The Laboratory Safety Institute
40 Years | 1978-2018

SPEAKING OF SAFETY

Making health, safety and the environment an integral and important part of education, work, and life

Fall 2018 Newsletter Vol. 27.2

Lab Safety Wellness Visit

A funny thing happened on the way to the doctor.

When you get to be 65, the insurance no longer pays for a physical exam. What's up with that? The seniors were disappointed and so were the doctors ($ … he said cynically).

No problem. Let's change the language. We'll call it a wellness visit so Medicare can pay for it.

Now everyone is happy again! Ok … so where is this going?

Your chemical hygiene plan is getting older. It's time for a wellness visit with LSI.

If you would like to send us the Microsoft Word version of either (not both), we'll take a look and send you back our first ten suggestions for improvement with our compliments.

Then, in a future issue of SOS, we'll include a David Letterman list of all the suggestions we made.

And if you would like to have us do the entire document (which we also do regularly) we'll talk about what it will cost to turn on the meter. LSI's "Medigap" only covers the first ten.

If you are not in the mood for our wellness visit, perhaps your would prefer our EHS "colonoscopy". This is a somewhat invasive and mildly uncomfortable look at your lab safety program.

LSI has developed a "Lab Safety Program Review Checklist" (see pages 6 and 7). We have identified 33 elements in an effective lab safety program. If you wish, you can use the checklist qualitatively or quantitatively. To use is qualitatively, you put a check mark in the appropriate column: OK, Needs Additional Work (NAW), or Does Not Exist (DNE).

To do it semi-quantitatively, count the number of check marks in each column.

Now for those of you with courage, do it quantitatively. Give yourself three points for everything that's ok. Zero to three points for the ones that need additional work, and zero for the ones that do not exist.

Since there are 33, 33 times three is 99. We'll give you one bonus point for having the courage to do it quantitative.
Now for those of you with real courage (or you are just a glutton for punishment), request a free copy of LSI's Excel "Lab Safety Program Evaluation Scorecard". This Excel spreadsheet not only has the 33 programs elements but also the criteria for each.

It's a six-point scale from "Outstanding" to "Does Not Exist." It automatically averages your score for each element and the overall score.

Here's the best part. LSI will spend a half hour with you and/or your safety committee to be sure you understand how to use it. If you would like us to do the whole evaluation with you or for you (on-site or online) we can discuss turning on the meter.

"Life is full of choices."

CONTENTS

Speaking of Safety is published by LSI. It is written and designed by James A. Kaufman. Brian Wazlaw (briwazlaw@aol.com), and Robert Lehrman (RALehrman@aol.com) are assistant editors.

Electronic subscriptions (three, 16-page issues) are free. Inquire about printed copy subscriptions. Multi-year and bulk subscriptions are also available.

You are welcome to reproduce all or part of the newsletter. Please share it with your students and colleagues. We appreciate hearing how these materials are used.

Back issues may be purchased for $6.00 each. Copies of all back issues (over 75) are available and can be purchased as a complete set in three-ring binders or electronically for $300. Contact Connor Michael for more Information.

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LSI Updates

LSI welcomes Anita Hamel as our new full-time Operations Assistant.

Caio Gravina has started his business studies at Mass Bay Community College. He is continuing to work as a part-time Operations Assistant.

Our newest Board Director is Barbara A. Hopkins. Most recently, she retired as NH State Science Supervisor and works as an education consultant.

Since our Spring SOS, LSI have provided courses in Chicago, at CSU in Fort Collins, and in Bellingham at Western Washington University.

Our conference courses included the National Association of Science Materials Managers in Spokane, WA and at the American Chemical Society in Boston.

Catalent Pharma Solutions in St. Petersburg, FL spon-sored at two-day lab safety short course for their twelve US locations.

I am writing this issue of SOS as I travel to Thailand to teach for two weeks.

