Scientific Inquiry through Plants

Sip³

You will make a difference!

Scientific Inquiry through Plants Sip^3

Over the next five years we will change the meaning of "Science Education" for many people.

We are pleased you've stopped by to see what is happening. We'd also like you to consider how you can participate and/or assist our efforts.

Scientific Inquiry through Plants Sip³ - An Overview

- What is Scientific Inquiry through Plants ***Sip³***?
- Why are we developing ***Sip³***?
- What do we hope to accomplish?
- What has happened so far?
- How can YOU participate?
- When do YOU need to be involved?

Scientific Inquiry through Plants Sip^3 - *what is it?*

Scientific Inquiry through Plants **is an innovative forum allowing students to discover biological core concepts through hands-on inquiry projects and online mentorship from plant scientists.**

www.plantbiology.org

The Research Projects

The Online Forum Bringing Everything Together

The Students & Educators

The Scientists

Resources

Sip³ Scientific Inquiry through Plants

Integrating original research, education and scientific mentoring.

Supported by the

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Reseach TOPICS
The Wonder of Seeds

Participating Schools

- The Bush School
- Pershing County High School
- Emporia State University
- Sisters Middle School

Sip³ Main Menu
· Home
· My Account
· Administration
· Logout

Online
0 unregistered users and 1 registered user on-line.

You are logged-in as **bdahl**.

Welcome to our Preview

Welc rdon our dust while we are developing the site in anticipation of showing it at Botany 2005.

Wel Scientific Inquiry through Plants!

Thanl u search deep enough to be touched by our vision and to see the potential we believe integr scientific mentoring has to offer. We'd love to hear your comments and ideas for assisting the project.

Over the next five years we will change the meaning of "Science Education" for many people. While looking around the site, we'd also like you to consider how you can participate and/or assist our efforts.

In late August 2005, Sip3 will be a fully functional site. At present you are vie didn't want you to miss anything.

The evolution from last year's pilots is dramatic. We have incorporated many of the options and safety features dents, teachers, scientists and the development committee suggested. We will be reviewing these options/features at our next meeting at the Botany 2005 Educational Forum in Austin, Texas August 12-13. We will pilot the new site this fall and open it to full participation in January 2006. If your class is interested in participating in the fall pilots or the 2006 launch, please email us at· sip3@botany.org.

To say we are excited about the possibilities in front of us, would be a vast understatement.

Remember, real science is a verb, not a noun! Get involved for real change.

If you are new to Sip3, welcome!! We look forward to your involvement. For those of you who have been a part of the program from the beginning, thanks for your continuing participation and support! Your thoughts, comments and hard work have made it all possible.

Sincerely,

Bill Dahl

Week

David Spooner - BSA Secretary
What an adventure, this is my career! -
Click here

Meet the SiP³ Scientists
Click here.

SiP³ Resources

- Instructor Resources
- Student Resources

SiP³ Resources
Instructor's Materials

Research Page for Pershing County High School, Team 5

Our research question is:
How do Monocots compare to Dicots, in tersm of Germination time, sprout size, etc...?

Website Guide, *Student Research Guide*, *Suggested Resources*, *Supplemental Materials*

VIEW
Our Journal — Uploaded 5/10/05 — Upload Journal
Our Data — Uploaded 5/6/05 — Upload Data

Peer Review Comments
Click Here

Team Responses
Click Here

Scientists' Comments
Click Here

Peer comment from Bush HS to Pershing CHS--teams both growing buckwheat seeds

Scientists feedback, w/ image to make personal connection

Research Discussion

4/20/05 12:15PM - T5: Our research question is: How do Monocots compare to Dicot

4/22/05 2:01PM - T5: First upload of our data is complete.

4/24/05 5:39PM - Dr. Beverly Brown: Your data suggest you are starting to se
Changes in color? Integrity of the seed coat? Anything else?

5/2/05 11:42AM - PEER COMMENT from Bush Team 4 -"Buckwheat Biologists": We are also growing buckwheat and we were wondering what your results of growth were, because your data sheet says there is no other data after day 2.

5/2/05 1:59PM - T5(Sean) Response to Dr. Brown: We are seeing some changes in our seeds, like the colors all seem to be getting slowly brighter. The shape and and sizes of the seeds are still growing and changing. Although some seeds seem to have stopped growing, the others continue

5/2/05 2: esults for growth are updated on our Data sheet. Sorry for the delay, but some of c can see from our updated info (if it isn't up yet) that in length, the buckwhe so they're erradic. It should be up by the same time this is, so it should be alright.

5/4/05 1: erested in the same kind of question as you, but we chose to do a different t?

