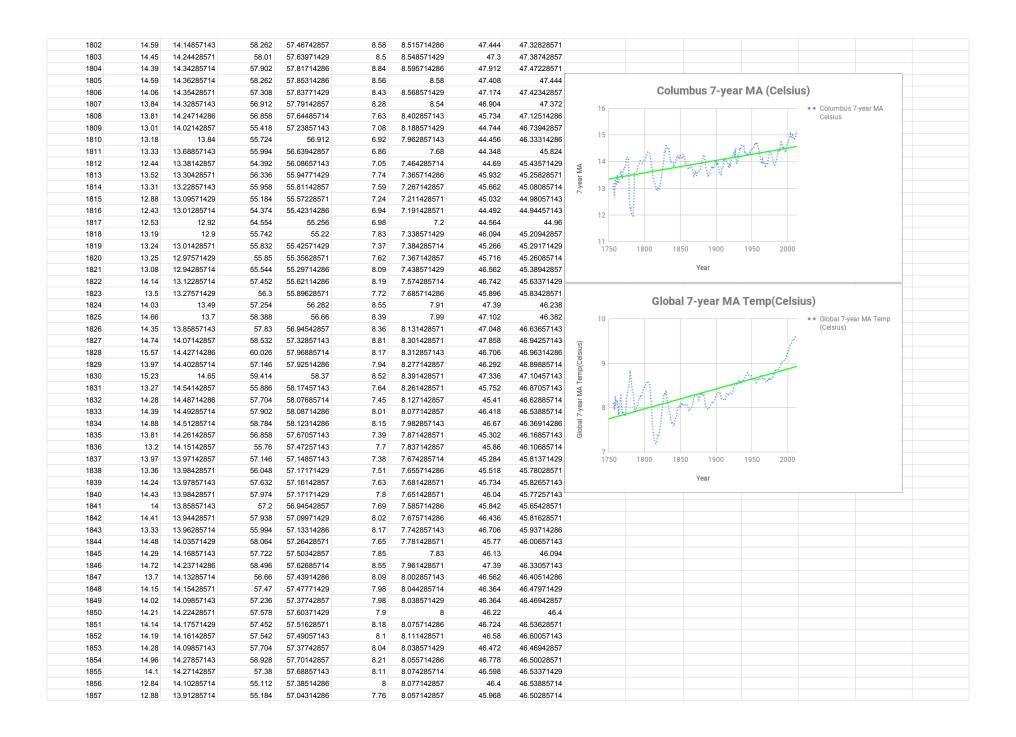
⁄ear	Columbus avg_temp (Celsius)	Columbus 7- year MA Celsius	Columbus avg_temp (Fahrenheit)	Columbus 7- year MA Fahrenheit	Global avg_temp (Celsius)	Global 7-year MA Temp (Celsius)	Global avg_temp (Fahrenheit)	Global 7-year MA(Fahrenheit)			Columbus Temp Statistics (Celsius)	Global Temp Statistics (Celsius)	Columbus Temp Statistics (Fahrenheit)	Global Temp Statistics (Fahrenheit)			
1750	14.62		58.316		8.72		47.696			Minimum	6.06	5.78	42.908	42.404			
1751	15.36		59.648		7.98		46.364			Maximum	16.05	9.73	60.89	49.514			
1752	8.3		46.94		5.78		42.404			Overall Average	13.9856654	8.359393939	57.17419772	47.04690909			
1753	14		57.2		8.39		47.102			Standard Deviation	0.93718121	0.5751842258	1.686926178	1.035331607			
1754	14.11		57.398		8.47		47.246			1st Quartile	13.59	8.0775		46.5395			
1755	11.66		52.988		8.36		47.048			3rd Quartile	14.45	8.7		47.66			
1756	14.24	13.18428571	57.632	55.73171429	8.85	8.078571429	47.93			Outlier Floor	12.3	7.14375		44.85875			
1757	13.62	13.04142857	56.516	55.47457143	9.02	8.121428571	48.236										
1758	12.55	12.64	54.59	54.752	6.74	7.944285714	44.132										
1759	13.55	13.39	56.39	56.102	7.99	8.26	46.382										
1760	12.1	13.11857143	53.78	55.61342857	7.19	8.088571429	44.942			Local vs	Global Ten	nps (Fahren	heit)				
1761	14.52	13.17714286	58.136	55.71885714	8.77	8.131428571	47.786		60				Columbus 7	AM room			
1762	14	13.51142857	57.2	56.32057143	8.61	8.167142857	47.498		00			- A - M	Fahrenheit	-year IVIA			
1763	11.94	13.18285714	53.492	55.72914286	7.5		45.5			" \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	■ Global 7-yea	ar MA			
1764	13.96	13.23142857	57.128	55.81657143	8.4	7.885714286	47.12		55	W     V	M- A. 4		(Fahrenheit				
1765	13.58	13.37857143	56.444	56.08142857	8.25	8.101428571	46.85		£ 33	' V			-				
