

Spring Bulbs for Schools (2017/18) Teacher's Guide

2017 is the 12th anniversary of the **Spring Bulbs for Schools Investigation!** As usual, we are welcoming new schools to the investigation whilst continuing to work with schools that have been involved since the beginning.

We continue to work in partnership with the **Edina Trust** who are funding the pots and bulbs and extending the range of the project. This year we have 174 schools taking part! There are 83 from Wales, 38 from England, 37 from Scotland and 16 from Northern Ireland.

Please find enclosed the very important Term Planner.

Follow Professor Plant on Twitter or follow updates on the bulb-blog page: <http://www.museumwales.ac.uk/spring-bulbs/>

E-mail: scan@museumwales.ac.uk

Twitter: [Professor_plant](#)

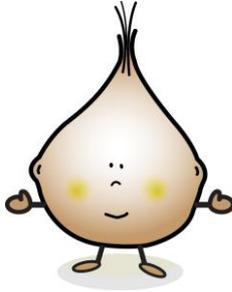


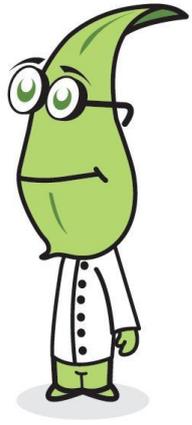
Term Planner: 2017/18

Here are some of the key dates for the project. Each stage has useful resources and PowerPoint files that you can use with your class.

Download from: <https://www.museumwales.ac.uk/spring-bulbs/>

Date	Activity
Week of 25 th Sept	Getting started Scottish Schools: <ul style="list-style-type: none"> • Introduce pupils to the project • Prepare for planting • Test username and password
Week of 9 th October	Getting started Welsh, English and Irish Schools: <ul style="list-style-type: none"> • Introduce pupils to the project • Prepare for planting • Test username and password
By October 13 th	Bulbs and pots to be delivered to All schools.
20 th October	Planting day: Welsh, English and Irish schools <ul style="list-style-type: none"> • (Remember to take photos for the competition!)
27 th October	Planting day: Scottish schools (Remember to take photos for the competition!)
20 th October	Deadline for photos to be entered into the Planting Day photo competition for Wales. Winners for Wales to be announced by 6 th November. Deadlines for schools in England and Scotland to be arranged by the Edina Trust.
6 th November	All schools to begin keeping weather records and continue until 29 th March (entering 'no record' for days the school is closed).
January – March	Encourage pupils to visit bulbs regularly and monitor the flowering dates and heights of their plants. One school from each country will win a prize for the class. To be in for a chance of winning you must enter all weekly weather data and flowering dates by 29 th March.
29 th March	Deadline to send all individual flower records and school weather records to the website. This ensures that each pupil receives a Super Scientist Certificate and pencil. If you enter all of your data you will be entered into a draw to win a prize for your class.
23 rd April	Competition winners to be announced and published on the website. Deadline to submit application to continue next year.
May 21 st	Certificates, pencils, seedlings and end of year report to be sent to awarded schools.
Week of 22 nd May	Nature-Activity trip for winning school in Wales to be arranged by this date for after half term.

Date	Activity details
<p>Bulb & pot delivery</p> <p>All equipment to be delivered to schools by 13th October.</p> <p>Scotland: 6th Oct England: 13th Oct Ireland: 13th Oct Wales: 13th Oct</p>	<p>Your 'Spring Bulbs for Schools' investigation pack will be delivered to your school on the dates shown. Please remove the bulbs from the box and store them in a cool, dry place. The bulbs won't get enough air if they are left in the box.</p> <p>Your pack should contain:</p> <ul style="list-style-type: none"> • 1 Daffodil bulb / pupil – Variety 'Tenby Daffodil'. • 1 Crocus Bulb / pupil – variety 'Whitewell purple'. • 1 pot / pupil. • 4 spare bulbs and pots /school. <p>Schools new to the project will also receive a thermometer and rain gauge.</p> 

