



# All you need to know about the Spring campaign



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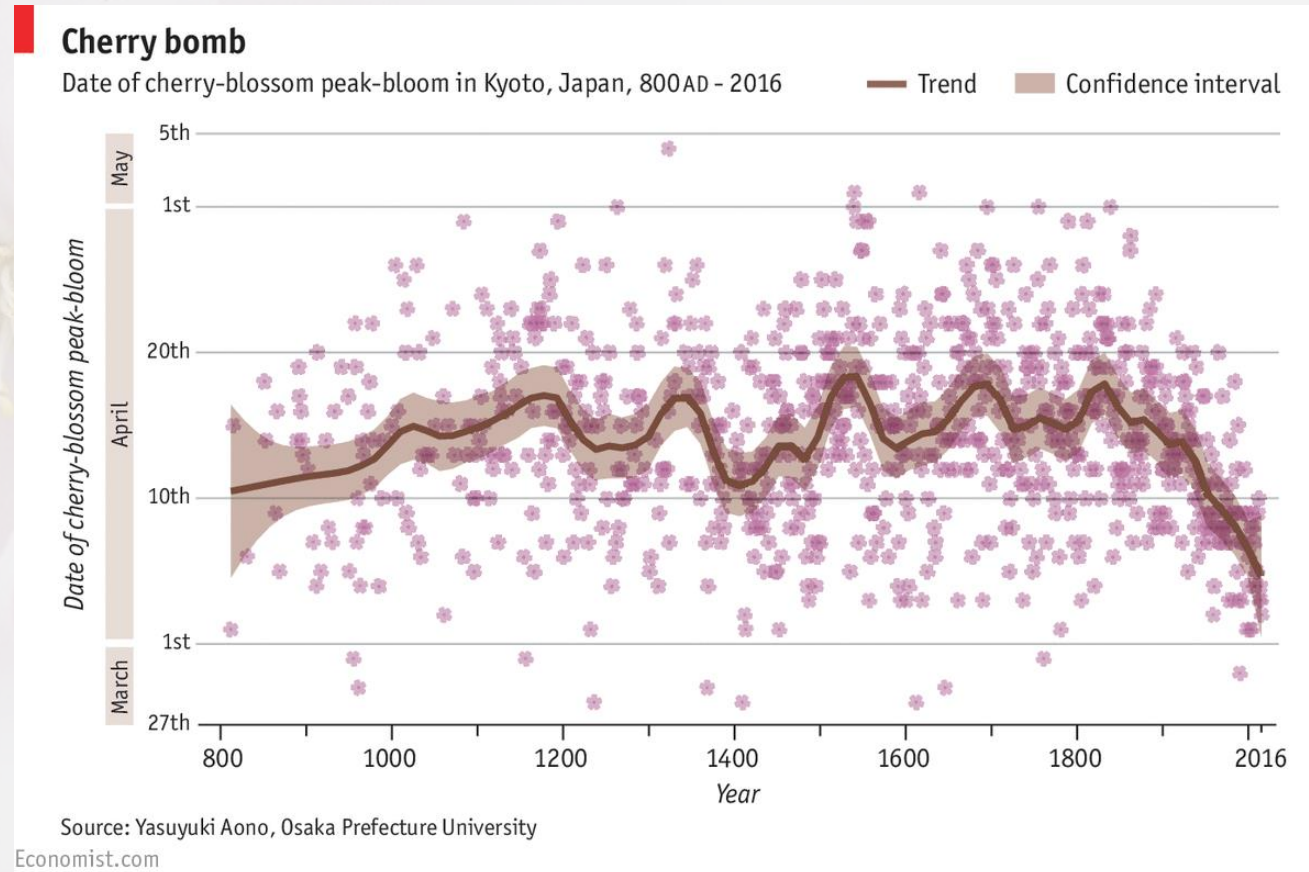
GLOBE Program  
Europe and Eurasia  
Region Coordination Office

March 10  
2021



# Look deep into nature, and then you will understand everything better. (Albert Einstein)

- Study of living organisms' response to seasonal and climatic changes in the environment
- One of the oldest areas of environmental science
- Observations expressed in proverbs „*A cold and moist April fills the cellar and fattens the cow*“
- Japan - records of cherry blossom for 1200 years