1766	14.45	13.50714286	58.01	56.31285714	8.41	8.161428571	47.138		nhei								
1767	13.22	13.66714286	55.796	56.60085714	8.22		46.796		(Fahrenheit)								
1767	12.86	13.43	55.148	56.174	6.78	8.024285714	44.204		(Fa	.							
1769	13.73	13.39142857	56.714	56.10457143	7.69	7.892857143	45.842		emp	MAAA	~~~						
1769	13.73	13.62714286	56.462	56.52885714	7.69	7.092057143	45.842		± 45	- V V							
1770	14.48	13.70142857	58.064	56.66257143	7.85	7.841428571	45.842										
1771			57.614			7.841428571											
	14.23	13.79428571		56.82971429	8.19		46.742		40	1000	0 1000	1050 0055					
1773	14.37	13.78285714	57.866	56.80914286	8.22	7.805714286	46.796			1800 185	0 1900	1950 2000					
1774	13.93	13.88428571	57.074	56.99171429	8.77	7.884285714	47.786			Year							
1775	14.86	14.17	58.748	57.506	9.18	8.227142857	48.524										
1776	13.64	14.15714286	56.552	57.48285714	8.3	8.314285714	46.94										
1777	13.56	14.15285714	56.408	57.47514286	8.26	8.395714286	46.868			Local	vs Global T	emps (Celsi	ius)				
1778	11.19	13.68285714	52.142	56.62914286	8.54	8.494285714	47.372		00			- 1	- Calumbia	7 year MA			
1779	6.06	12.51571429	42.908	54.52828571	8.98	8.607142857	48.164		20				<ul> <li>Columbus</li> <li>Celsius</li> </ul>	/-year MA			
1780		12.20666667		53.972	9.43	8.78	48.974						Global 7-ve	or MA Tomp			
1781	14.13	12.24	57.434	54.032	8.1	8.684285714	46.58		15				Celsius)	ai wa remp			
1782	13.65	12.03833333	56.57	53.669	7.9	8.501428571	46.22		15		~~~		,,				
1783	13.4	11.99833333	56.12	53.597	7.68	8.412857143	45.824		4	- U ~							
1784	13.35	11.96333333	56.03	53.534	7.86	8.355714286	46.148		7-Year MA								
1785	13.16	12.29166667	55.688	54.125	7.36	8.187142857	45.248		Yea	m 1		_					
1786	13.7	13.565	56.66	56.417	8.26	8.084285714	46.868		7.								
