

CHERRY BLOSSOM STUDIES



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GROUP INTRO

We are exchange students who came from different parts of the world with the intention of getting to know the local culture and learn the language. In Taiwan, everything is different than in our countries, but the one thing that occurs the same way in each of our countries are Cherry Blossoms. With this in mind we came up with the idea of starting a project comparing the cherry blossoms' blooming in different climatic zones, more specifically, the ones our countries are located in. The Cherry Blossom in this experiment is a fixed point that needs the same conditions in every country to bloom, which occur at different times in each of them.



➤ POLAND



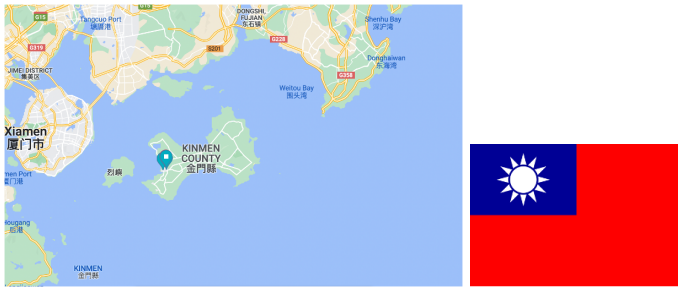
- A country located in Central Europe, The country has a total area of 312,696 square kilometers and a population of over 38 million people, making it the sixth most populous member state of the European Union.
- It's situated in a continental climate area. The temperature in Poland is variable throughout the year. During winter the average temperature is around 0°C, in spring -10°C, summer temperature could be higher than 30°C and in autumn average temperature is around 10°C. Precipitation around 550/600 millimeters per year.

➤ BRASIL



- Brazil is the fifth-largest country in the world, located in South America. It is the largest country in the region and occupies almost half of the continent's landmass at 8.5 million square kilometers. Brazil is home to over 217 million people, making it the seventh most populous. The country is known for its diverse culture, beautiful natural landscapes, and vibrant cities like Rio de Janeiro and São Paulo.
- The southernmost part of Brazil, known as South Region, composed by the states of Paraná, Santa Catarina and Rio Grande do Sul, has a subtropical climate. Average temperature is 20°C. Rarely presenting temperatures colder than 10°C. Precipitation in the region generally exceeds 1,000 millimeters per year

➤ KINMEN



- Kinmen, also known as Quemoy, is a small group of islands off the southeastern coast of China, located in the Taiwan Strait. It covers an area of about 150 square kilometers and has a population of around 130,000 people. The county is mostly known for its history in the war between Taiwan and China and the remnants of said conflict, which turned the island into a focal point for tourist visits.
- Situated in a subtropical area, its climate is different from the main island, Taiwan. All year the temperature is 2°C lower and it possesses very strong winds with a temperature that averages around 22°C, rarely going lower than 8°C. Precipitation in the region averages at around 1080 millimeters per year.

ABSTRACT

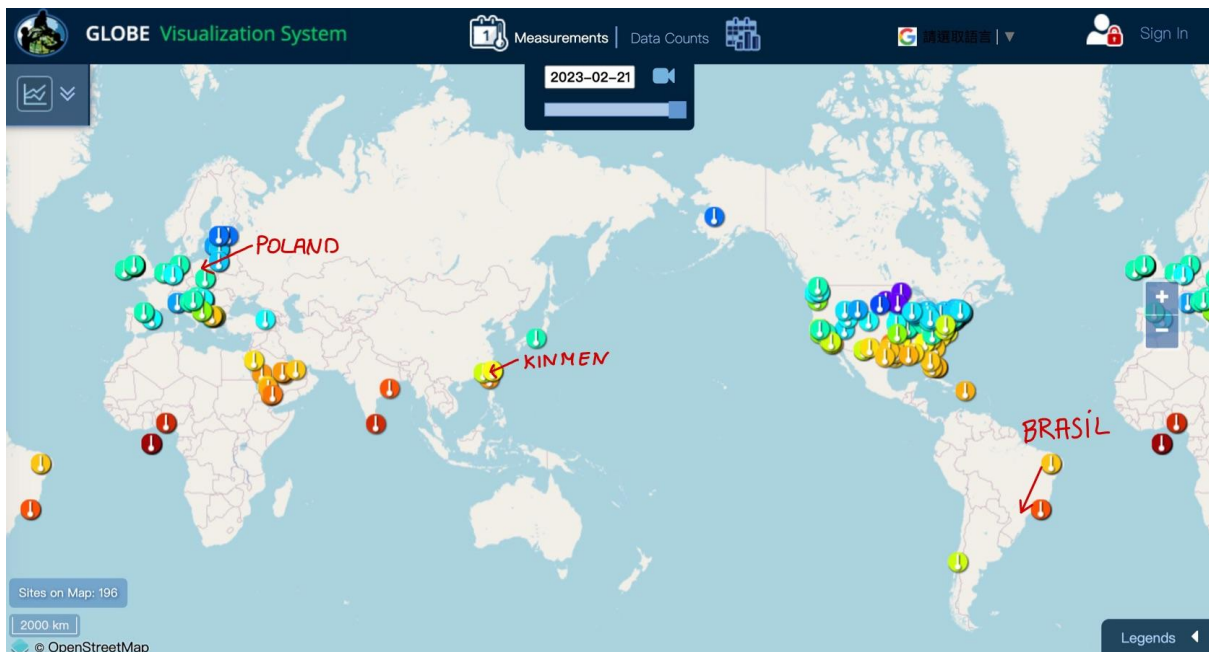
Cherry Blossoms are species of trees that have been observed in various parts of the world, and noticeably different areas showed a varying time frame for the blooming of the Cherry Blossoms' flowers, which rose the question, what influences the blooming season of Cherry Blossoms in different areas across the globe. By bringing that into question, it opens the opportunity to establish a connection between people and experiences from different countries and cultures, creating a space that encourages innovation and new ideas. Through the analysis of multiple materials gathered, from in person pictures to data collected from the "GLOBE" website, it was noted that the blooming of this unique specimen is heavily influenced by the variations of temperature. An essential discovery, since there was a big misconception that the Cherry Blossoms' flowers bloomed based solely on season, spring for example.