# 2021 Spring Phenology Campaign

**180 school teams**

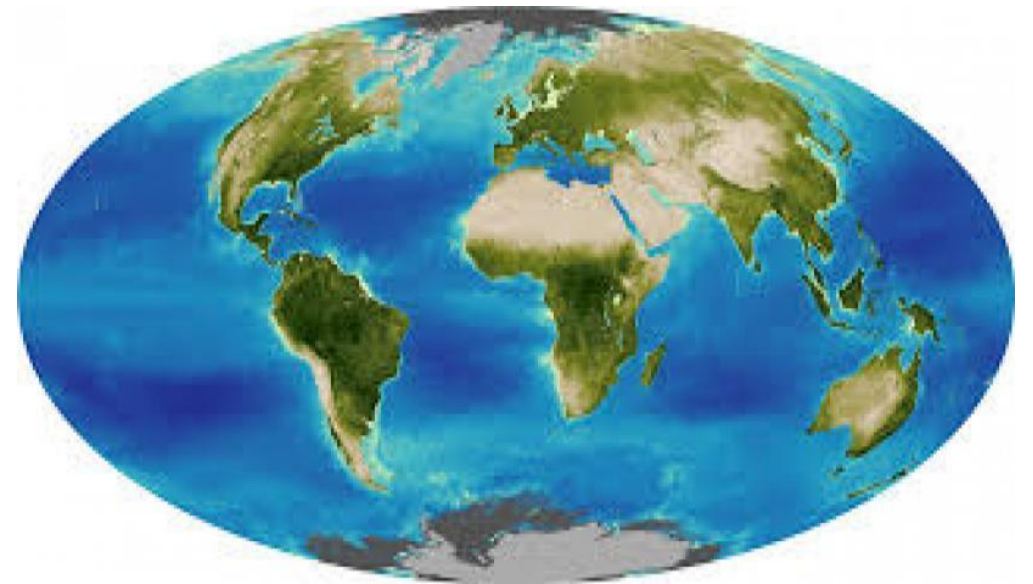
**22 countries**

Belgium, Croatia, Czech Republic, Estonia, Greece, Hungary, Ireland, Israel, Italy, Kyrgyz Republic, Lithuania, Malta, Nederland, North Macedonia, Poland, Slovakia, Spain, Sweden, Switzerland, Turkey, Ukraine, USA

**March → June**

## **Campaign aims**

- Learning about nature in nature
- Activities suitable for distance learning
- Sharing and cooperation
- Source of information for schools projects and scientists



# 2021 Spring Phenology Campaign

- 5 green-up activities
- 4 carbon activities
- Newsletter
- [Webinars](#)
- Certificate and badges for cooperation and data entry



All activities are voluntary.  
Let us know, how it goes!



## Phenology is a language of nature

Open the Spring campaign with these beautiful words from Gunta Āne, a phenologist from the University of Latvia, who newly joined the campaign and together with other scientists will guide you through the spring journey.

Warm welcome to all of you, more than 170 teachers and nearly 2000 students registered from 21 countries of the Europe and Eurasia region.

In this newsletter, you will find Campaign Activity 1 and 2, an invitation to the campaign webinar and other information essential for the spring campaign.

Enjoy a nice reading,  
a



# Activity 1 – My Tree

- Find a suitable tree
  - Close
  - Low branch
  - Not shaded
- Describe the tree and the site where it grows
- Take pictures with GrowApp
- Share pictures of your tree without leaves at the discussion forum



Sour cherry



Small-leaved lime



Hazel



Penduculate oak



Silver birch



Beech



Fig

# Activity 2 – Look at the Buds

- Select and sign a branch and 4 buds
- Observe them 2 times a week
- Record the observations into the Tree and Shrub Green-Up Data Sheet
- If you have an Atmosphere site nearby, keep recording temperature and precipitation data
- Share date of budburst