1787	13.73	13.58857143	56.714	56.45942857	8.03	7.884285714	46.454	46.19171429	5								
1788	14.24	13.60428571	57.632	56.48771429	8.45		47.21										
1789	13.98	13.65142857	57.164	56.57257143	8.33	7.995714286	46.994										
1790	13.89	13.72142857	57.002	56.69857143	7.98	8.038571429	46.364		0								
1791	14.08	13.82571429	57.344	56.88628571	8.23	8.091428571	46.814			1800 1850	1900	1950 2000					
1792	13.57	13.88428571	56.426	56.99171429	8.09	8.195714286	46.562	46.75228571			Year						
1793	14.15	13.94857143	57.47	57.10742857	8.23	8.191428571	46.814	46.74457143									
1794	14.25	14.02285714	57.65	57.24114286	8.53	8.262857143	47.354										
1795	13.97	13.98428571	57.146	57.17171429	8.35	8.248571429	47.03	46.84742857									
1796	13.78	13.95571429	56.804	57.12028571	8.27	8.24	46.886	46.832									
1797	13.7	13.92857143	56.66	57.07142857	8.51	8.315714286	47.318	46.96828571									
1798	14.45	13.98142857	58.01	57.16657143	8.67	8.378571429	47.606	47.08142857									
1799	14.12	14.06	57.416	57.308	8.51	8.438571429	47.318	47.18942857									
1800	14.02	14.04142857	57.236	57.27457143	8.48	8.474285714	47.264	47.25371429									
1801	14.38	14.06	57.884	57.308	8.59	8.482857143	47.462	47.26914286									



1858	14.22	13.92428571	57.596	57.06371429	8.1	8.045714286	46.58	46.48228571	
1859	13.93	13.88714286	57.074	56.99685714	8.25	8.067142857	46.85	46.52085714	
1860	14.11	13.86285714	57.398	56.95314286	7.96	8.055714286	46.328	46.50028571	
1861	13.93	13.71571429	57.074	56.68828571	7.85	8.004285714	46.13	46.40771429	
1862	14.06	13.71	57.308	56.678	7.56	7.925714286	45.608	46.26628571 Outline:	
1863	13.57	13.81428571	56.426	56.86571429	8.11	7.941428571	46.598	46.29457143   used this SQL code: SELECT * FROM city_list WHERE country = 'United States' to look at the cities available.	able in the l
1864	13.24	13.86571429	55.832	56.95828571	7.98	7.972857143	46.364	46.35114286 46.37171429 This SQL code to extract the Columbus yearly average temperatures:	
1865	14.04	13.84	57.272	56.912	8.18	7.984285714	46.724		
1866	13.37	13.76	56.066	56.768	8.29	7.99	46.922	46.382 FROM city_data	
1867	13.68	13.69857143	56.624	56.65742857	8.44	8.058571429	47.192	46.50542857 WHERE city = 'Columbus' AND country = 'United States'	
1868	13.07	13.57571429	55.526	56.43628571	8.25	8.115714286	46.85	46.60828571 Temp data was missing from years 1746-1749 and year 1780.	
1869	13.2	13.45285714	55.76	56.21514286	8.43	8.24	47.174	40.032	
1870	13.91	13.50142857	57.038	56.30257143	8.2	8.252857143	46.76	46.85514286 I then exported and download it as an CSV file onto my personal computer.	
1871	14.34	13.65857143	57.812	56.58542857	8.12	8.272857143	46.616	46.89114286 This SQL code to extract the global annual average temps:	
1872	12.89	13.49428571	55.202	56.28971429	8.19	8.274285714	46.742	46.89371429 SELECT *	
1873	13.26	13.47857143	55.868	56.26142857	8.35	8.282857143	47.03	46.90914286 FROM global_data	
1874	14.45	13.58857143	58.01	56.45942857	8.43	8.281428571	47.174	46.90657143 No temperatures was missing, but it started at 1750.	
1875	13.05	13.58571429	55.49	56.45428571	7.86	8.225714286	46.148	46.80628571 I opened a new Google Sheet and imported the Columbus temp data, then imported the global temp data in	nto the sam
1876	13.56	13.63714286	56.408	56.54685714	8.08	8.175714286	46.544	46.71628571 spreadsheet.	3411
1877	14.1	13.66428571	57.38	56.59571429	8.54	8.224285714	47.372	46 80371429	
1878	14.37	13.66857143	57.866	56.60342857	8.83	8.325714286	47.894	Two Deletions: Deleted rows containing years 1743-1749 in the Columbus data because the global data started at 1750.	
