

An introduction to  **planting science**


An opportunity for education and outreach


 [planting science.org](#)

[Student](#) [Teacher](#) [Scientist](#) [Research Gallery](#) [Plant Themes](#)

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University of Toronto
planting science mentor since 2007

 fostering student research
through scientific inquiry and
online mentorship

 **planting science**



Goals of this presentation:


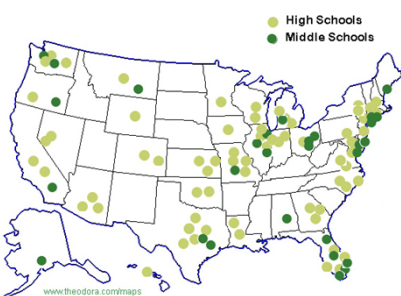
- 1.) Introduce Planting Science to CSPB
- 2.) Recruit CSPB as a society partner
- 3.) Recruit CSPB members to mentor
- 4.) Get Canadian students and teachers involved



•The Concept


- PlantingScience is a learning and research resource, bringing together students, plant scientists, and teachers from around the world. Students engage in hands-on plant investigations, working with peers and scientist mentors to build collaborations and to improve their understanding of science.

>11,000 students, 900 scientists, 14 societies.
>3,000 team projects from 34 states + international.



are you taking part in the evolution?

planting science
join us, make a difference





plantingscience

Planting science provides all the resources to teachers


<p>The Wonder of Seeds</p>  <p>Germination and Seedling Growth Investigation</p> <p>Grades 7-12</p> <p>More Information</p>	<p>The Power of Sunlight</p>  <p>Photosynthesis and Respiration Investigation</p> <p>Grades 9-12</p> <p>More Information</p>	<p>Foundations of Genetics</p>  <p>Traits, Variation, and Environment in Rapid Cycling Brassica</p> <p>Grades 9-12</p> <p>More Information</p>
<p>PlantingScience Modules in Field-Testing</p>		
<p>Corn Competition</p>  <p>Grow the largest corn plants.</p> <p>Grades 7-12</p>	<p>Where does pollen come from?</p>  <p>Pollen and Pollination Investigation</p> <p>Grades 7-12</p>	<p>Genetics in Inbred Arabidopsis</p>  <p>Investigation with a model species to track transmission of traits.</p> <p>Grades 9-12</p>
<p>Celery Challenge</p>  <p>Osmosis, Diffusion, and Transpiration Investigation</p> <p>Grades 7-12</p>	<p>C-Fern in the Open</p>  <p>Sexual reproduction, alternation of generations investigation</p> <p>Grades 9-12</p>	



plantingscience

- **What does it take to be a PlantingScience partner?**
- The willingness to partner and participate
- **What does it cost to be a PlantingScience partner?**
- \$0 and participation


What is it like to be a **plantingscience** mentor?




Registered scientists receive mentoring resources.
Usually matched to ~2 student teams per session.

Mentors choose:


- which sessions fit their schedules.
- preferences for grade level and plant inquiry projects.



The Wonder of Seeds
Germination and Seedling Growth Investigation
Grades 7-12
[More Information](#)




The Power of Sunlight
Photosynthesis and Respiration Investigation
Grades 9-12
[More Information](#)




Foundations of Genetics
Traits, Variation, and Environment in Rapid Cycling Brassica
Grades 9-12
[More Information](#)


PlantingScience Modules in Field-Testing




Corn Competition
Grow the largest corn plants.
Grades 7-12




Where does pollen come from?
Pollen and Pollination Investigation
Grades 7-12



Genetics in Inbred Arabidopsis
Investigation with a model species to track transmission of traits.
Grades 9-12




Celery Challenge
Osmosis, Diffusion, and Transpiration Investigation
Grades 7-12



C-Fern in the Open
Sexual reproduction, alternation of generations investigation
Grades 9-12

What is it like to be a **plantingscience** mentor?



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Welcome to the Scientist Page for PlantingScience

This page contains information about and hints for volunteering as an online mentor.

Already a registered mentor? Once you login, you'll see a link to Update Your Availability and Mentoring Preferences.

Thanks to the >200 mentors who confirmed participation for the Fall 2011 Session!

Feel free to contact us with any questions: pssteam@plantingscience.org.

My Mentor Teams

Team Code	Team Name	Teacher	School	Level	Last Project Update	Last Comment	By
ACS_S12_W05	The Blondie Bunch	Bob Hollwedel		Middle School/Jr High	Apr 19, 6:13 pm	Apr 29, 12:33 am	1Eindriolo
ACS_S12_W05	The Blondie Bunch	Aaron Egonzone	Alexander Central School	Middle School/Jr High	Apr 19, 6:13 pm	Apr 29, 12:33 am	1Eindriolo
SSS_S12_W03	Super Science Samurai	Betty Indriolo	St. Sebastian School	Middle School/Jr High	Mar 27, 1:53 pm	Apr 2, 11:23 pm	Catrina

Other Projects I've commented on

Team Code	Team Name	Teacher	School	Level	Last Project Update	Last Comment	By

Your info

- [Edit Your Professional Information](#)
- [Update your Availability and Mentoring Preferences](#)
- [Update Your Name for "Comments" and Timezone](#)
- [Update Your Password](#)
- [Update Your Email Address](#)
- [Add/Update Your Image](#)
- [View Your PlantingScience Profile](#)


Forum Discussions

3 recent Topics:

- [Spring 2012 --- 1Valvarado - Apr 19, 2012](#)
- [Spring 2012 --- 1KGriffith - Apr 12, 2012](#)
- [Spring 2012 --- 1Sheehan - Apr 12, 2012](#)

[PlantingScience Forums](#)

Meet our Scientists



Kate LeCroy

As a college biology major, I'm involving myself in plant research with my professors!

