



Cherry blossoms  
and  
Temperature survey

# Students

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# Teacher

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## Abstract

- This study observed the flowering time of this year's cherry blossoms, and used data from previous years to speculate on the flowering time of 2018, 2019 and 2020. It was found that this year's cherry blossoms apparently bloomed earlier than previous years.

## Research motivation

- At the beginning of February each year, the cherry blossoms in front of the Life Science and Technology Building of Kinmen High School are in full bloom. It is a tradition for students to take photos with uniformed students and cherry blossoms in full bloom each year. We found that the flowering time in previous years seems to be different. The conditions for the cherry blossoms to bloom are determined according to factors such as temperature, so we decided to observe the comparison between the date when the cherry blossoms bloom and the temperature of the current month.

## Research purposes

- Based on the observation records of the cherry blossoms and the photos of the Jinmen High School students and the cherry blossoms in previous years, then compare the temperature on the corresponding date with the first blooming date, and compare the annual records, hoping to find that the cherry blossoms are more affected by global warming Evidence of early opening.

## The place where Kinmen from



## KMSH's place



# Location of cherry blossoms



- **Way :**

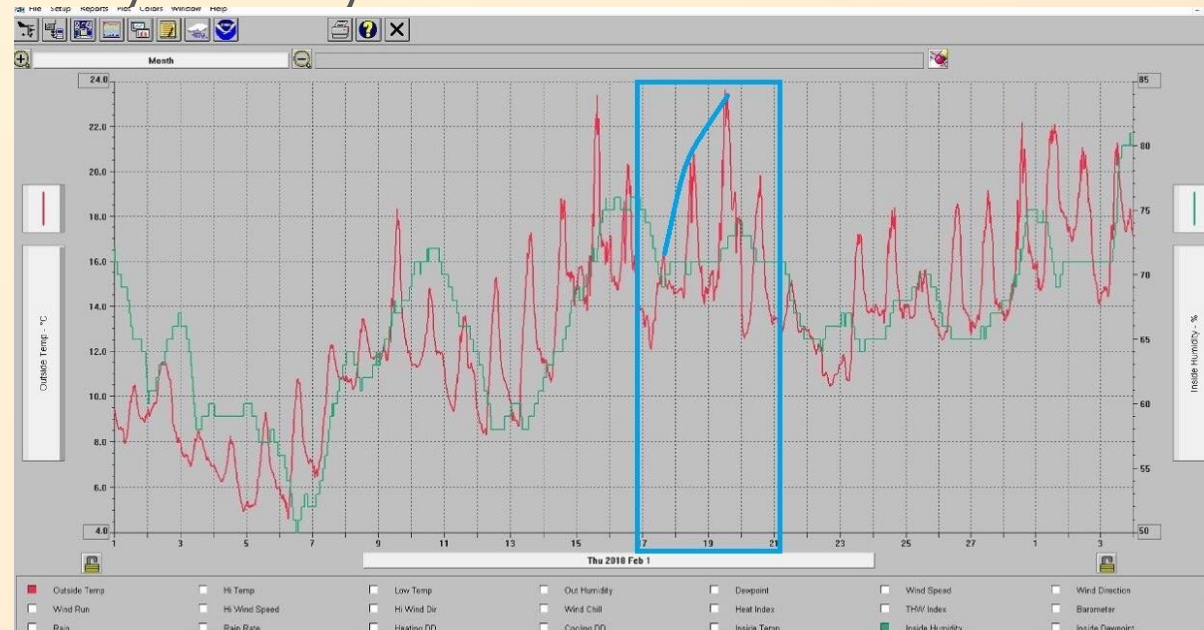
- Use the mobile phone to record the cherry blossoms of the day, and add the climate record of the day to make a line chart.

- **Research motivation :**

- phone, computer, weather box



- We found that when the temperature rises, the cherry blossoms will bloom.
- For example, when the cherry blossoms were in full bloom on February 20, 2018, Temperature record given by the teacher at Kinmen High School.
- Temperature starts to warm up in early February.
- Green : Room temperature
- Red : Outdoor temperature



- We can find from the outdoor temperature that the cherry blossoms bloom after a low temperature and then warm up.
- Since we observe the cherry blossoms in 2021, we will use the photos taken by the teacher in 2018, 2019, and 2020, as well as the news of the cherry blossoms in the Kinmen area to speculate the time of blooming.