1879	14.22	13.85857143	57.596	56.94542857	8.17	8.322857143	46.706	46.98114286 Deleted the last two rows of the Global temps (years 2014 and 2015) because Columbus did not have temps	ps for those
1880	14.4	14.02142857	57.92	57.23857143	8.12	8.29	46.616	46.922 years	
1881	14.54	14.03428571	58.172	57.26171429	8.27	8.267142857	46.886	46.88085714 I added two new columns for a 7 year moving average for local and global data.	
1882	14.23	14.20285714	57.614	57.56514286	8.13	8.305714286	46.634	46.95028571	
1883	13.9	14.25142857	57.02	57.65257143	7.98	8.291428571	46.364	46.92457143 I then added four new columns to convert the temperatures from celsius to fahrenheit using the Google She	eets function
1884	13.68	14.19142857	56.624	57.54457143	7.77	8.181428571	45.986	46.72657143 convert(#value, 'C', 'F'). I computed the 7-year moving averages for the fahrenheit temperatures.	
1885	12.43	13.91428571	54.374	57.04571429	7.92	8.051428571	46.256	46.49257143 It should be clear what units these temperatures were in, so I converted the original temperatures to Fahrer	nheit, and I
1886	12.91	13.72714286	55.238	56.70885714	7.95	8.02	46.31	the original temps with 'Celsius'. Converting the temperatures to Fahrenheit also made more sense of the d 46.436 I am accustomed to measuring temperature in Fahrenheit in the United States.	data for me
1887	13.88	13.65285714	56.984	56.57514286	7.91	7.99	46.238	46.382	
1888	13.46	13.49857143	56.228	56.29742857	8.09	7.964285714	46.562		
1889	13.71	13.42428571	56.678	56.16371429	8.32	7.991428571	46.976	46.33571429 Line charts: 1 created four charts: 2 charts showing both the local and global temperatures, one in celsius and one in fall 46.38457143 and 2 charts showing the the local and global temperature individually. I created the separate line charts for	
1890	14.58	13.52142857	58.244	56.33857143	7.97	7.99	46.346	46 382 local temps to illustrate the increasing trends. The celsius global and local temp charts sufficed to show the	ir inceasing
1891	13.73	13.52857143	56.714	56.35142857	8.02	8.025714286	46.436	trend line. 46.44628571	
1892	13.22	13.64142857	55.796	56.55457143	8.07	8.047142857	46.526	46.48485714 Observations:	
1893	13.5	13.72571429	56.3	56.70628571	8.06	8.062857143	46.508		
1894	14.25	13.77857143	57.65	56.80142857	8.16	8.098571429	46.688	46.51314286 From years 1750 to 2013 Columbus, OH in the US was on average hotter than the global average tempera 46.57742857 overall average (from averaging all the yearly average) of about 13.99 celsius versus the global overall average.	itures with a
1895	13.14	13.73285714	55.652	56.71914286	8.15	8.107142857	46.67	46.59285714 celsius.	rage or o.c
1896	14.36	13.82571429	57.848	56.88628571	8.21	8.091428571	46.778		. of a
1896	14.25	13.77857143	57.65	56.80142857	8.21	8.091428571	46.778	46.56457143 Both the global and local temperature trend lines indicate trends with positive slopes, therefore overall rates 46.64685714 [therefore increasing temperatures.]	s of overall
1897	14.25	13.77857143	57.362	56.80142857	8.29	8.13/14285/	46.922		
								46.688 The Columbus annual average temps have more variability, or higher standard deviation, than than the star 46.77285714 of the global annual averages. In other words, there is greater 'spread' of the temps, or greater differences in the star of the global annual averages.	ndard devi
1899	13.96	13.93571429	57.128	57.08428571	8.4	8.207142857	47.12	46.886 temps and the overall averages. In other words, there is greater spread of the temps, or greater differences temps and the overall average in the local data.	perween tr
1900	14.27	14.04571429	57.686	57.28228571	8.5	8.27	47.3		
1901	13.02	13.87	55.436	56.966	8.54	8.324285714	47.372	46.98371429 The year of 1779 is the only year where Columbus had a annual average temperature lower than the globa 47.02228571 temperature and the year where Columbus had its lowest annual temperature. There's a good chance that	ıı annual av
1902	13.86	13.97285714	56.948	57.15114286	8.3	8.345714286	46.94	47.02228571 average of 6.06 celsius is a mistake because it is below Q1 - 1.5*(Q3 - Q1) or the 'outlier floor' at a different	ce larger th
1903	13.41	13.83714286	56.138	56.90685714	8.22	8.347142857	46.796	47.02485714 the other temps.	