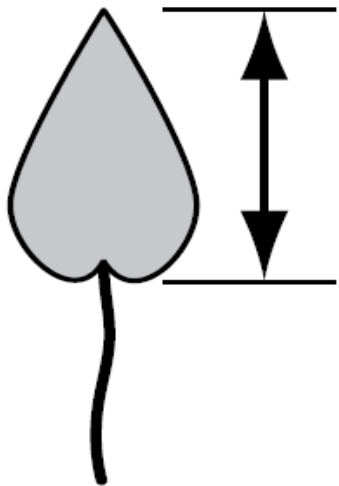
Tree and Shrub Green-Up					
Date (day & month)	Leaf 1 (dormant, swelling, budburst, leaf length (mm))	Leaf 2 (dormant, swelling, budburst, leaf length (mm))	Leaf 3 (dormant, swelling, budburst, leaf length (mm))	Leaf 4 (dormant, swelling, budburst, leaf length (mm))	Data entry ✓



Credits: Gozo College Middle School, Malta

# Activity 3 – First Leaves

- Budburst (= you can see the tip of green leaf) - record to your data sheet
- **Measure the length of a leaf that grows from the bud**
- Measure the leaf without the stem
- Continue twice a week until your leaves stops growing





# Activity 4 – My Green Up Data

- Upload your green up data to globe.gov website
  - Login to your GLOBE account
  - Data collected at Activities 1, 2 and 3.
- Try GLOBE Visualization tool
  - - See the data on world map
  - - Draw and share a graph with your data
- Compare your data
  - with another school
  - to your data from previous years at