5/4/05 11:45AM - Dr. Jeffrey Osborn: Dear Team 5: I think comparing monocots and dicots is a fascinating idea. Have you done much

Why are we developing Sip³ ?

- #10 The Bruce Alberts challenge
- #9 Plants are the best medium for scientific inquiry
- #8 Our mission and objectives
- #7 Our Common Vision for Change
- #6 We Can Take the Mountain to Mohammad!!!
- #5 Our staff
- #4 Students
- #3 Teachers
- #2 Our members
- #1 By acting we will create positive change

Why are we developing Sip³?

The Impact vs. Cost Equation

(greatest potential for change + impact on mission)

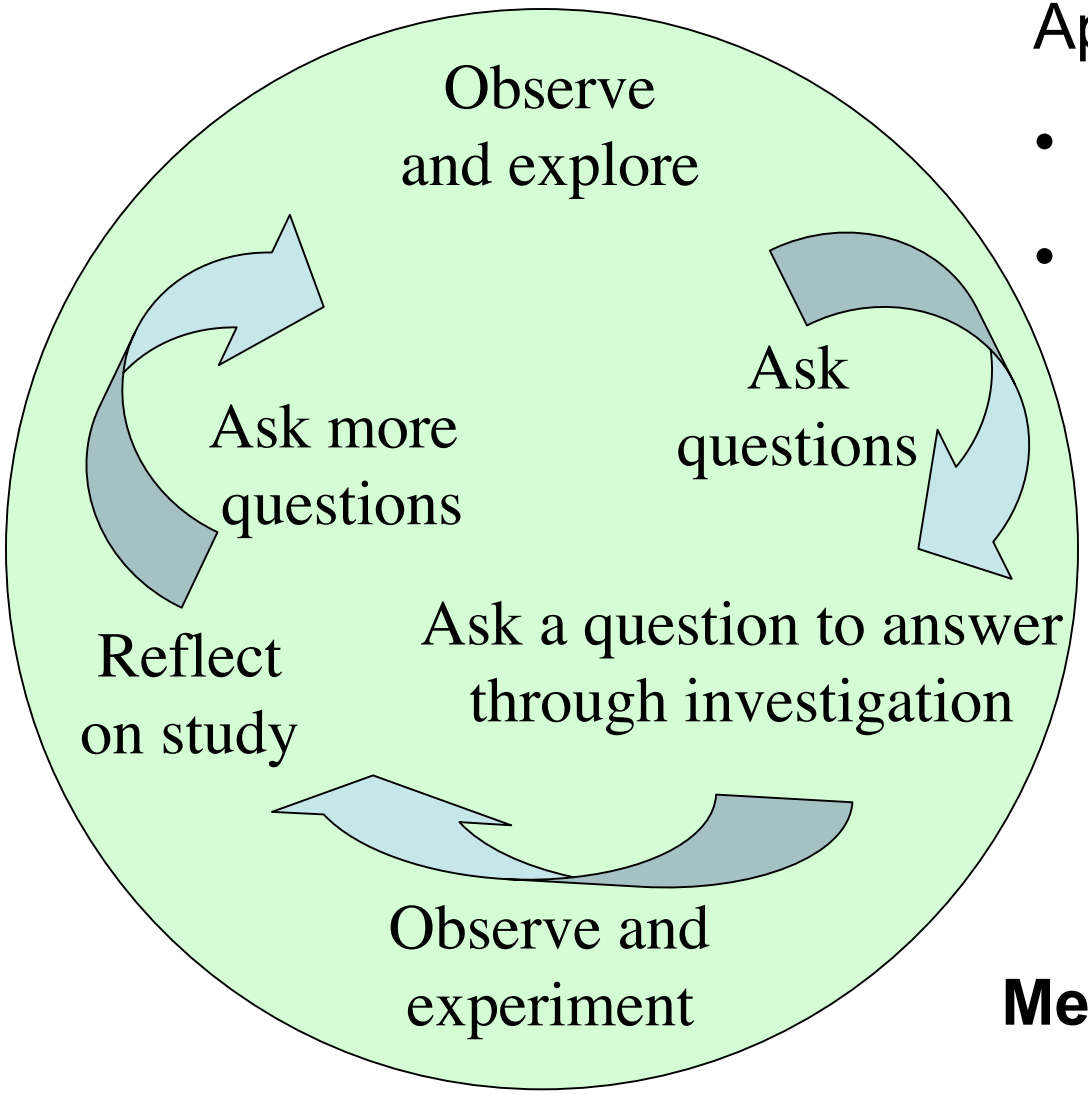
=

(minimal expenditure + low time commitment + ability to reach students)

What do we hope to accomplish with the development of Sip³?

