



The GLOBE Program

# Trees Are Beautiful

School collaboration and activities within the  
**European Phenology Campaign**

Coordinated by

GLOBE Program Europe and Eurasia Region  
Coordination Office  
TEREZA Educational Centre



Sponsored by: 

Supported by: 





- **6 years** - spring green-up and autumn green-down
- **7 tree** species
- **22 countries** - mainly from Europe and Eurasia region
- **150+** school teams involved each term
- **~3000** active students involved each term

**Why?** To support school involvement and cooperation.



Sour cherry



Small-leaved lime



Hazel



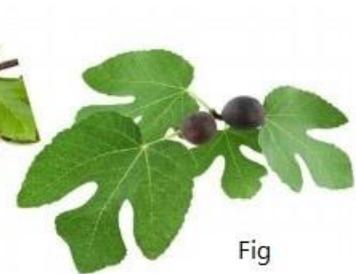
Penduculate oak



Silver birch



Beech



Fig



## Why we need Phenology?



Climate change



Agriculture



Health care

...forestry, tourism and a lot more.



## Spring Activities

**ACTIVITY 1  
MY TREE**



**ACTIVITY 2  
LOOK AT THE BUDS**



**ACTIVITY 3  
FIRST LEAVES**



**ACTIVITY 4  
MY GREEN UP DATA**



**ACTIVITY 5  
GREEN SCALE**





## Activity 1 – My Tree

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



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## 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



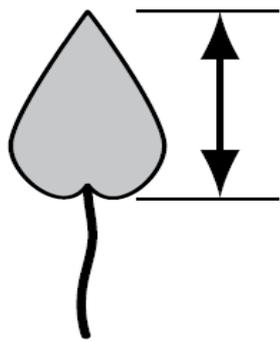
Tree and Shrub Green-Up					
Date (day & month)	Leaf 1 (dormant, swelling, budburst, leaf length (mm))	Leaf 2 (dormant, swelling, budburst, leaf length (mm))	Leaf 3 (dormant, swelling, budburst, leaf length (mm))	Leaf 4 (dormant, swelling, budburst, leaf length (mm))	Data entry ✓

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

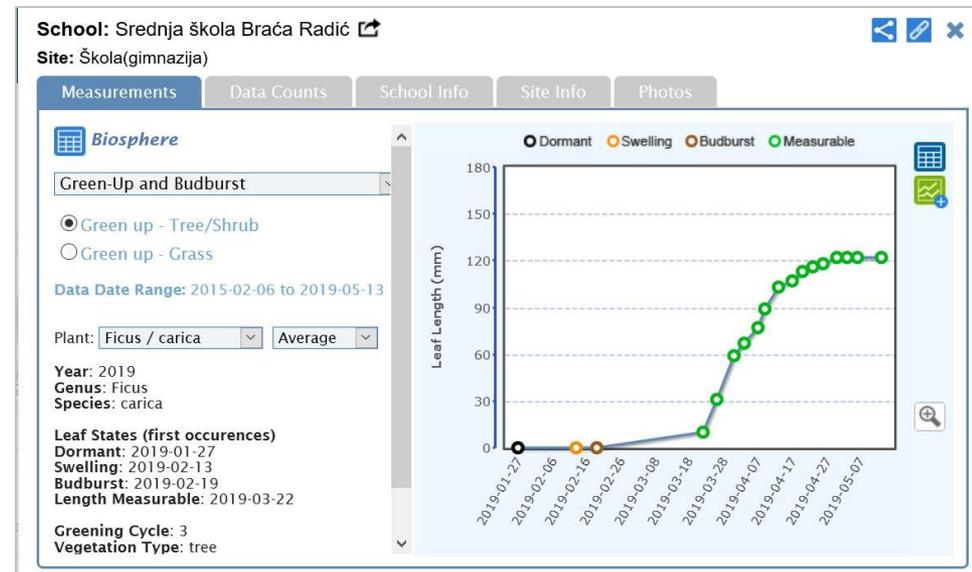




## Activity 4 – My Green Up Data

- 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

Data guide and webinars at the website.