# According to February 18, 2019 (Fan Special for Kinmen Tourism)



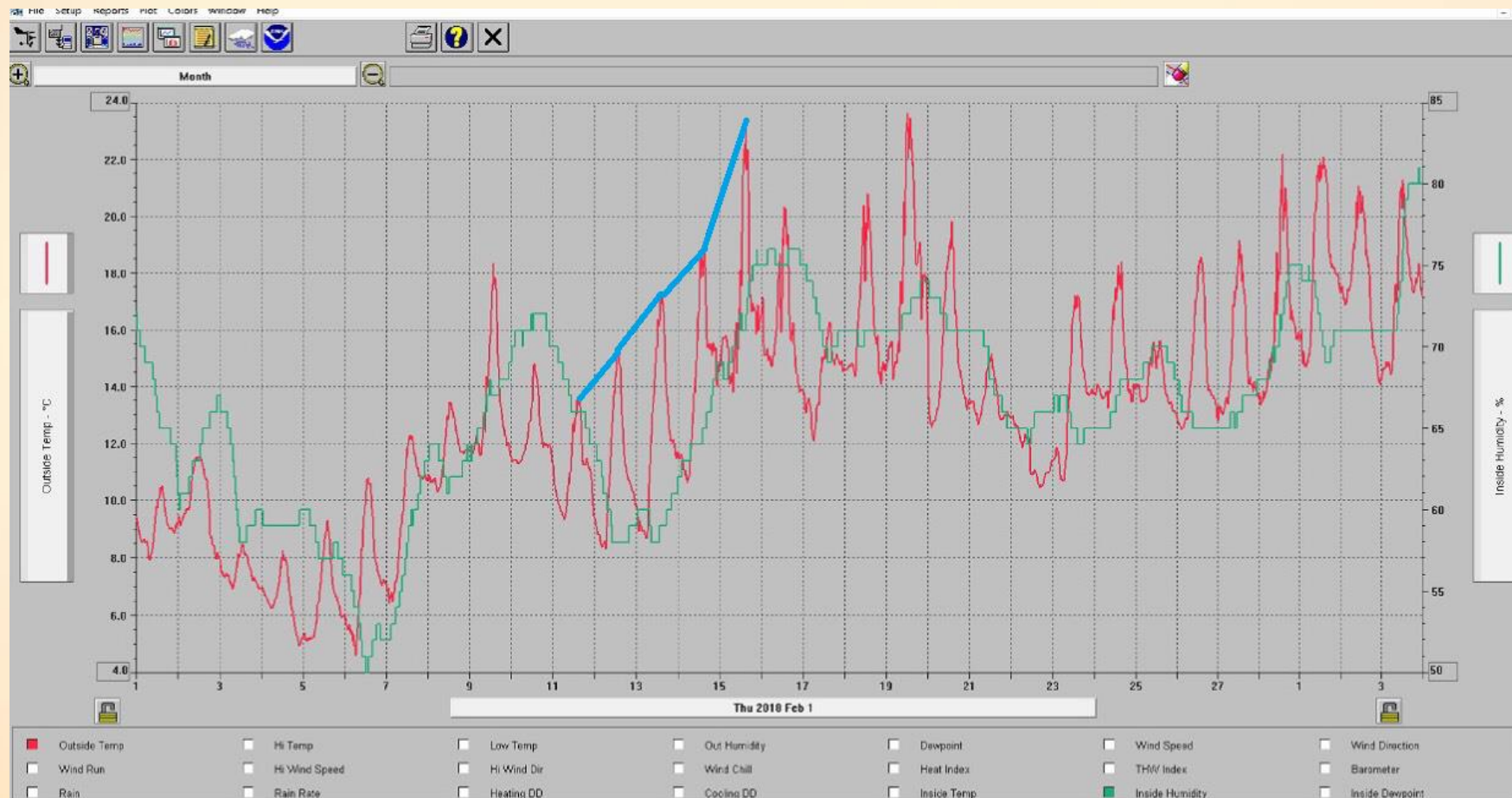
- 2019 ImageSource
- <https://www.facebook.com/kinmentour/posts/1217005155125006/>

