

Business Name

SCST Quarterly



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Message from the President

Brian Shmaefsky



Greetings SCST Colleagues!



Greetings SCST members; I truly appreciate your membership. I am pleased to follow in the footsteps of immediate Past President Connie Russell and the previous presidents who navigated SCST since its inception in March 24, 1979.

I hope everybody has gotten off to a great academic year in spite of the hardships created by budget cuts. The SCST

Board is aware that tightened spending at colleges putting severe restrictions on professional development budgets. For many of us, that means that travel to conferences may be restricted. Our SCST board is hoping that you make SCST a priority by scheduling your travel to the SCST Annual Conference in Indiana. Our meeting is being held on March 29-April 1, 2012 in conjunction with the NSTA National Conference. The SCST sessions represent the only college science professional development venue that promotes the improvement in

the teaching of college science courses via interdisciplinary interactions among teachers of college science.

SCST is facing the problems of almost all professional organizations in the past 5 years. Our membership numbers are not growing and we are not getting sustainable influx of new members. Please encourage your colleagues to join our organization. Also, let your new faculty and graduate students know about the value of membership in SCST. We have a wonderful network of faculty who can share years of teaching experience. Many of our members are doing cutting-edge research on college science teaching. These ideas are shared through our involvement with the Journal of College Science Teaching and through sessions at the SCST Annual Conference.

We also need members to fill some leadership positions. SCST is currently looking for a National Membership Chair and a Councilor-at-Large for 2011. Please feel free to submit your name to me if you are interested in serving SCST in a leadership capacity. We are also glad to accept nominations of colleagues.

Please visit the new SCST website at <http://www.scast.org/>. Our webmaster Nick Roster has also setup a Society for College Science Teachers (SCST) Facebook. Go to <http://www.facebook.com/> and search for our page. Please “Friend” us to know that you found the website.

In past newsletters the presidents made comments such as “It’s easy to be a member of an organization by simply paying dues, but that’s not what membership is all about.” We would like you to be actively involved in SCST. I want to hear from you about ways that we can make SCST grow and any ways that SCST can help with your teaching needs.

Feel free to contact me at: brian.r.shmaefsky@lonestar.edu.

~ *Brian*

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National Convention

March 29 – April 1, 2012

Indianapolis

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Announcement

SCST is seeking National Membership chair to serve on the Board. Please contact Brian Shmaefsky if interested in this important position with SCST.



Regional Updates

SCST Councilors-at-Large

Watch for updates on the upcoming area meetings

2011 Area Conferences:

Hartford, Connecticut **October 27-29**

New Orleans, Louisiana **November 10-12**

Seattle, Washington **December 8-10**

NEW FORMAT FOR SCST AREA CONFERENCES

This fall's SCST sessions at NSTA Area Conferences in Hartford, New Orleans, and Seattle will be organized differently---we will offer two-hour workshops rather than multiple shorter presentations.



Regional Updates

SCST Councilors-at-Large

Hartford

The first of these educational sessions is scheduled for Friday, October 28, 2011, in Hartford, Connecticut. A two-hour workshop entitled “Lecture-Free Teaching: A Learning Partnership between Science Educators and their Students” will be led by Dr. Bonnie Wood, author of the book with this title. Using her book (2009, NSTA Press) as a guide, participants will experience a simulation of a typical class meeting of a college science class. The Friday morning session is from 9:30 AM to 11:30 AM in the Mark Twain Room of the Hilton Hartford.

Although there is no additional charge for the workshop, participants must register for at least one-day of the three-day Hartford Area Conference of the National Association of Science Teachers (NSTA). Registration information is at <http://nsta.org/conferences/2011har/?lid=tnavhp> and a description of the SCST session is located under Friday morning workshops.

Dr. Wood’s book can be purchased at the NSTA Science Bookstore at the Connecticut Convention Center (with a 20% Conference discount and free shipping) or ordered online (<http://nsta.org/store/default.aspx>). A book-signing will occur on Friday, October 28 from 12:30 to 1:00 PM.

In addition to the workshop, members of the SCST will be on hand with information about the organization and the March 2012 National Conference.

Bonnie Wood

Seattle

NOT JUST FOR PHYSICS: Come to the SCST two-part workshop session at the Seattle Regional Meeting to find out about “Effective Teaching Using Tools from Physics Education Research”, led by two of the leaders in the field, Paul Heron and Lillian McDermott of the University of Washington; Friday, December 9 at 11 & 12:30, room 211 in the Washington State Convention Center.

PS – Don’t forget to register for the meeting by October 21 to get the early-bird rate!