<p>Getting started</p> <p>Scottish schools Week of 25th September.</p> <p>Welsh, English and Irish schools week of 9th October.</p>	<p>Introduce pupils to the project and prepare for planting:</p> <ul style="list-style-type: none"> • Before planting, pupils will need to name and adopt their bulbs and make labels for their pots. This is a good time to discuss what a plant needs to grow and to decide where to position the bulbs outside in your school grounds. Please use the resources below. <p>Resources at : http://www.museumwales.ac.uk/spring-bulbs/</p> <ul style="list-style-type: none"> • A letter from Professor Plant (PowerPoint) • Adopting and Caring for your Bulbs (PowerPoint) • Make your own bulb label [PDF] • Bulb adoption certificate [PDF] • FAQ's <p>Test your new username and password:</p> <p>All teachers will be e-mailed a new username and password to use to send data to the museum website. Please follow the instructions in the e-mail which will be sent to you by the 9th of October.</p> 
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Planting day:

Welsh, English and Irish schools: 20th October

Scottish schools: 27th October

Planting Day Photo Competition!

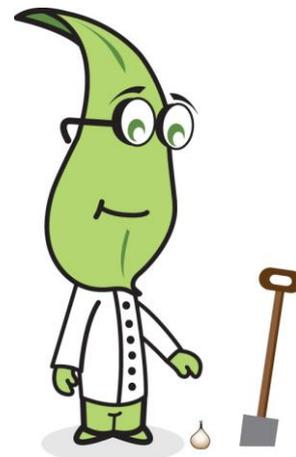
Schools to plant their bulbs on this day to ensure a fair-test.

- Pupils will need to plant their bulbs and attach the label they have already prepared. If you can't plant on this date please plant as close to this date as possible and make a note of the date. **You will need to have soil ready for this activity. No trowels or spades are necessary.** Discuss safety rules with the class before planting.

Resources at :

<http://www.museumwales.ac.uk/spring-bulbs/>

- Planting your bulbs
- Make your own mini-origami booklet! The secret undercover life of the bulb. By Professor Plant. (Colour version) (Fill in the gaps version) (How to do)



This year schools in Wales will be taking part in the Edina Trust's Planting Day Photo Competition! To be in for a chance of winning just take a photo of your class planting their bulbs and send it in to us.

Schools taking part in the Edina Trust extension project can send their photos to the Edina Trust Moodle site: <http://moodle.edinatrust.org.uk>

Schools in Wales can send their photos to National Museum Wales either through Professor Plant's Twitter page (below) or the Scan email address: scan@museumwales.ac.uk

Schools in Wales must share their photos on planting day (20th October). Welsh Winners will be announced on 6th November and prizes sent out soon after.

The Edina Trust will provide information on deadlines for schools taking part in the Edina Trust Extension Project.



- Send your stories and pictures to our bulb-blog and follow Professor Plant on Twitter! www.twitter.com/Professor_Plant

Keeping weather records

Begin 6th November

Continue until: March 29th (entering 'no record' for days school is closed)



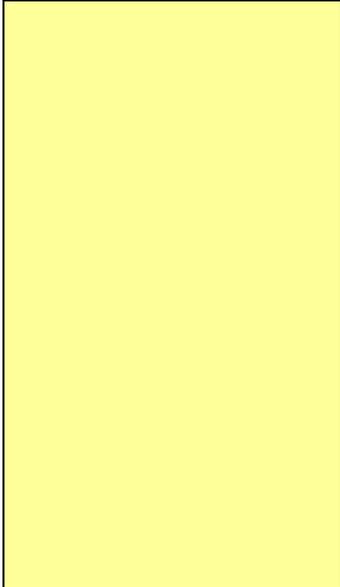
All schools to begin keeping weather records:

- Pupils will need to begin collecting information, using equipment and sending information via the website. Teachers will need to gather: 1 rain gauge, 1 thermometer, rulers, pencils, the weather chart and the class username and password (ready for logging into the website).

- If pupils send in data weekly then schools can compare weather records, study the map and identify local trends. So please send data weekly on Friday afternoons if you can.
- Schools may also wish to study last year's records and findings.

Resources: Download from <http://www.museumwales.ac.uk/spring-bulbs/>

- Keeping weather records (PowerPoint)
- School weather chart [PDF]
- Thermometer and rain gauge.
- My Daffodil [PDF] My crocus [PDF]
- Map & weather charts
- Previous results

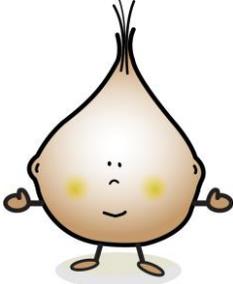


Keeping flower records and bulb blogging:

January to March

From January to March encourage pupils to visit their bulbs regularly and record the flowering dates and heights of their plants.