- 2020 National Quemoy University Cherry blossoms in full bloom
- <https://kinmen.travel/zh-tw/news/details/2520>

- According to meteorological data and news, we speculate that the cherry blossoms in 2019 will bloom around February 14, 2019. According to the 2020 3/11 news (Kinmen cherry blossoms in full bloom), it can be speculated that the cherry blossoms in 2020 will bloom at the end of February and early March.
- This year we discovered the cherry blossoms. We saw some small petals on February 5th.
- So it is obvious that this year's cherry blossoms bloom earlier than previous years
- The following is the temperature data and comparison of the previous three years (2018 2019 2020)

# P1:2018/2/1~2018/3/4 Temperature graph, First opening:2018/2/8

Temperature continued to rise in February.





2018/3/2 11:00AM Kinmen senior high school



2018/2/20 Kinmen senior high school a few have bloomed

# P2:2019/1/1~2019/3/30 Temperature graph , First opening:2019/2/11

School: National Kinmen Senior High School



Site: 金門高中KMSH-DAVIS

Measurements

Data Counts

School Info

Site Info

Photos

Atmosphere

Air Temperature Noons

Solar Noon Temperature Noons

Data Date Range: 2018-12-24 to 2021-02-04

Measured At: 2021-02-04 04:30:00

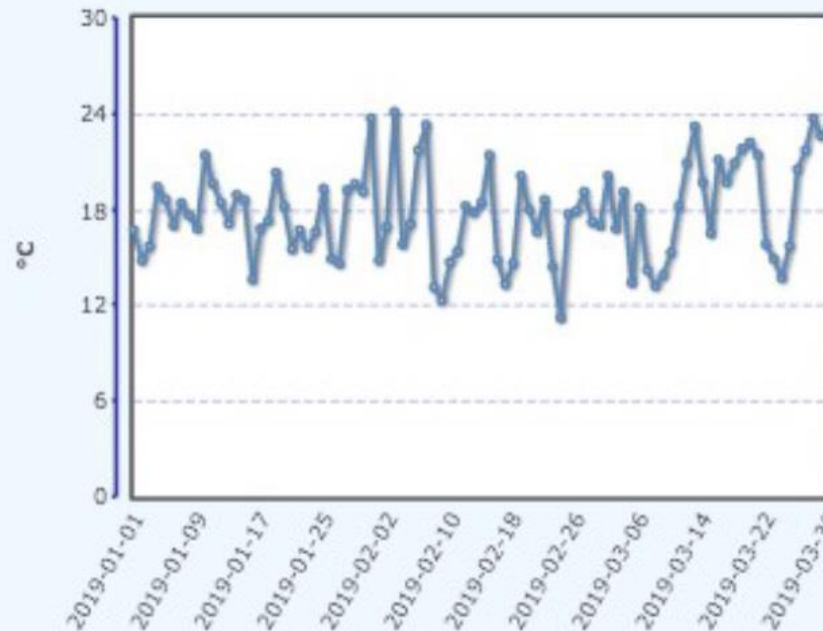
Solar Measured At: 2021-02-04 12:07:00

Solar Noon At: 2021-02-04 04:20:41

50 Cm Soil Noon Current Temperature: 22.1 °C

Comments: (Phase 4 Email Data Entry)