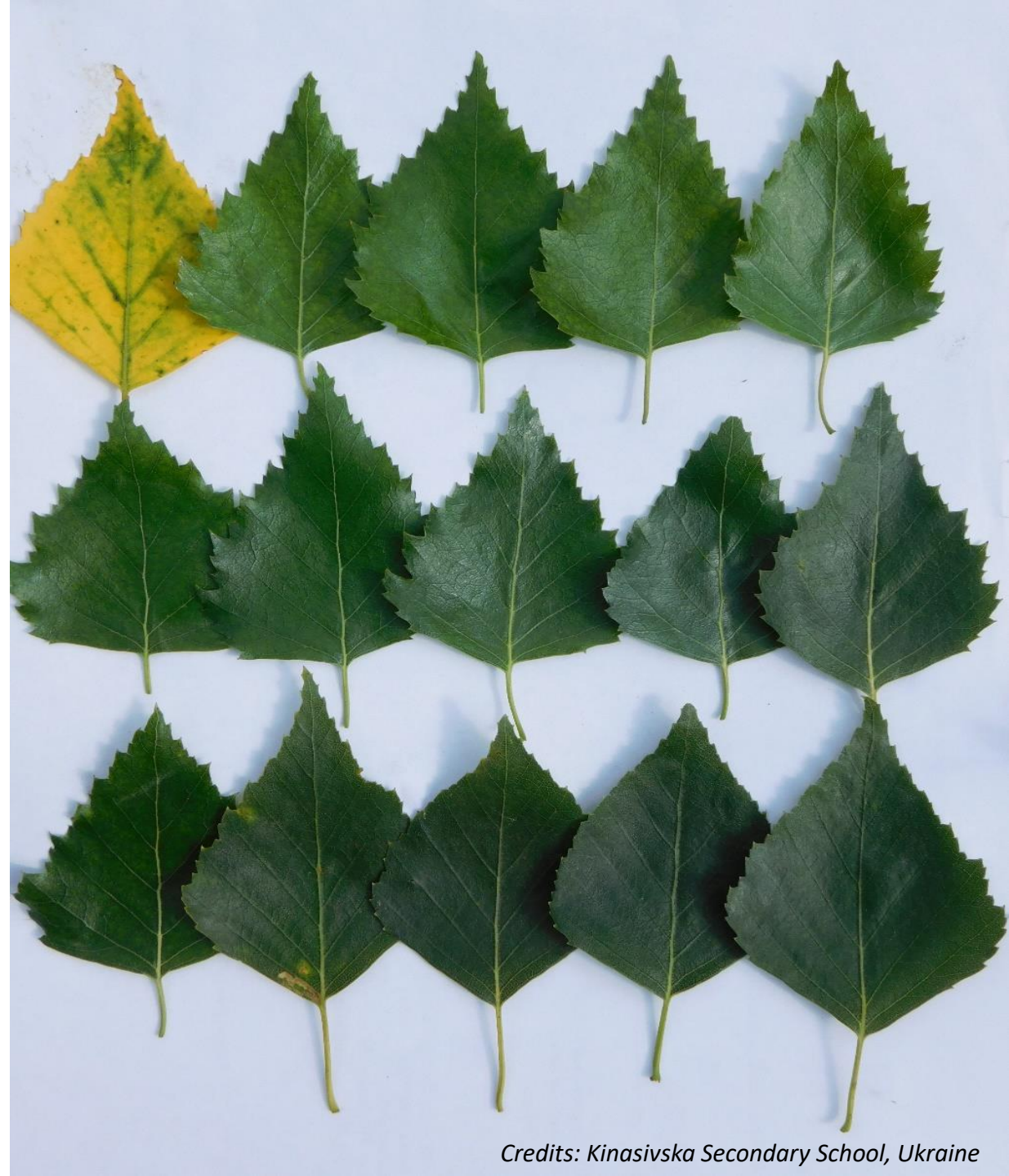
## Webinar My Spring Data in May





# Activity 5 – Green Color Scale

- Enjoy time outdoors
- Collect a variety of green leaves
- Create a scale, palette or..



*Credits: Kinasivska Secondary School, Ukraine*

# GrowApp

- Mobile application
- Time lapse videos
- Use # to describe tree species and your school





# Discussion Forum

## Share your pictures and results

### How to do it?

- Sign in to GLOBE account
- European Phenology Campaign > News and discussion
- Choose „2021 Spring“ [New Thread](#)
- Add pictures

Body
<div><div>+</div><div>First pictures of my tree in spring...</div></div>



- Publish your post [Publish](#)

Home [Add Category](#) [New Thread](#) 

Categories

 **2021 Spring**  
Post here for the 2021 Spring Campaign  
0 Categories  
0 Threads

Permissions

**Subscribe**

RSS 



### Add Message

Subject \*

Body

Write your content here...

Tt

# Collaboration group

- 112 schools this autumn
- International groups of 2-4 schools
  - Exchange of data and pictures by e-mail
  - Communication via ZOOM / Skype...
  - Student research projects
  - Practicing language skills

Let us know, how your cooperation is going!



*Credits: Lutsk City Ecology and Nature Center, Ukraine*



## European Phenology Campaign

### Webinars

[Download Materials](#)[Get Inspired](#)[Community](#)[News and discussion](#)[Our Measurements](#)[My Tree grows under Covid-19](#)[GrowApp](#)[Autumn 2020](#)[Contacts](#)

## Webinars



Webinars became an important part of the campaign. For autumn 2020 we have planned for you a series of webinars focused on autumn tree change and the use of GLOBE data tools and apps. The webinars also provided opportunities for sharing experience and meeting scientists. **The webinars were prepared in cooperation with scientists from the Trees Around the GLOBE campaign team.**

### 2021 Spring Campaign webinars

**March 10 @ 3pm CET. All You Need to Know about the Spring Campaign.** You will learn about the Spring campaign schedule, activities, and resources. Dr. Gunta Kalvāne from the University of Latvia will share with us what it means to work as a phenologist and why she finds phenology important and interesting. There will be time for questions and discussion as well.

The webinar will be organised on ZOOM. To join the webinar, please register [here](#).



**April. Trees in my Neighborhood.** Meeting with scientists on the topics of growing and caring for trees, the role of trees in reducing the urban heat island and the use of remote sensing to study changes in vegetation. More details will be available soon.

**May, My Spring Data.** Learn how to enter green-up data and how to create a graph of leaf growth using GLOBE visualisation tool.

**June. Our Spring Research.** Online meeting for students and teachers to present their work and inspire each other.

## European Phenology Campaign

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## Download Materials

[activities](#) | [field guides](#) | [e-training](#) | [protocols](#) | [GLOBE data tutorials](#) | [lesson plans](#)

- [2020 Spring Campaign Flyer](#) - basic information about the campaign
- [Presentation](#)
- [GLOBE 365 Poster](#) - there is a place to stick photos of your tree as well as a hard copy of the poster, contact your GLOBE country coordinator.
- [Why do the leaves change color?](#) - learn why and how the autumn colors change
- [Winter twigs](#) - a key to recognising buds

### Activities for students

#### Spring

[Activity 1: My Tree + carbon activity: Tree Growth Game](#)