## Activity 5 Green Color Scale

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

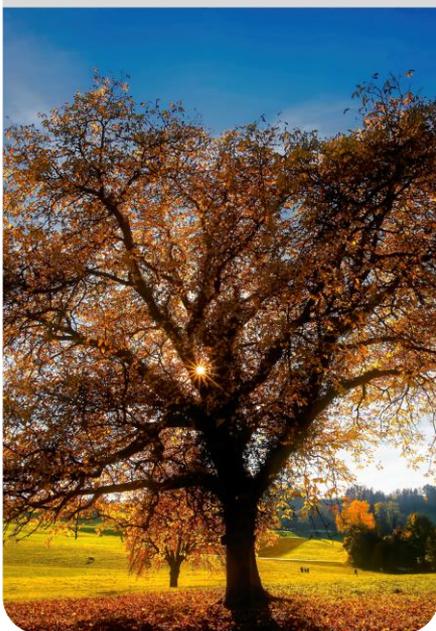


*Credits: Kinasivska Secondary School, Ukraine*

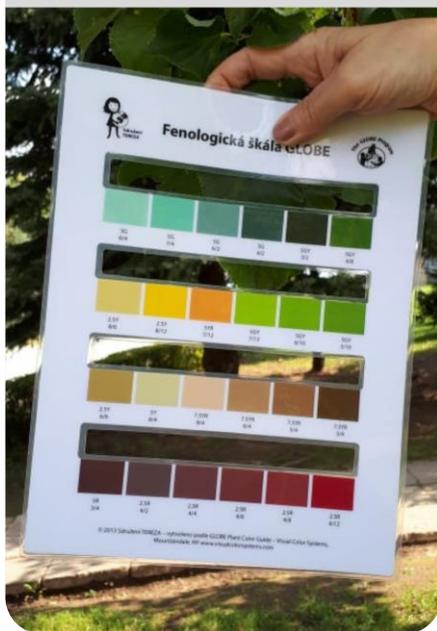


## Autumn Activities

### ACTIVITY 1 MY TREE



### ACTIVITY 2 COLOR CHANGE



### ACTIVITY 3 GREEN DOWN DATA





## Activity 1 – My tree

- Find a suitable tree
  - Close
  - Low branch
  - Not shaded, fertilised
- Mark 4 leaves at one branch
- Describe the tree and the site where it grows
- Take pictures with GrowApp
- Share pictures of your tree at the discussion forum



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Fig



## Activity 2

- Twice per week until leaves fall down
- Observe color change and falling of leaves
  - the dominant color using the GLOBE Plant Color Guide
  - snow covered
  - fallen
- Record data into the data sheet

### Example of Completed Green-Down Data Sheet

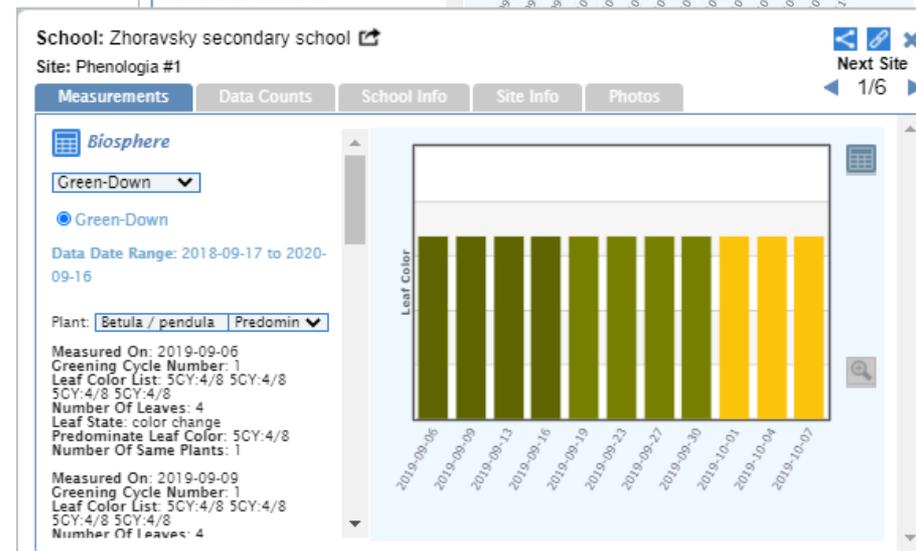
#### Tree, Shrub, and Grass Green-Down

Date YYYY-MM-DD (year-month-day)	Growing season cycle (1, 2 or 3)	Leaf 1 (Color, fallen, snow covered)	Leaf 2 (Color, fallen, snow covered)	Leaf 3 (Color, fallen, snow covered)	Leaf 4 (Color, fallen, snow covered)	Data submitted to GLOBE
2013-09-30	1	5 G 7/4	5 G 7/4	5 G 7/4	5 G 7/4	<input type="checkbox"/>
2013-10-03	1	5 G 7/4	5 G 7/4	5 G 7/4	2.5 Y 8/6	<input type="checkbox"/>
2013-10-07	1	5 G 7/4	2.5 Y 8/6	5 G 7/4	2.5 Y 8/6	<input type="checkbox"/>
2013-10-11	1	5 G 7/4	2.5 Y 8/6	2.5 Y 8/6	2.5 Y 8/6	<input type="checkbox"/>
2013-10-14	1	5 G 7/4	2.5 Y 8/6	2.5 Y 8/6	2.5 Y 8/6	<input type="checkbox"/>
2013-10-16	1	2.5 Y 8/6	2.5 Y 8/6	2.5 Y 8/6	2.5 Y 8/6	<input type="checkbox"/>