Elevation: 35.00 m



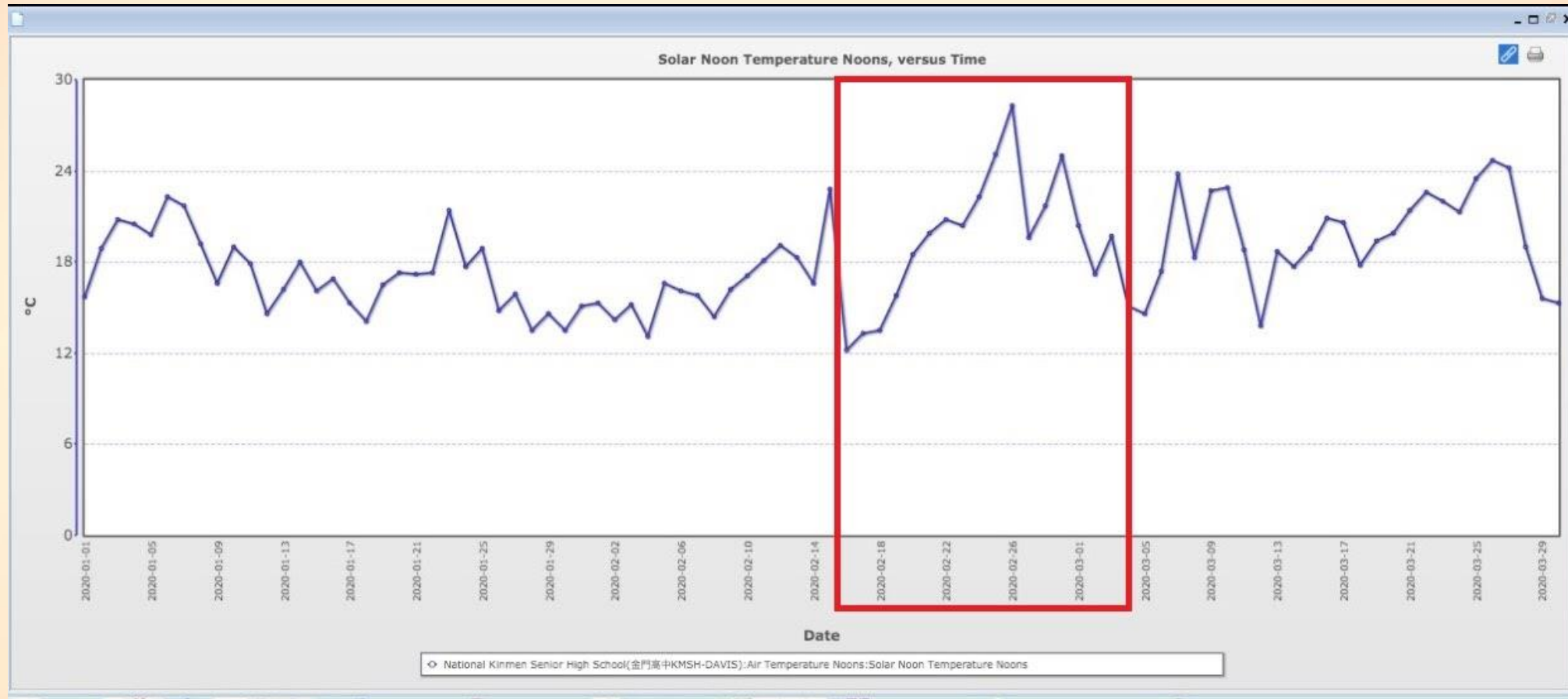
2019-1-1

2019-3-30

Plot

X

# P3:2020/1/1~2020/3/30 Temperature graph . First opening:2020/2/18

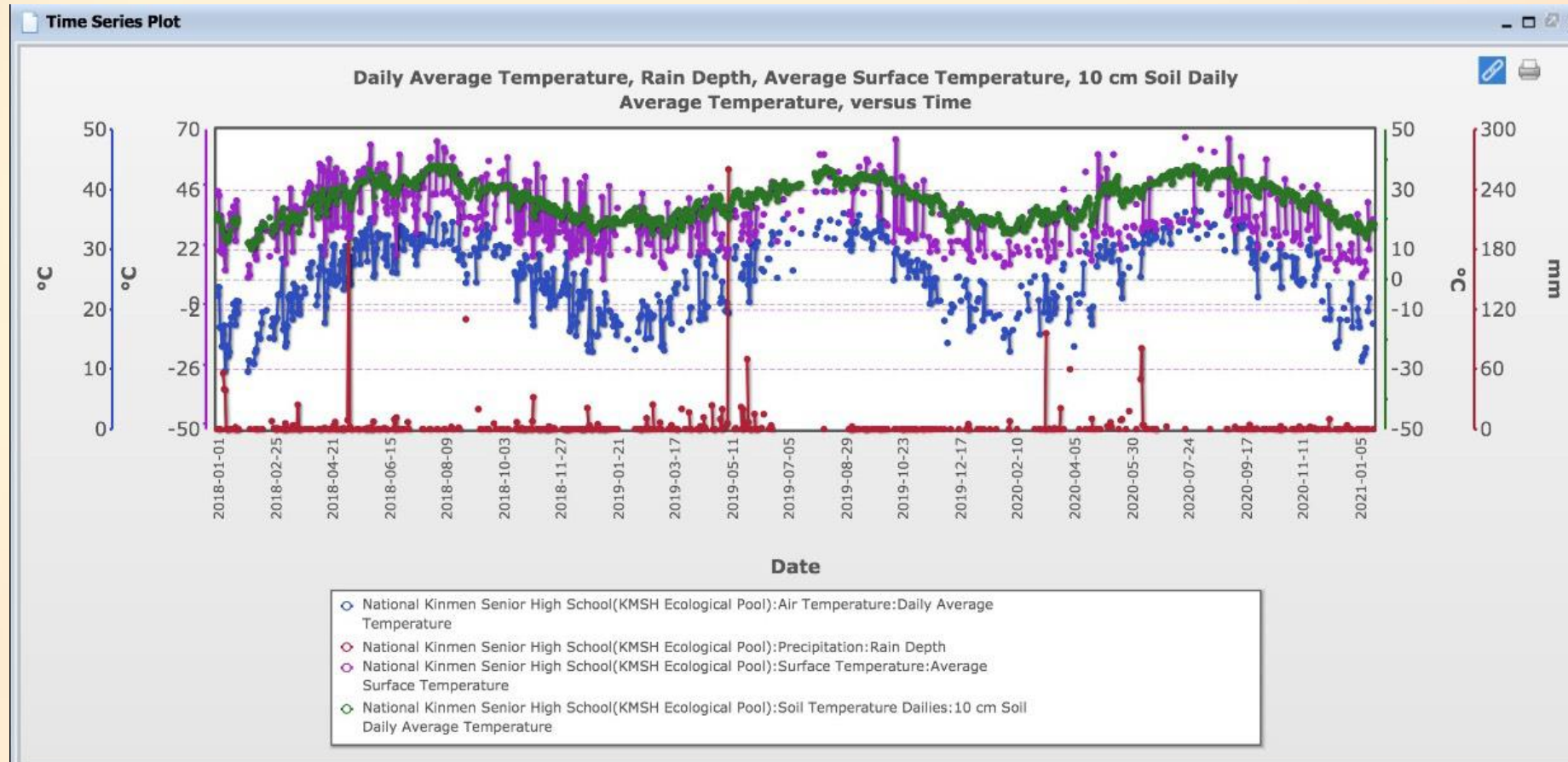






2020/2/25 Kinmen senior high school

