Outline:

1. I used SQL to combine city name, average temperature, year from the city_data and average temperature, year from global_date on year. Then, I extract it and download it as .csv file.

    The query:

    SELECT c.city, c.avg_temp AS tokyo_temp, c.year, g.avg_temp AS global_temp

    FROM city_data AS c

    JOIN global_data AS g

    ON c.year = g.year

    WHERE c.city LIKE 'Tokyo';

2. I used Excel with built-in formula (=average()) to calculate the 10 year moving average since 1845~1854 to 2004~2013.

3. I think the key of line chart is making it easily readable. Line chart needs clear topic and coordinate axis(with unit and appropriate range).
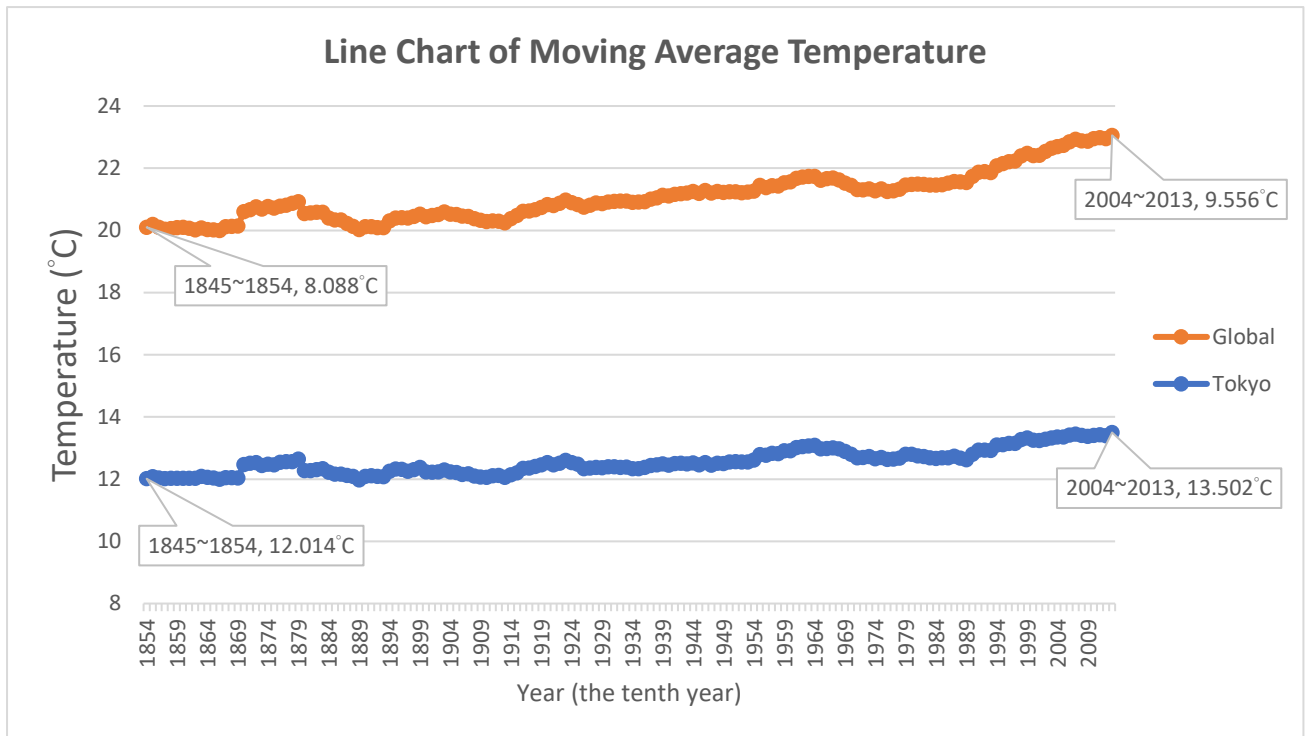
Fig.1 Line chart of moving average temperature(10 years) since 1945 to 2013.

According to the line chart below, we observed some things.

1. The average global temperature is climbing from 8.088°C to 9.556°C since 1845~1854 to 2004~2013. And the average temperature in Tokyo is climbing from 12.014°C to 13.502°C. The difference in global temperature (1.468°C) is close to the difference in Tokyo (1.488°C).
2. The up and down trend in these two curves is similar. It means the weather change in Tokyo is similar to global trend.
3. Since 1980~1989, The average temperature is steadily increasing in both Tokyo and global.
4. The average temperature from 2004 to 2013 is the highest since 1845 in both Tokyo and global.