RESEARCH QUESTIONS

What influences the blooming season of Cherry Blossoms in different areas across the globe?

Background Research

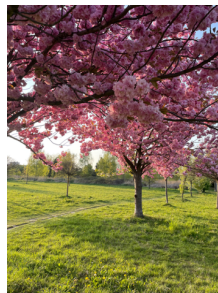
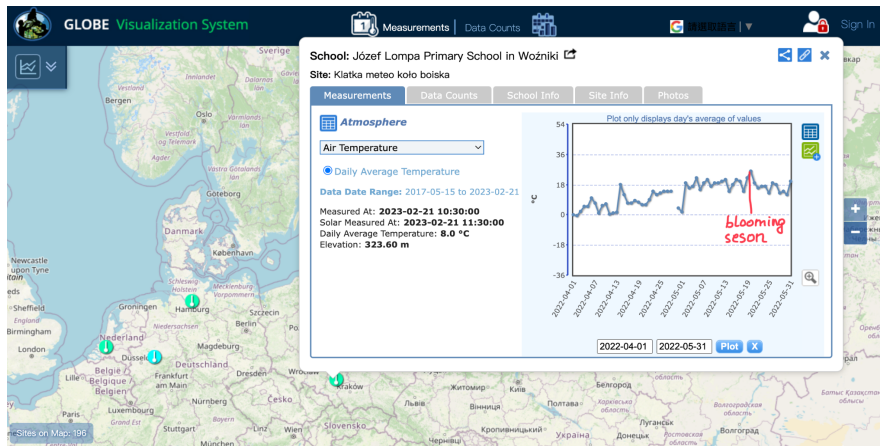
Cherry blossoms, also known as sakura, are a beautiful sight to behold when they reach full bloom. Every year, countries around the world attract visitors to see their beautiful cherry blossoms, including countries like Japan, South Korea, and the United States. However, there are also many other countries that have their own beautiful cherry blossoms, such as Kinmen Island in Taiwan, Poland, and Brazil.



RESEARCH METHODS

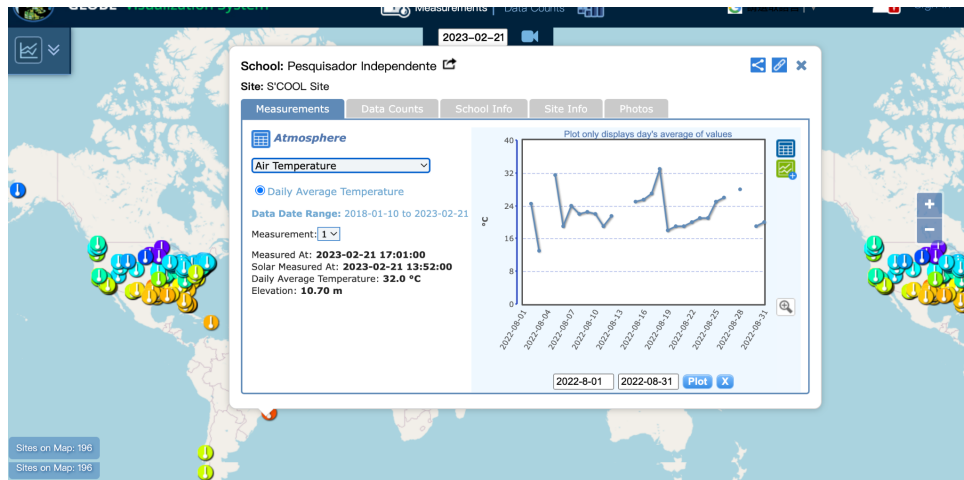
Every year it is observed that trees, blooming in each country, did so at different times, which was thought to be related to the season, more specifically the coming of spring. For that reason, before the start of the experiment, it was known at what time these trees bloom in those places. In past years, pictures of blooming trees in selected towns were taken, with dates added below. Combined with that are compiled the annual temperature chart from the website “globe”, where schools around the world register the temperatures in their countries every day. Thanks to this project, young scientists around the world can conduct experiments like this one.