- Change the way young people perceive and engage in science
- Increase the potential for Student - Teacher - Scientist interactions
- Improve scientific literacy and increase interest in science
- Mentorship of K-16 students
- **Positively impact BSA mission**

Teaching and learning through inquiry



Apply the inquiry cycle:

- conducting research
- training graduate students

Inquiry = engaged learning

Engaged learning = deep learning

Memorization ≠ Learning

What has happened so far?

- Bruce Alberts challenge
- March 2005 meeting
- Pilot website
- Spring 2005 pilots
- Website developments

What has happened so far?

Dr. Beverly Brown and the

Scientific Inquiry through Plants
Research Topics

The Wonder of Seeds

What has happened so far?

Valdine McClean
and the Pershing County High School experience

HOME | About BSA Sci-π | Participants | BSA Scientists | Research Topics | View Research | Contact Us

Pershing County High School

Team 1:
Jessie G., Ryan S., Tisha C., Whitney H., Aja G.

PROJECT COMPLETED

Team 2:
Katrina H., Jessica P., Karlee F., Uli S., Holly R., Cassie B.

PROJECT COMPLETED

Team 3:
Dean H., Zack P., Kala B., Kim B., Becky J., Tony N.

PROJECT COMPLETED

Team 4:
Michael G., Thomas S., Jared S., Charlie D., Abrahaim K.

PROJECT COMPLETED

Demographics for District

- Enrollment: 797
- Ethnicity: 8% American Indian, 1% Asian/Pacific Islander, 25% Hispanic, 1% Black, 65% Caucasian
- Low Socio/Economic: 45%
- Special Education: 22%

Pilot Project Participant Stats

- Sophomore Biology Students
- Scores on Iowa Tests of Educational Development:

	Reading	Language	Math	Science
Pershing	39	37	35	41
Nevada average	41	42	42	42
National norm	50	50	50	50

Team 1 - The Sweets:
Haley, Emily, Hannah, Chelsea, Taryn

PROJECT COMPLETED

Team 2: Swedish Hotdogs
Drew, Randy, Eric

PROJECT COMPLETED

Team 3: The Sprouts
Haley, Ami, Janelle

PROJECT COMPLETED

Team 4: Red Hot Chili Peppers
Annie, Claire, Justine

PROJECT COMPLETED

Team 5: The Pyro Gardeners
Jake, Austin

PROJECT COMPLETED

Team 6: Pink Panthers
Chase, Zane, Holden, Beth

PROJECT COMPLETED

Team 7: The Nerds
Julia, Hillary, Ashley, Callie

PROJECT COMPLETED

Team 8: The Green Team
Bastian, Dallas, Billy

PROJECT COMPLETED

Team 9: 4 Kings of Science
Daniel, Kevin, Hayden, Will

PROJECT COMPLETED

Team 10: Seed Eaters
Josh, Race, Brennan, Drew

PROJECT COMPLETED

Team 11: Outlaw Gardeners
Parker, Sean, Zander

PROJECT COMPLETED

Team 12: Monkeys
Brandi, Kassandra, Sara, Michelle

PROJECT COMPLETED

Research Page for Sisters Middle School, Team 13
Mike and the *Taco*

Our research question is: Which corn seeds will grow faster if 1 container of corn seeds is put in sunlight while rinsed and the other container of corn seeds is put in the dark while rinsed?

Website Guide, *Student Research Guide*, *Suggested Resources*, *Supplemental Materials*

VIEW

Our Journal	Uploaded 5/19/05	Upload Journal
Our Data	Data Uploaded 5/27/05	Upload Data

Peer Review Comments
Click Here

Team Responses
Click Here

Scientists' Comments
Click Here

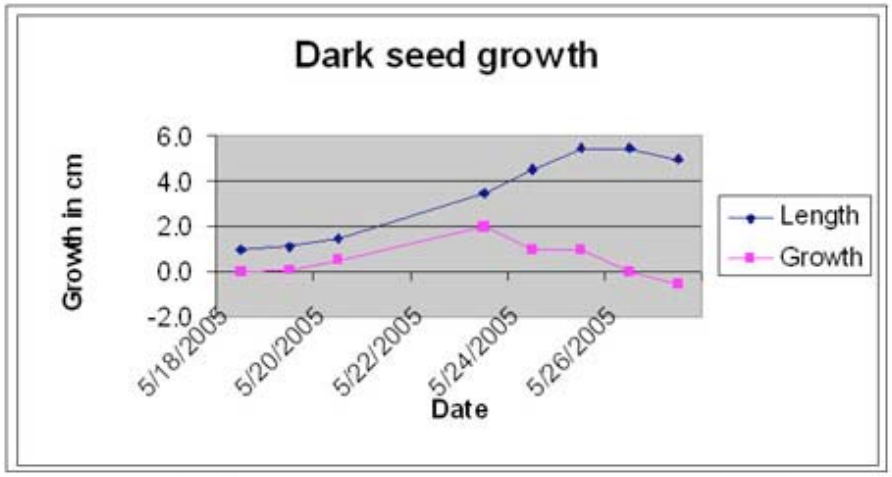
Research Discussion

Thr 5/19/05 3:01 PM - T13 The first upload of our journal is complete. **Hypothesis**: We think the container of corn seeds in sunlight will grow the fastest because that container will be able to take in 2x as much nutrients.

