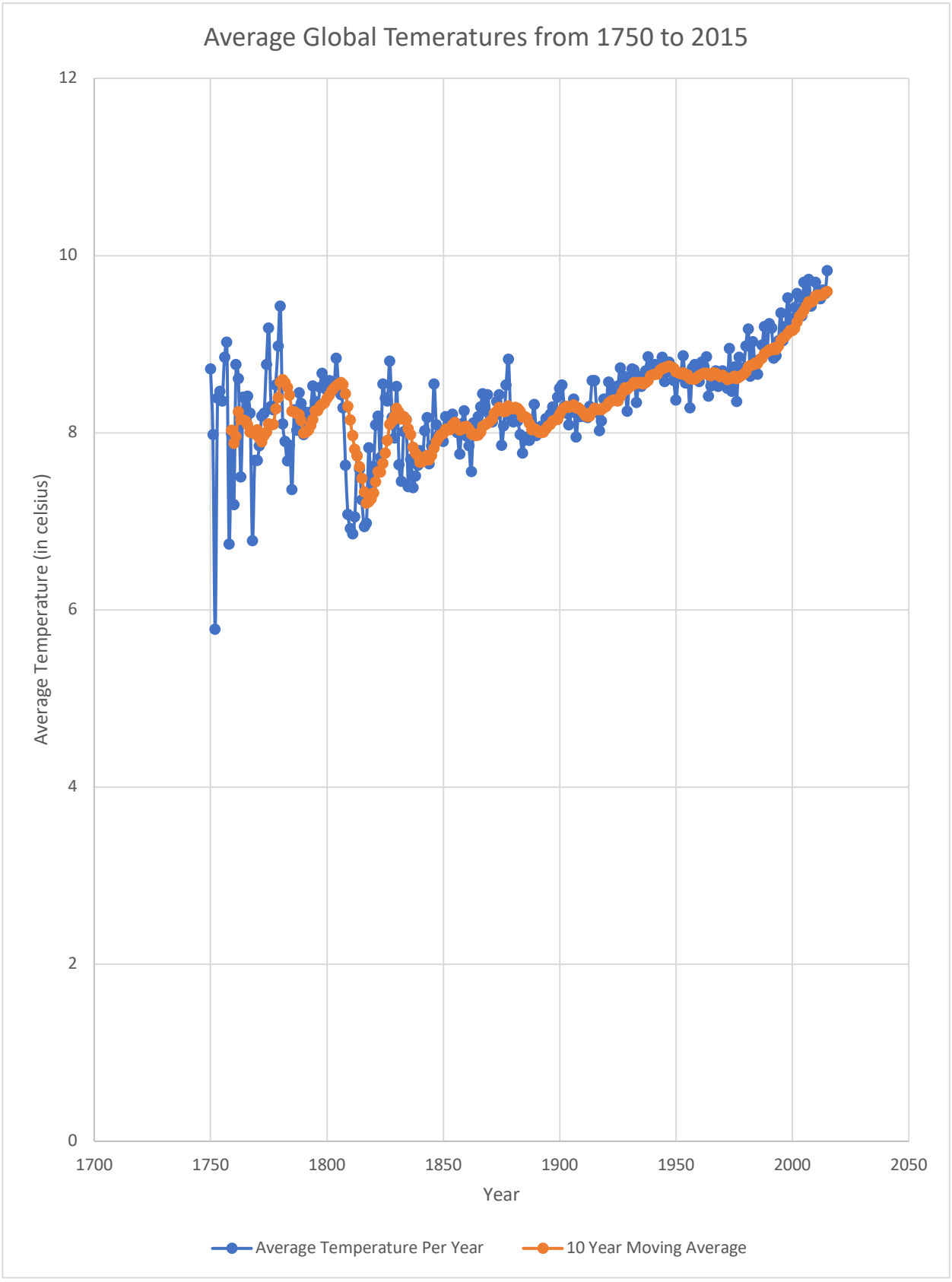
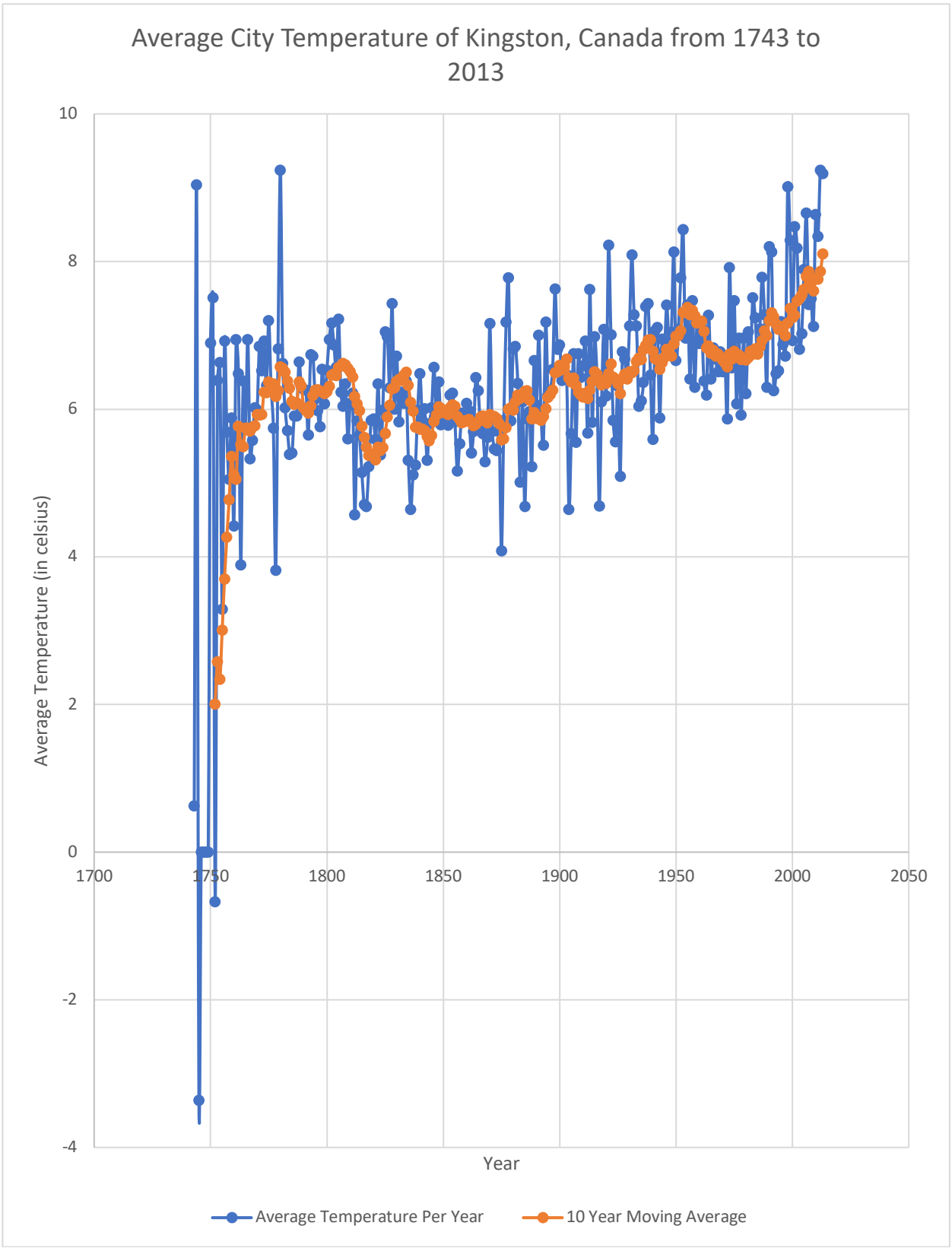
Global Data