## Activity 3 – My green-down data

- Upload your green up data to globe.gov website
  - Login to your GLOBE account
  - Data collected at Activities 1 and 2
- 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





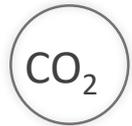
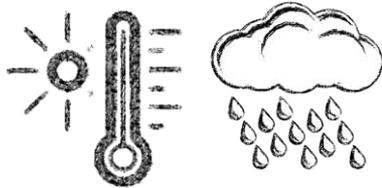
## Other Activities and Tools



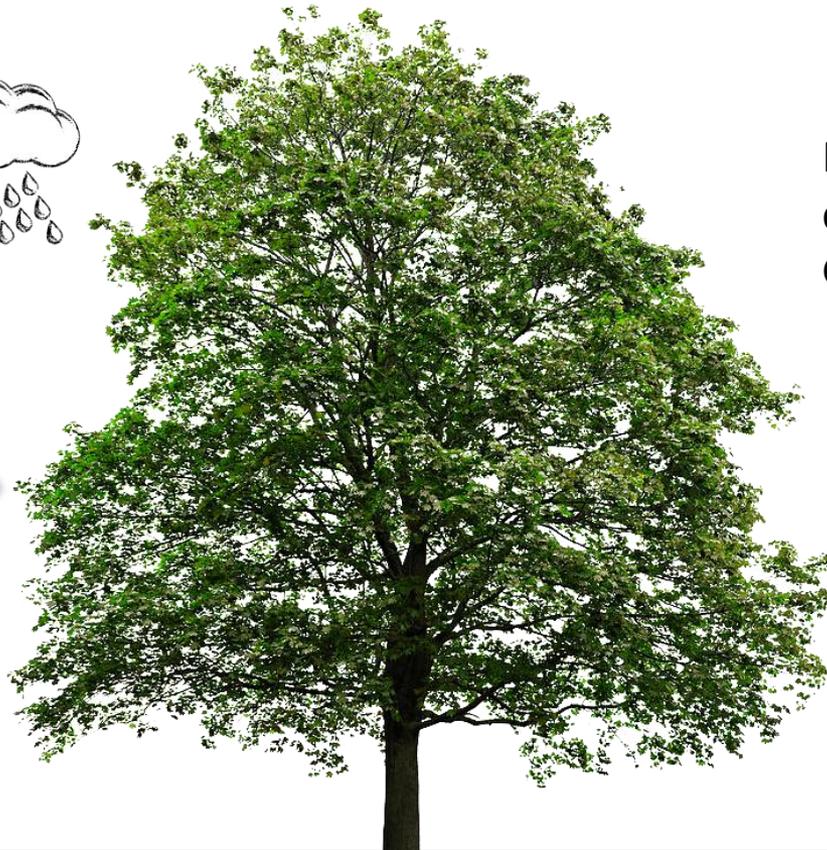
# Trees as Part of the Environment

Discover this relationship

Measure temperature  
and precipitation



Find out, how trees are  
related to global carbon  
cycle



Measure tree height with  
clinometer or using  
GLOBE Observer tool





## GrowApp

- Easy to use mobile application  
[for Android](#) / [for iPhone](#)
- Time lapse videos
- Use # to describe tree species and your school





The GLOBE Program

Collaboration  
is at the heart  
of the campaign.



## Collaboration with schools, scientists and local communities.

### Sharing results and experience

- [Online forum](#) – photos and results posted by teachers and students
- [„Get Inspired“ Padlet](#) – inspiration from schools
- [GrowApp](#), GLOBE Observer, GLOBE database
- Webinars and online meetings – part of campaign / GLOBE

### Collaboration group

- Optional intense collaboration of 2-4 school teams formed by campaign coordinators
- From exchange of data to planning a research project or meeting

### Recognition

- Certificates and badges





The GLOBE Program

# Lesson Learned from the Campaign





## Lesson Learned

- Ideal for schools starting in GLOBE
- A starting point to further development of cooperation with partner schools, new themes, activities and cultural exchange
- Suitable for students of all ages
- Students enjoy being outdoors, exploring nature and using apps
- Activities can be done by groups or by students individually



# Contact

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