Jim Kaufman

Hi-Definition Online Courses

LSI has just finished updating and re-recording in hi-definition its one-, two-, and three-day online distance-learning lab safety courses. We have also added a new course, "**How to Be a More Effective Lab Safety Officer"**

The Introduction (one-day), Extended (two-day), and Comprehensive (three-day), are available for $495, $875, and $1,095, respectively.

Background

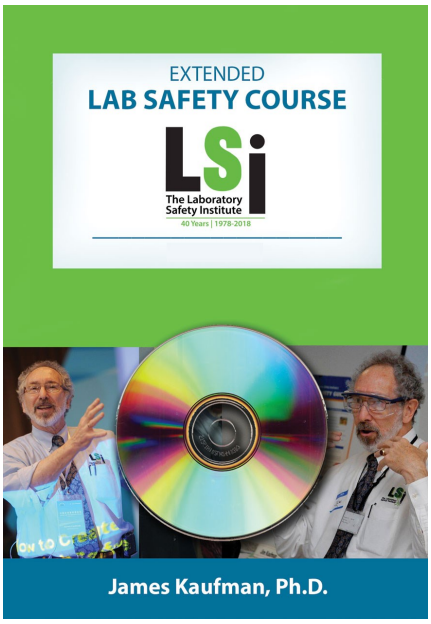
In 1994, I took a video crew to Chicago to record our two-day course with 50 participants. We edited the 16-hour course to make eight 90-minute videos on VHS, which originally sold for $875, the same as the live course.

In 2014, LSI started offering our one, two, and three-day lab safety course on-line and on-demand for those who are "Remotely Interested" ™ in lab safety.

Earlier this year (2018), we updated those online presentation to high-definition. They are also available as DVD videos sets. You can use them to provide a lab safety course for yourself and your colleagues.

If you would like to have a complimentary, live, half-hour discussion / Q&A with LSI when using the original or the newer ("Extra Crispy") DVDs, please call to schedule. (508) 647-1900.

Life is full of choices.
Regards … Jim



Lab Safety Pioneers in Thailand

I'm in Thailand for two weeks in Chiang Mai, Bangkok, and Rayong. None of this would have been possible without the help of three special people: Peta, Oat, and Phichai. Twenty-four years ago (1994), they founded Neolab International, "The Safe Laboratory Maker." They design, manufacture and maintain LEED-certified green laboratories. Neolab also provides lab safety training and seminars, problem-solving as well as preventative maintenance of furniture, fume hoods, laboratory ventilation with an emphasis on compliance with lab standards for personnel safety.

Phichai is the president of Neolab. Oat (Peta's sister) is the general manager. Peta is a lab designer. Like me, she did her graduate studies at Worcester Polytechnic Institute (WPI). We met the first time I visited Thailand in the 90's. She has her own company, Innovalab Design. Most recently, these pioneers established a non-profit foundation, the Laboratory Safety Foundation, Thailand. Their mission is to encourage and promote best laboratory health, safety and environmental practices throughout the country.

LSI and I have been very fortunate to get to know and have the opportunity to work with three such dedicated individuals. If you would like to learn more about their work:
I*nnovalab.design@gmail.com +(66) 02-159-8197*
Neolab: www.neolabinter.co.th +(66) 02-159-9777
Lab Safety Foundation: +(66) 08-1901-2903

Safe Science: Be Protected

By Dr. Ken Roy

Animals in the Science Lab: Don't Forget the Safety!

Integrating live animals into the K-12 science classroom/lab is a means to promote student interaction with organisms as part of the teaching/ learning process. It also promotes responsibility for students in caring for living things. However, teachers need to ensure that animals are properly cared for and treated humanely, responsibly and ethically.

As better professional practice, NSTA supports including live animals as part of instruction in the K-12 science classroom. This is because observing and working with animals firsthand can spark students' interest in science as well as a general respect for life while reinforcing key concepts as outlined in national standards.

NSTA has a position paper titled "Responsible Use of Live Animals and Dissection in the Science Classroom" (http://www.nsta.org/about/positions/animals.aspx). Based on legal standards, OSHA also has an informative "quick facts" relative to lab safety and working with small animals (https://www.osha.gov/Publications/laboratory/OSHAquickfacts-lab-safety-working-with-small-animals.pdf).