Fri 5/27/2005 7:18 AM - Dr. Beverly Brown: It sounds as if you are off and running! I'm curious to know what you think the connection is between sunlight and the ability to obtain nutrients. Why do you think it will be 2X faster in the sunlight? I'll look forward to hearing from you.

Thr 5/19/05 3:01 PM - T13 Our first data upload is complete.

Reseach Information



Where are we going from here?

- Today's developments
- Tomorrow's workshop
- Website Changes
- Fall Pilots
- Assessment & alterations
  - Student assessment
  - System assessment
  - Standards assessment
- January 2006 launch
- Scientific Society Collaboration

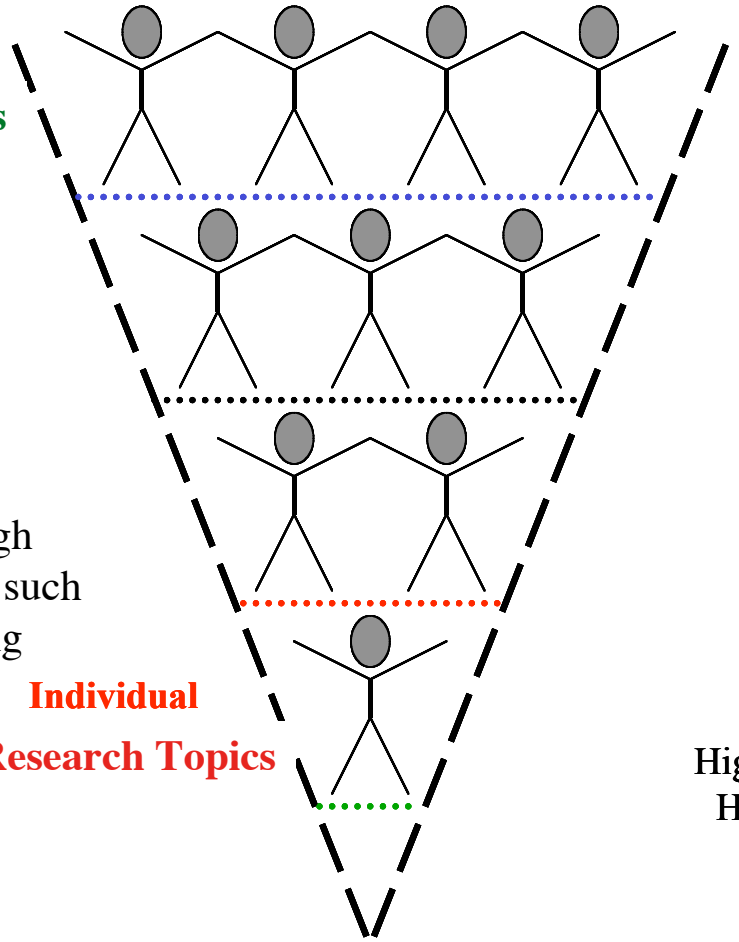
Where are we going from here?

Participation Level, Specificity and Required Input

Class/Group Research Topics

80% of students will come away with a better understanding of science and scientific concepts

20% will go on to explore the wonders of science further through individual/team projects in areas such as science fairs. Actively pursuing science outside of the classroom!



Individual Research Topics

General
Low Input

Highly Specific
Higher Input

How YOU can participate?

- Three more sessions today
  - Scientist & Teacher Breakouts 2a. & 2b.
  - Pulling it all together session 3.
- Workshop tomorrow
- Fall 2005 pilots & January 2006 launch
  - Participating schools
  - Participating scientist

When do YOU need to get involved?

- NOW!
- Email sip3@botany.org
- Go to www.plantbiology.org
- See us now…..

- **WE need YOUR expertise!**

Scientific Inquiry through Plants Sip³

- Involvement Opportunities
  - Research Project Development
  - Research Project Leadership
  - Service Leadership
  - ~1.5 service hours per month
- Impact
  - BSA Mission & Objectives
  - BSA Leadership in Science Education
  - ~ 400,000 students over the first five years
  - BSA Leading Society & Scientific Collaboration

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