From these charts, it can be seen that the temperature from Poland during flowering (May 2. 2022) was about 20°C and before flowering there was a rapid increase in temperature.



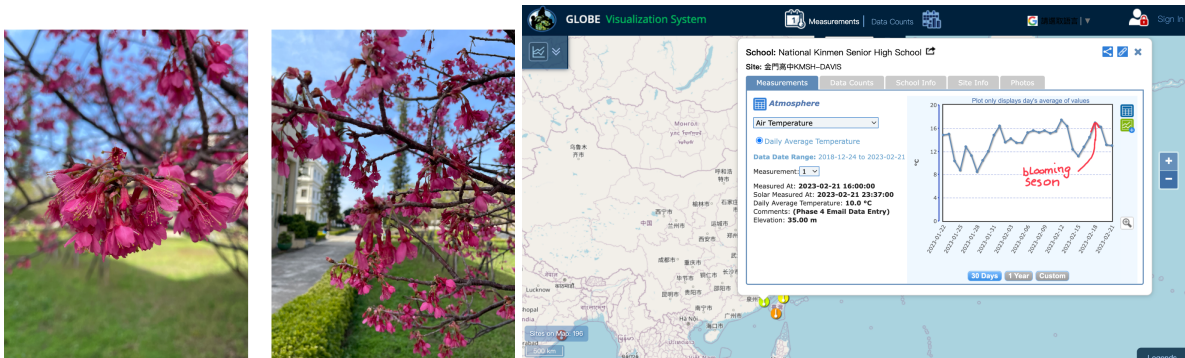
May 2. 2022

Similar phenomena can also be observed in Brazil (August 4. 2022) the temperature was also around 23°C.



August 4. 2022

In Kinmen, the temperature during flowering was 17°C and there was also a rapid increase in temperature.



February 21. 2023

Discussion

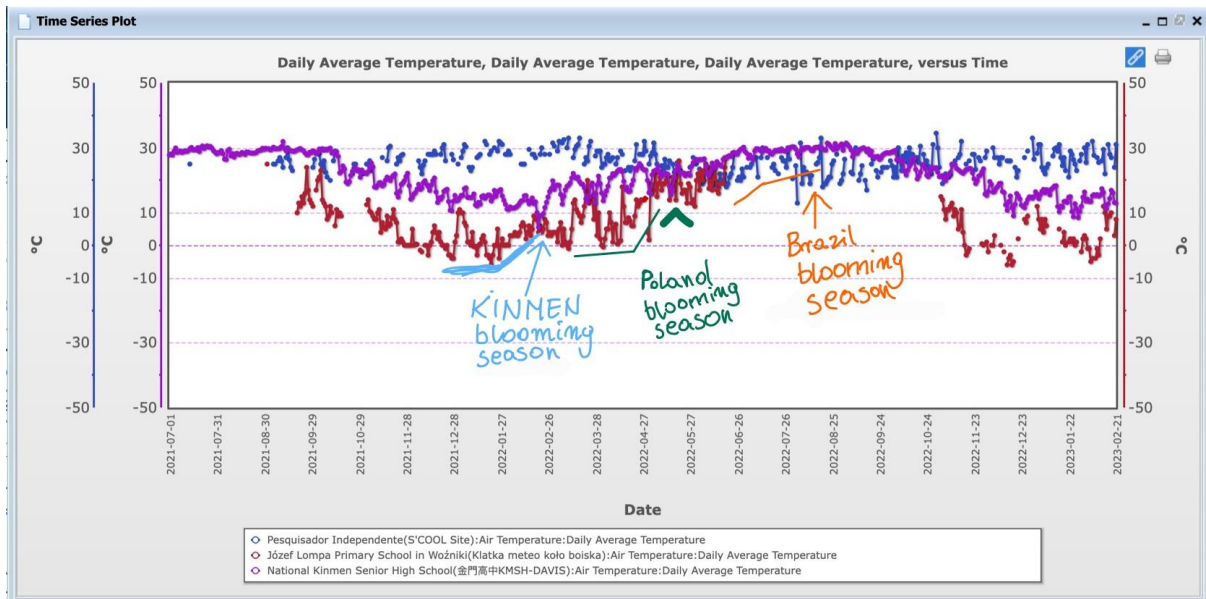
The initial belief that the blooming of the flowers was solely related to a Season, was partly disproved, though the coming of spring is not entirely blameless, the essential element that triggers the flowers' blooming is temperature.

It can be observed that there's a very niche temperature range in which the cherry blossoms bloom, between 17 to 23 degrees celsius, a mere 6°C difference between the lowest and highest temperature. In more detail, a 3°C difference between Kinmen, Brazil and Poland.

With that in mind, it can be noted that the studied specimen requires very specific climate conditions that happen at different times across the globe, thus creating this notable difference in each country's blooming season.

Conclusion

In conclusion, all the experiments that were carried out indicate that all over the world, regardless of the season, the cherry blossom needs a temperature between 18 and 22 degrees Celsius to bloom. Before flowering, there is a sudden increase in temperature in all climatic zones, which can be seen in the temperature charts in Brazil in Kinmen and in Poland.



References

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