Average Global Temeratures from 1750 to 2015
12
10
8
6
4
2
0
Average Temperature (in celsius)
1700
1750
1800
1850
1900
1950
2000
2050
Year
Average Temperature Per Year
10 Year Moving Average

City Data


Average City Temperature of Kingston, Canada from 1743 to 2013
Average Temperature (in celsius)
10
8
6
4
2
0
-2
-4
1700
1750
1800
1850
1900
1950
2000
2050
Year
Average Temperature Per Year
10 Year Moving Average

Outline:

1. What tools did you use for each step?
   - I used MySQLWorkbench (to import the table creation file and convert it to excel readable file when exporting it) and Microsoft Excel (to analyze the data and create line graphs from it).
2. How did you calculate the moving average?
   - I used the Microsoft Excel Data Analysis function and the lecture material to calculate and visualize the moving average. The idea is to gather an interval of data, add them together and divide by the amount of data in the said interval. For this assignment, I decided to calculate the 10-year moving average for both local and global temperatures.
3. What were your key considerations when deciding how to visualize the trends?
   - My key considerations were deciding on what the x-axis and y-axis are going to be for the ling graphs. Since we need to compared the two graphs, we need to make sure that the graphs can both individually represent the data well (that is, be able to show the temperature trends) and have the same axis so that valid comparisons between graphs can be made.

Observations:

1. Both the local and global temperatures are trending upwards over the same periods of time.
2. Both the local and global temperatures have experienced a greater fluctuation in the earlier years (around 1750s) compared to later years.
3. The local temperatures experienced negative temperatures values in the earlier years whereas the global temperatures have stayed above average throughout.
4. The local temperatures experienced more fluctuation over the years compared to global temperatures.
5. The 10-year moving average for global temperatures is a lot smoother (less fluctuations) compared to the 10 year moving average for local temperatures.