1904	13.17	13.68285714	55.706	56.62914286	8.09	8.318571429	46.562	46.97342857	
1905	13.45	13.59142857	56.21	56.46457143	8.23	8.325714286	46.814	46.98628571	
1906	14	13.59714286	57.2	56.47485714	8.38	8.322857143	47.084	46.98114286	
1907	13.75	13.52285714	56.75	56.34114286	7.95	8.244285714	46.31	46.83971429	
1908	14.48	13.73142857	58.064	56.71657143	8.19	8.194285714	46.742	46.74971429	
1909	14.04	13.75714286	57.272	56.76285714	8.18	8.177142857	46.724	46.71885714	
1910	13.54	13.77571429	56.372	56.79628571	8.22	8.177142857	46.796	46.71885714	
1911	14.97	14.03285714	58.946	57.25914286	8.18	8.19	46.724	46.742	
1912	13.3	14.01142857	55.94	57.22057143	8.17	8.181428571	46.706	46.72657143	
1913	14.41	14.07	57.938	57.326	8.3	8.17	46.94	46,706	

1011	10.70	44.07574400	50.000	F7 00000F74	0.55	0.004400571	47.400	40.07057440		
1914	13.79	14.07571429	56.822	57.33628571	8.59	8.261428571	47.462	46.87057143		
1915	13.92	13.99571429	57.056	57.19228571	8.59	8.318571429	47.462	46.97342857		
1916	14.06	13.99857143	57.308	57.19742857	8.23	8.325714286	46.814	46.98628571		
1917	12.72	13.88142857	54.896	56.98657143	8.02	8.297142857	46.436	46.93485714		
1918	14.1	13.75714286	57.38	56.76285714	8.13	8.29	46.634	46.922		
1919	14.57	13.93857143	58.226	57.08942857	8.38	8.32	47.084	46.976		
1920	13.5	13.80857143	56.3	56.85542857	8.36	8.328571429	47.048	46.99142857		
1921	15.52	14.05571429	59.936	57.30028571	8.57	8.325714286	47.426	46.98628571		
1922	14.93	14.2	58.874	57.56	8.41	8.3	47.138	46.94		
1923	14.14	14.21142857	57.452	57.58057143	8.42	8.327142857	47.156	46.98885714		
1924	13.08	14.26285714	55.544	57.67314286	8.51	8.397142857	47.318	47.11485714		
1925	14.53	14.32428571	58.154	57.78371429	8.53	8.454285714	47.354	47.21771429		
1926	13.54	14.17714286	56.372	57.51885714	8.73	8.504285714	47.714	47.30771429		
1927	14.86	14.37142857	58.748	57.86857143	8.52	8.527142857	47.336	47.34885714		
1928	13.66	14.10571429	56.588	57.39028571	8.63	8.535714286	47.534	47.36428571		
1929	13.83	13.94857143	56.894	57.10742857	8.24	8.511428571	46.832	47.32057143		
1930	14.35	13.97857143	57.83	57.16142857	8.63	8.541428571	47.534	47.37457143		
1931	15.1	14.26714286	59.18	57.68085714	8.72	8.571428571	47.696	47.42857143		
1932	14.68	14.28857143	58.424	57.71942857	8.71	8.597142857	47.678	47.47485714		
1933	15.12	14.51428571	59.216	58.12571429	8.34	8.541428571	47.012	47.37457143		
1934	14.36	14.44285714	57.848	57.99714286	8.63	8.557142857	47.534	47.40285714		
1935	14.23	14.52428571	57.614	58.14371429	8.52	8.541428571	47.336	47.37457143		