# P4:2018 2019 2020 Year: Change in average daily temperature over time(Blue) 、 Rainfall(Red) 、 Surface temperature(Purple) 、 10 cm average soil temperature(Green)



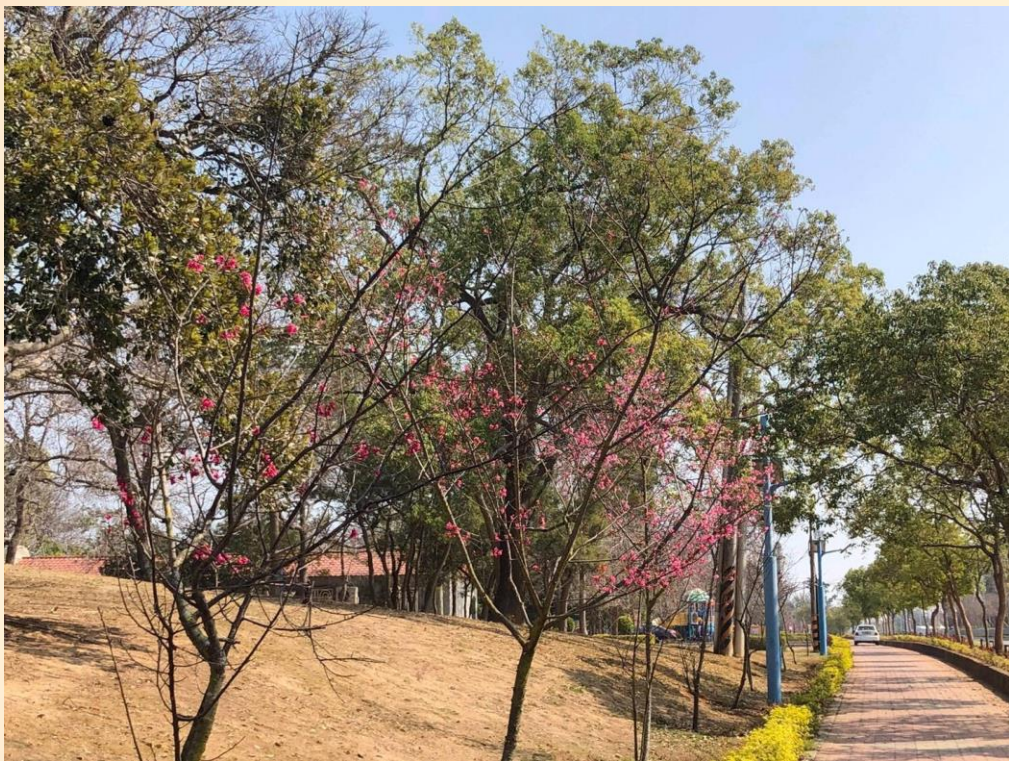
# Cherry blossoms in other areas of Kinmen in 2021