- **Pupils to continue keeping weather records as in previous term.**
- Send your stories and pictures to our bulb-blog and follow Professor Plant on Twitter!
www.twitter.com/Professor_Plant



- Watch **Professor Plant's video diary** to see how the bulbs grew last year and/or follow **Professor Plant's picture diary** (in the bulb-blog) to compare the growth as it happens.
- **Mapping.** Pupils should be encouraged to watch the flowering map to see where the flowers are opening first and study the weather patterns to see if they can work out why the bulbs are opening earlier in certain regions.
- **When & what to record?** Use the **'keeping flower records'** PowerPoint to make sure all pupils know what and when to record. As soon as a flower opens ask that pupil to login and make a record of their flowering dates. Immediately on sending in a record, a flower should appear above your school on the **flower map** and the date should appear on the **flower chart**. Ask each pupil to send in their records as flowers open, so that the website can calculate an average flowering date for your school. This can be used to compare trends. For more info on how to send in data see:

Keeping flower records, bulb blogging and Twitter:
January - March

<http://www.museumwales.ac.uk/spring-bulbs/>

- **While the bulbs grow:** This could be a good time to discuss the potential implications of climate change and to put the importance of the investigation into context. See **global warming resources**. Pupils could find out 'how long they need to run to power a light bulb' and make energy saving pledges. They could also take part in the 'Climate Change Wales True or False' quiz.
- **When the flowers open** pupils could create a diagram of the plant highlighting the structure and functions of the leaf, roots, flower etc. See resources. Pupils may take home their Daffodil once it has flowered, at the teacher's discretion. See: 'Bulb Care after flowering'.
- **How to get certificates.** All pupils that send in their records will receive **Super Scientist Certificates, pencils and seeds**. Please make sure all weather and flowering records are sent to Professor Plant through the SCAN website by **29th March 2018**
- Don't worry if some bulbs haven't flowered by 29th March, those pupils will still receive certificates. Please ask them to take their bulbs home and note when their flowers open. Important! We require a flowering date for both the Daffodil and Crocus from each pupil, so our mapping system can calculate the average flowering dates for your school.
- **Certificates will be sent to schools by 21st May 2018.** For more information on how to send in data see:
<http://www.museumwales.ac.uk/spring-bulbs/>

Resources at : <http://www.museumwales.ac.uk/spring-bulbs/>

- Keeping flower records (PowerPoint)
- Daffodil chart [PDF]
- Crocus chart [PDF]
- Bulb-blog
- Professor Plant's video diary
- Name the daffodil flower parts (PowerPoint)
- Name parts of a Daffodil [PDF]
- Global warming: why should we care? (30 min discussion) [PowerPoint]
- True or false: climate change Wales [PowerPoint]
- The energy crisis (25 min debate) [PowerPoint]
- Climate change: what's occurring? [PDF]
- Bulb care - after flowering [PDF]

<p>Win a Class Prize!</p>	<p>Keep weekly records for the chance to win a prize for your class!</p> <p>The Prize for schools in Wales is a Nature Activity Trip for the class. This includes: A free coach and a day of facilitated nature activities for one class. A winner from South Wales will visit St Fagans National Museum of History <u>or</u> a winner from North Wales will visit the National Slate Museum.</p> <p>The Edina Trust will organising local prizes for winning schools in England, Scotland and Ireland. See: www.edinatrust.org.uk</p> <ul style="list-style-type: none"> • To be in for a chance of winning you must send your weekly weather records to the website by 29th March. The winners will be announced by 23rd April. • All pupils that send in their records will receive Super Scientist Certificates, pencils and seeds. • 23rd April: Deadline to submit application to continue next year.
<p>Data handling, certificates and final report</p> <p>Week: 21st May</p>	<p>Certificates and Professor Plant's report: These will be sent to each school by 21st May 2018, to be presented to pupils and the school as a whole. This provides an opportunity for pupils to present the project, findings and procedures to the rest of the school / next year's participants.</p> <ul style="list-style-type: none"> • Resources: Download from: http://www.museumwales.ac.uk/spring-bulbs/ <ul style="list-style-type: none"> • Certificates 2018 • The latest findings

	<ul style="list-style-type: none">• Previous results