Limestone quarries often have interesting features we don't know a lot about. Right now, I'm surveying a Limestone quarry at Ruffner Mountain in Birmingham, Alabama. I'll be collecting

What is it like to be a mentor?

School Level: Middle School/Jr High
[Print this](#)

Research Information

Research Question
which seeds grow in beach climates?

Research Predictions
Some seeds will grow better in salt water rather than regular water, like the ones that live in beach climates.

Experimental Design

Research Conclusions

Conversations – use this space to communicate about this project

Students, please do not include your last name in any comments.


Add a new Comment

Subject

Comment

Submit Comment

Research Team Profile



Super Science Samurai


Project Data

Our Uploaded Journals:

Our Uploaded Data Files:

Our Uploaded Final Presentation Files:

Images:



Blanket Flower 0% and 2% and 5% salt

What is it like to be a mentor?

March 14, 2012 | 7:46 AM | [liesey](#) (Team Member)

Procedure

1. First you will need the following: 8 Petri dishes, Mung bean and Alfalfa seeds, Salt, water, paper towels
2. Measure out the salt into the water so that each one is either 2.3 5 and 10 percents.
3. Wet the paper towels with the salt water so that each one has the right percentage there will be, Two 2%, Two 5%, Two 10%, and two with tap water.
4. Set the paper towels in the Petri dishes and set a seeds in each one.
5. Close the dish and watch for germination and growth!

[Edit Comment](#)

March 12, 2012 | 9:45 AM | [Dr. Emily Indriolo](#) (Scientist/Mentor)

ok
I look forward to hearing your proposal!

[Edit Comment](#)

March 9, 2012 | 8:13 AM | [liesey](#) (Team Member)

Thank you for your advice! We are planning to send you our procedure by next Wednesday.

Talk to you soon,
Anna, Kelly, Sara, and the Libby

[Edit Comment](#)

March 8, 2012 | 9:56 AM | [Dr. Emily Indriolo](#) (Scientist/Mentor)

potential hypothesis
Hey team!

So here are some of my thoughts on your potential questions:

- 1.) the first one will be fairly easy to set up but for the case of you experiment, I don't think you have a long enough time frame to really watch the interactions between the seedlings.
- 2.) testing environmental factors such as salinity are a biologically relevant question and can enlighten us as the difference between



What students say...

"Thank you so much for being a great mentor. You really helped us learn a lot! Planting science was a great way for us to be a part of science!"

"I've never been a fan of Science, but these experiments really made Science come alive for me!"

"Having a scientist comment on our project is cool!"

Research Team Profile



Team Kumquat

Project Data

Our Uploaded Journals:

- [OliviaPlantingScienceTeamKumquat9.doc \(43.50k\)](#)
- [Harrisonshanahan.doc \(430.50k\)](#)
- [LouisKatieJournal.pages \(144.25k\)](#)
- [graceteamkumquat51.doc \(41.50k\)](#)
- [ScienceJournalEmmaPelly5.doc \(96.50k\)](#)

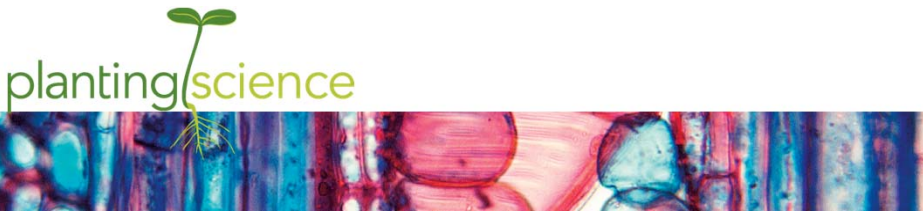
Our Uploaded Data Files:

Our Uploaded Final Presentation Files:

- [PlantingScienceTeamKumquat02.doc \(25.00k\)](#)
- [graceTeamkumquatgraph1.xls \(17.00k\)](#)

Images:



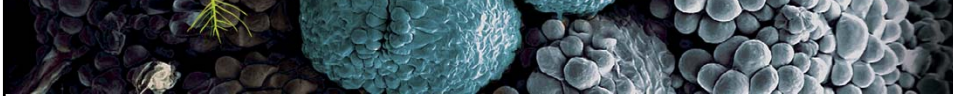



What teachers say...

"The experience my students had with planting science was probably the best learning experience I have ever worked with!"

"Thanks for the opportunity for my kids to do "real" science."

"Having scientist mentors MAKES the program. Bravo!"




What scientists say...

"Students are our future and now is the time to nurture them."

"It is a great opportunity to make a difference in how students view and think about science."

"Online mentoring has helped me understand how younger students ask questions."



What is it like to be a **plantingscience** mentor?



1. **Easy** - straightforward website and helpful advice and background information provided.
2. **Effortless** - you are automatically emailed updates so that you know when to log in and interact with your teams.
3. **Enlightening** - you will learn to think differently and communicate in a way that these young scientists can understand.
4. **Rewarding** - it always feels good when your team does an excellent job on their project!



Share your passion for plant science!



Kevin and Lila drawing detailed pictures of the plants.



pollinator map



flower bed



So happy about plants!



Want to know more?

Please email:
psteam@plantingscience.org

Society partnership contact:

Claire Hemingway:
chemingway@botany.org
562-308-0075