Paul Dolan

Outstanding Undergraduate Science Teacher Award

OUSTA Award Committee Update

2012 OUSTA Winner Announced
Kimberly D. Tanner, San Francisco State University



Claire Sandler
OUSTA Chair

The 2011-2012 winner of the Society for College Science Teachers (SCST) Outstanding Undergraduate Science Teacher Award (OUSTA) is Kimberly D. Tanner who is Associate Professor of Biology at San Francisco State University. The 2012 OUSTA award has been generously sponsored by the Springer Publishing Company.

A neurobiologist by training, Tanner is an innovative teacher who employs inquiry-based learning and interactive methods in her highly-rated classes for biology majors, non-majors and science education graduate students. She utilizes a variety approaches to teaching, assessing and adapting methods and materials in order to make learning biology most meaningful for her students. Kimberly Tanner is regarded as a national leader in biology education research whose groundbreaking work has helped define and publicize the position of tenure-track science education specialists in science departments. One of her current research projects is an investigation of the extent to which undergraduate biology majors develop expertise over the course of their undergraduate studies. Her current research activities address three primary areas: 1) the impact of scientist-teacher partnership models on teachers, scientists and students; 2) the development of novel approaches to classroom assessment; and 3) the effectiveness of approaches to promoting gender equity in the sciences. At SFSU, Tanner established the Science Education Partnership and Assessment Laboratory (SEPAL), which facilitates and investigates the impact of scientist-teacher partnerships as a mechanism of science education reform and K-20+ articulation. Tanner is currently the Principal Investigator on three NSF-funded projects and one NIH-funded SPECTRUM project that was established to build pathways to biomedical research for girls and women of color. Tanner also has a prolific record of scholarly publication including two books: *Girls in Science: A Framework for Action* - which won the 2009 Association of Educational Publishers Distinguished Achievement Award - and *Transformations: Approaches to College Science Teaching*, coauthored with Deborah Allen. Considered by her colleagues to be a productive, dynamic, imaginative, energetic, inspiring, creative, caring and collaborative teacher-scholar, Dr. Tanner is a most worthy recipient of the 2012 Outstanding Undergraduate Science Teacher Award.

Please join us for the OUSTA presentation and Dr. Tanner's remarks during the NSTA/SCST College Luncheon to be held on Saturday, March 31 during the 2012 NSTA/SCST national conference in Indianapolis.

SCST established the OUSTA to recognize the achievement of our colleagues who have enhanced the profession as outstanding teachers of science. The annual award is based upon a selection process that evaluates nominees according to the following categories: 1) teaching excellence; 2) scholarship; and 3) service to science education.

Member Contributions and Announcements

Teaching Tip



Big Picture Test: A quick and simple method to assess student learning

PART II

By Linda L. Tichenor and Sandya Baviskar

As promised in the last edition of the *Quarterly*, Dr. Baviskar and I have examined the data generated by an end-of-class assessment called “*The Big Picture Test*.” In Part I of the article, we described the types of misconceptions that students were likely to make but made no attempt to quantify the results.

In the previous article, we described the assessment as asking students in the introductory biology course to construct biologically correct sentences from given groups of words. The goal was to determine students’ understanding and comprehension of the material just covered during the lecture. The word groups were taken from the topic, ‘Cell structure and function’. For example, given the words *lysosome*, *enzymes*, and *damaged organelles*, the student should have come up with the following sentence: A lysosome contains enzymes which degrade damaged organelles. Instead, the misconception sounded like this: Damaged organelles have enzymes that are called lysosomes. (See Summer *SCST Quarterly*).

Words used for sentence construction	N=93	
	Incorrect Responses	% Incorrect Responses
Lysosome, enzymes, damaged organelles	47	50.50
Central vacuole, poison, nutrients	65	69.90
Golgi complex, ER and vesicles	51	54.84
Nucleus, ribosomes, proteins	53	56.90

Students’ Performance on Big Picture Test

Table 1.0. The number and percentage of students who demonstrated incorrect responses.

When we first started examining the responses in a qualitative way, we decided that probably not that many students would have confused the concepts so clearly presented in the lecture. We were surprised by the quantitative results and a bit discouraged by what was not retained or understood. Unlike multiple choice or fill-in-the blank type quizzes, the Big Picture Test allows us to probe students’ understanding and thought processes rather than their ability to word associate or to make a lucky guess. Our data seems to agree with the literature on how much content is forgotten after a lecture presentation—50-70% in our case, regardless of how organized or well-articulated. We decided that the scores would improve if students were either more attentive in class (competition with texting) or prepared for the day’s lecture material.

What we would like is for readers to try the assessment in their own classrooms and report back. If they leave with the types of misconceptions that we saw in the exercise, how can they possibly study the material later? Please email us with ideas/solutions/results of your own assessments. Thank you in advance for your input.