1935	14.23	14.60285714	57.884	58.28514286	8.55	8.585714286	47.39	47.45428571		
1930	14.06	14.56142857	57.308	58.21057143	8.7	8.595714286	47.66	47.47228571		
1937	15.05	14.55428571	59.09	58.19771429	8.86	8.615714286	47.948	47.47226571		
1938	14.82	14.55428571	58.676	58.23371429	8.76	8.622857143	47.768	47.50828571		
1940	13.22	14.30285714	55.796	57.74514286	8.76	8.682857143	47.768	47.62914286		
1941	14.6	14.33714286	58.28	57.80685714	8.77	8.702857143	47.786	47.66514286		
1942	14.06	14.31285714	57.308	57.76314286	8.73	8.732857143	47.714	47.71914286		
1943	14.08	14.27	57.344	57.686	8.76	8.762857143	47.768	47.77314286		
1944	14.46	14.32714286	58.028	57.78885714	8.85	8.784285714	47.93	47.81171429		
1945	14.32	14.22285714	57.776	57.60114286	8.58	8.744285714	47.444	47.73971429		
1946	14.97	14.24428571	58.946	57.63971429	8.68	8.732857143	47.624	47.71914286		
1947	13.94	14.34714286	57.092	57.82485714	8.8	8.738571429	47.84	47.72942857		
1948	14.47	14.32857143	58.046	57.79142857	8.75	8.735714286	47.75	47.72428571		
1949	15.12	14.48	59.216	58.064	8.59	8.715714286	47.462	47.68828571		
1950	14.09	14.48142857	57.362	58.06657143	8.37	8.66	47.066	47.588		
1951	14.41	14.47428571	57.938	58.05371429	8.63	8.628571429	47.534	47.53142857		
1952	14.74	14.53428571	58.532	58.16171429	8.64	8.637142857	47.552	47.54685714		
1953	14.98	14.53571429	58.964	58.16428571	8.87	8.664285714	47.966	47.59571429		
1954	14.96	14.68142857	58.928	58.42657143	8.56	8.63	47.408	47.534		
1955	14.63	14.70428571	58.334	58.46771429	8.63	8.612857143	47.534	47.50314286		
1956	14.63	14.63428571	58.334	58.34171429	8.28	8.568571429	46.904	47.42342857		
1957	14.82	14.73857143	58.676	58.52942857	8.73	8.62	47.714	47.516		
1957	13.34	14.58571429	56.012	58.25428571	8.77	8.64	47.714	47.552		
1950	14.71	14.5857 1429	58.478	58.24657143	8.73	8.652857143	47.700	47.57514286		
		14.38857143	56.534		8.73		47.714			
1960	13.63			57.89942857		8.611428571		47.50057143		
1961	13.92	14.24	57.056	57.632	8.8	8.645714286	47.84	47.56228571		
1962	14.11	14.16571429	57.398	57.49828571	8.75	8.662857143	47.75	47.59314286		
1963	13.44	13.99571429	56.192	57.19228571	8.86	8.745714286	47.948	47.74228571		
1964	14.28	13.91857143	57.704	57.05342857	8.41	8.7	47.138	47.66		
1965	14.4	14.07	57.92	57.326	8.53	8.665714286	47.354	47.59828571		
1966	13.64	13.91714286	56.552	57.05085714	8.6	8.647142857	47.48	47.56485714		
1967	13.82	13.94428571	56.876	57.09971429	8.7	8.664285714	47.66	47.59571429		
1968	13.61	13.9	56.498	57.02	8.52	8.624285714	47.336	47.52371429		
1969	13.59	13.82571429	56.462	56.88628571	8.6	8.602857143	47.48	47.48514286		