2021/2/20 10:20AM Xiahouan  
First opening



2021/2/7 5:10PM Hunan First opening

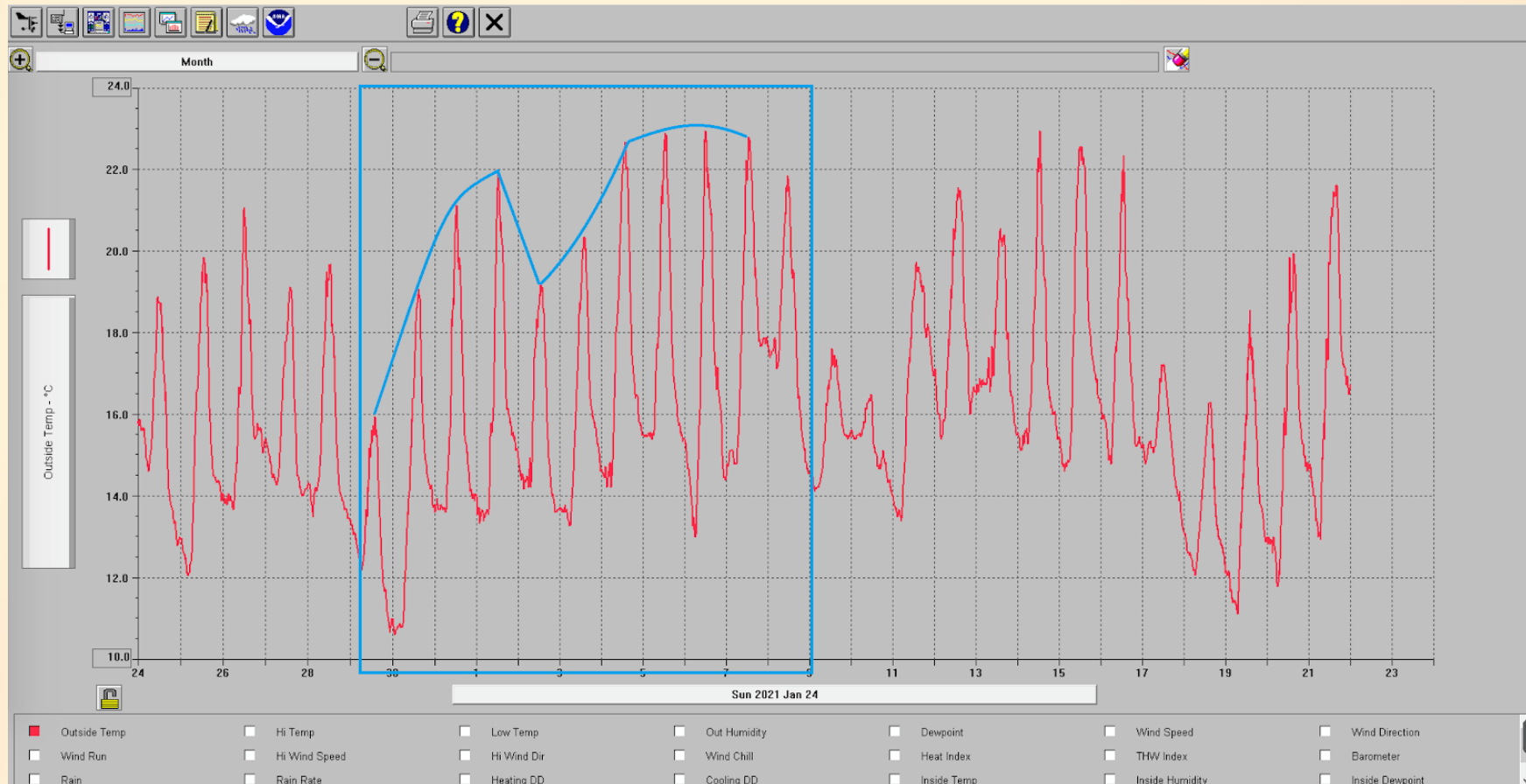


2021/2/7 Taihu

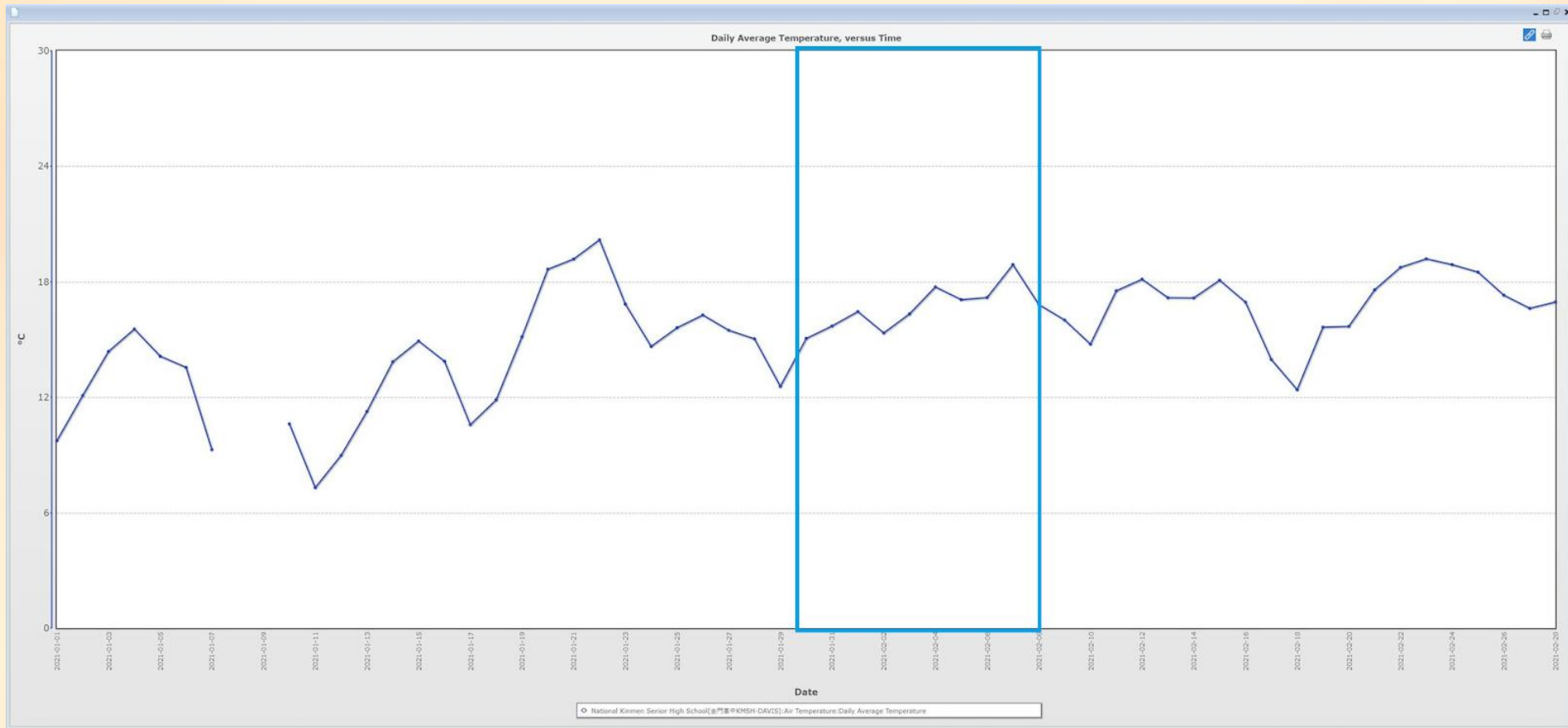


2021/2/21 Yangzhai

P5:2021/1/24~2021/2/22 Expected to bloom for the first time:2021/2/2



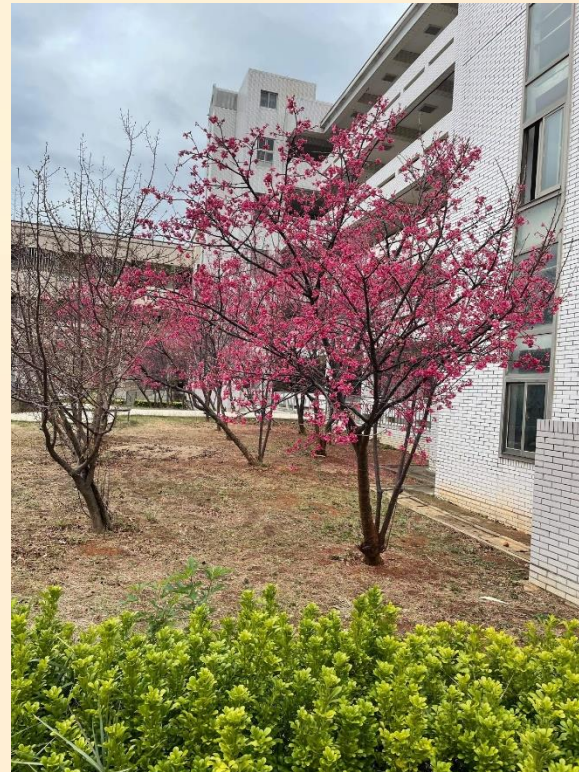
- From the above information, we can find one thing in common is that temperatures in winter and summer are distinct.
- We found that the date of the first flowering in 2021 is significantly earlier than in previous years



It started to warm up in January this year.



2021/2/8 Kinmen senior high school



2021/2/15 Kinmen high school 2:00PM First opening on the left The flower on the right is open.





2021/2/21 Kinmen senior high school



2021/2/22 Kinmen senior high school



2021/2/23 Kinmen senior high school



2021/2/25 Kinmen senior high school

- Discuss:
- 1. The cherry blossoms of 2018 have bloomed in mid-February