[Activity 2: Look at the Buds + Data Sheet + Carbon Around Me](#)

[Activity 3: First Leaves + carbon activity: Carbon in my tree](#)

[Activity 4: My Green Up Data + Data Upload Guide + carbon activity: The Green Up](#)

[Activity 5: Green Color Scale](#)

#### Autumn

[Activity 1: My Tree + How Tall Is My Tree?](#)

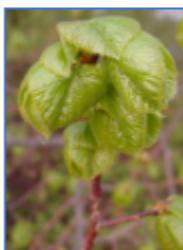
[Activity 2: Color Change of Leaves](#)

[Activity 3: My Green Down Data + Data Upload Guide](#)

### Green Up/Down e-training

E-training and closer information about Green-up and Green-down: [protocol e-training](#)

### GLOBE protocols



#### Green up

- [Green up protocol](#)
- [General field guide Trees](#)
- [Data Sheet Trees and Shrubs](#)



#### Green down

- [Green down protocol](#)
- [General field guide Trees](#)
- [Data Sheet Trees and Shrubs](#)

### How to work with GLOBE data?

**GLOBE Data Entry** - GLOBE data can be submitted on a desktop pc or using the [GLOBE data entry app](#).

**Visualize GLOBE data** - [Instruction for visualizing GLOBE phenology data...](#)

**Looking at GrowApp data** - [Analyzing green index of GrowApp images](#)



### Lesson plans

- [A first look at phenology](#). Students explore patterns, similarities, and differences among plants at the same location.
- [A sneak preview of budburst](#). Students observe the relationship between budburst and temperature.
- [Green down](#) (age 11-14). Students learn to ask questions while using the research cycle.
- [What's hidden in tree buds](#) (age 11-14). Students get familiar with the structure of the buds of deciduous trees, they



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## Get inspired - Student Research projects



### **NEW** How do birches in Otrokovec and Bierun fall asleep?

An excellent example of cooperation and use of inquiry-based science education principles by Primary school Mánesova Otrokovice, Czech Republic and Primary School no.1 in Bieruń.



### Zhoravska Secondary School, OŠ Đurmanec, Croatia, and ZS Predmosti became partner schools in the 2020 Spring Campaign.

The results of their exemplary collaboration are summarized in this presentation.



### A team from OS Ivana Filipovica Osijek, Croatia used an innovative way, how to facilitate cooperation and share information about their research.

Get inspired by the beautiful presentation of results using Wakelet online collection.



### Research on the role of trees in a carbon cycle by students from Kinasivska secondary school of I III degrees, Ukraine

See interesting results of the research that was carried out using



### Time of budburst and dynamics of leaf growth in *Tilia cordata* Mill. at Varaždin and Belišće

An excellent example of how research can be done with Green Up data in GLOBE. Read the



### Interesting facts about fig trees presented by GLOBE students from Malta.

Students from Malta explored the historical and cultural aspect of fig trees and created many beautiful

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## My tree grows under Covid-19 restrictions

[how to stay involved](#) | [data entry and visualisation](#) | [buddburst animations](#) | [inspiration from teachers](#)

For many of us, it is very difficult now to observe our tree. Despite that, **the campaign continues and brings new collaboration and study opportunities.** On this page, you will find activities that your students can do from their garden and home as well as other tips from teachers who do distant teaching.

**Please let us know, what you do. Share graphs, photos or paintings from your students** at the [discussion forum](#) and inspire the campaign community.

### Ideas, How to Stay Involved

- Can you go outside? Do you have a **tree in your garden**? Observe its buds and the first leaves. Measure how fast a leaf grows.
- Are outdoor activities restricted? Use [GrowApp](#) to take pictures of a **tree that you can see from a window** and post them to the forum.
- Use data from the [GLOBE database](#) - compare results from different regions or countries. Create and share graphs.
- Exchange results via Skype, Zoom, WhatsApp or any other online communication.
- Call your partner teacher(s) and get to know each other. Ask your students to prepare a presentation about themselves and your school (in English).
- Go through the [protocol e-training](#) (Tree and Shrub Green-Up).







# Thank you!

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[www.globe.gov/web/european-phenology-campaign](http://www.globe.gov/web/european-phenology-campaign)