Email address: Linda.Tichenor@uafs.edu

Contributed article- Medicinal remedies found in the home By Thomas Lord

This is a great discussion to have with colleges classes. It usually generates new remedies from them

1. Drinking two glasses of Gatorade can relieve headache pain almost immediately- without the unpleasant side effects caused by traditional pain relievers.
2. Colgate toothpaste makes an excellent salve for burns.
3. Before you head to the drugstore for a high-priced inhaler filled with mysterious chemicals, try chewing on a couple of curiously strong Altoids peppermints. They'll clear up your stuffed nose.
4. Achy muscles from a bout of the flu? Mix 1 Tablespoon of horseradish in 1/2 cup of olive oil. Let the mixture sit for 30 minutes, then apply it as massage oil, for instant relief for aching muscles
5. Sore Throat?? Just mix 1/4 cup of vinegar with 1/4 cup of honey and take 1 Tablespoon six times a day. The vinegar kills the bacteria.
6. Cure urinary tract infections with Alka-seltzer. Just dissolve two tablets in a glass of water and drink it at the onset of the symptoms. Alka-Seltzer begins eliminating urinary tract infections almost instantly-even though the product has never been advertised for this use.
7. Eliminate puffiness under your eyes.....All you need is a dab of preparation H, carefully rubbed into the skin, avoiding the eyes. The hemorrhoid ointment acts as a vasoconstrictor, relieving the swelling instantly.
8. Honey remedy for Skin Blemishes.....Cover the blemish with a dab of honey and place a band-aid over it. Honey kills the bacteria, keeps the skin sterile, and speeds healing. Works overnight.
9. Listerine therapy for toenail fungus....Get rid of unsightly toenail fungus by soaking your toes in Listerine mouthwash. The powerful antiseptic leaves your toenails looking healthy again.
10. Easy eyeglass protection....To prevent the screws in eyeglasses from loosening, apply a small drop of Maybelline Crystal Clear nail polish to the threads of the screws before tightening them.
11. Coca-Cola cure for rust...Forget those expensive rust removers. Just saturate an abrasive sponge with Coca Cola and scrub the rust stain. The phosphoric acid in the coke is what gets the job done. What's it do to our insides when we drink it.?



Caption describing picture or graphic.

Contributed article- Medicinal remedies found in the home By Thomas Lord

Continued

12. Cleaning liquid that doubles as bug killer....If menacing bees, wasps, hornets, or yellow jackets get in your home and you can't find the insecticide, try a spray of Formula 409. Insects drop to the ground instantly. What's it do to us as we breathe the fumes?

13. Smart splinter remover.....just pour a drop of Elmer's Glue-all over the splinter, let dry, and peel the dried glue off the skin. The splinter sticks to the dried glue.

14. Hunt's tomato paste boil cure....Cover the boil with Hunt's tomato paste as a compress. The acids from the tomatoes soothe the pain and bring the boil to a head.

15. To disinfect a broken blister, dab on a few drops of Listerine....a powerful antiseptic.

16. Heinz vinegar to heal bruises...Soak a cotton ball in white vinegar and apply it to the bruise for 1 hour. The vinegar reduces the blueness and speeds up the healing process.

17. Kills fleas instantly. Dawn dishwashing liquid does the trick. Add few drops to your dogs bath & shampoo the animal thoroughly. Rinse well to avoid skin irritations. Goodbye fleas

18. Rainy day cure for dog odor....Next time your dog comes in from the rain, simply wipe down the animal with Bounce or any dryer sheet, instantly making your dog smell springtime fresh.

19. Eliminate ear mites....All it takes is a few drops of Wesson corn oil in your cat's ear. Massage it in, then clean with a cotton ball. Repeat daily for 3 days. The oil soothes the cat's skin, smothers the mites, and accelerates healing.

20. Vaseline cure for hairballs.....To prevent troublesome hairballs, apply a dollop of Vaseline petroleum jelly to your cat's nose. The cat will lick off the jelly, lubricating any hair in its stomach so it can pass easily through the digestive system.

21. Quaker Oats for fast pain relief....It's not for breakfast anymore! Mix 2 cups of Quaker Oats and 1 cup of water in a bowl and warm in the microwave for 1 minute, cool slightly, and apply the mixture to your hands for soothing relief from arthritis pain.

Member Contributions and Announcements

Editor's Note:

Howdy! We are chugging through another fall semester. I hope everybody got a chance to enjoy the summer. I spent the summer teaching so I am ready for Christmas. I am looking for any items for the "Upcoming Events" .

Zane



Please send contributions to Best Teaching Tip and Member Contribution and Announcements to me at zane.laws@cisco.edu.

Upcoming Events:

Winter Newsletter contribution deadline is November 20.

Regional conferences:

[Hartford, Connecticut](#) **October 27-29**

[New Orleans, Louisiana](#) **November 10-12**

[Seattle, Washington](#) **December 8-10**