- 2. The cherry blossoms of 2019 have bloomed at the end of February
- 3. The 2020 cherry blossoms have already bloomed in early March
- 4. The 2021 cherry blossoms have already bloomed in early February
- 5. Kinmen's temperature environment is similar to Japan
- 6. There is a chance to bloom when the temperature difference changes from cold to warm, but the time when the temperature warms up every year is not fixed, so it still needs to be determined by the conditions of the year.

# cherry tree of map



# Conclusion:

- 1. The temperature rise is the time for the cherry blossoms to bloom. Kinmen is generally in February
- 2. Kinmen has four distinct seasons. Compared with other areas of the same latitude, it is suitable for planting cherry blossoms.
- 3. The blooming time of each cherry tree is different. It is possible that the first one has withered before the new one blooms.
- 4. From the information we found on the Internet, we can find that there is a certain formula for cherry blossoms to bloom. The cherry blossoms in our school belong to Yoshino cherry blossoms. After its Cumulative Temperature reaches 290 degrees, it begins to bloom.

# Research photos



- 1. Global Warming Japan Cherry Blossoms bloom early Experts worry that they will not see the flower in the future -CommonWealthMagazine
- (<https://www.ftvnews.com.tw/news/detail/2018327I01M1> )
- 2. When does the Cherry Blossoms bloom ? Warm in Winter and Cold in Spring ! -CommonWealthMagazine
- (<https://www.cw.com.tw/article/5094710>)
- 3. Global Warming 、 Heat island effect Japan cherry blossom festival held early-TVBS NEWS
- (<https://news.tvbs.com.tw/world/1103897>)
- 4. Cumulative Temperature of source information
- (<https://pedia.cloud.edu.tw/Entry/Detail/?title=%E7%A9%8D%E6%BA%AB> )
- 5. Japan's Earliest ! Okinawa Cherry Blossoms bloom 15 days earlier than last year-United NEWS
- (<https://udn.com/news/story/9659/3581692>)