Better Professional Practices - NSTA

Under better professional practices, NSTA states the following as part of their position paper:

NSTA recommends that teachers educate themselves about the safe and responsible use of animals in the classroom. Teachers should seek information from reputable sources and familiarize themselves with laws and regulations in their state.

Become knowledgeable about the acquisition and care of animals appropriate to the species under study so that both students and the animals stay safe and healthy during all activities.

Follow local, state, and national laws, policies, and regulations when live organisms, particularly native species, are included in the classroom.

Integrate live animals into the science program based on sound curriculum and pedagogical decisions.

Develop activities that promote observation and comparison skills that instill in students an appreciation for the value of life and the importance of caring for animals responsibly.

Instruct students on safety precautions for handling live organisms and establish a plan for addressing such issues as allergies and fear of animals.

Develop and implement a plan for future care or disposition of animals at the conclusion of the study as well as during school breaks and summer vacations.

Espouse the importance of not conducting experimental procedures on animals if such procedures are likely to cause pain, induce nutritional deficiencies, or expose animals to parasites, hazardous/toxic chemicals, or radiation.

Shelter animals when the classroom is being cleaned with chemical cleaners, sprayed with pesticides, and during other times when potentially harmful chemicals are being used.

Refrain from releasing animals into a non-indigenous environment.

Legal Safety Standards - OSHA

OSHA also recommends the following specifics for a safer laboratory experience in working with animals:

All procedures on animals should be performed by properly trained personnel. By using safe work practices and appropriate personal protective

equipment (29 CFR Part 1910 Subpart I), workers can minimize the likelihood that they will be bitten, scratched, and/or exposed to animal body fluids and tissues.

(Editor's note: In most workplaces, this is a requirement and not a recommendation.)

Use Safe Work Practices

Avoid eating, drinking, smoking, handling contact lenses, applying cosmetics, or taking or applying medicine.

Avoid touching your mouth, nose and eyes.

Avoid using sharps whenever possible. Be extremely careful when using a needle and syringe or when using sharps during necropsy (autopsy) procedures. Never remove, recap, bend, break, or clip used needles from disposable syringes. Use safe needles whenever possible.

Never use your mouth to pipette liquids. Only use mechanical pipetting devices.

Keep doors to rooms holding research animals closed.

Perform procedures carefully to reduce the possibility of creating splashes or aerosols.

Restrict operations that generate hazardous aerosols to biological safety cabinets or other ventilated enclosures, such as animal bedding dump stations.

Clean up all spills immediately.

(Editor adds … If you can clean it up without injuring yourself or others and it is not an emergency or likely to become an emergency, clean it up. Otherwise, all US employers must follow OSHA's 29CFR1910.120 and all other related OSHA regulations. This include all public sector employers not otherwise covered by this regulation. Who says so? The EPA in 40CFR311.)

Promptly decontaminate work surfaces when procedures are completed and after surfaces are soiled by spills of animal material or waste.

Properly dispose of animal waste and bedding.

Remove gloves and wash your hands after handling animals or animal tissues and before leaving areas where animals are kept.

Wear appropriate personal protective equipment (PPE). Wear all required PPE identified by your employer based on the activity performed.

Wear gloves designed to resist puncture from animal bites.

Wear eye protection. This will not only protect your eyes from potential scratches, but also will protect them from direct contamination by animal secretions or indirect contamination from materials contaminated with animal secretions.

Wear head/hair covering to protect against accidental sprays or splashes.

In The End

Live animals in the science lab can help create an exciting learning experience for students. Just make sure health and safety issues are addressed in advance of any activities or demonstrations involving the animal visitors!

Author:

Dr. Ken Roy
Director of Environmental Health & Safety Glastonbury (CT) Public Schools
NSTA & NSELA Safety Compliance Consultant
Email: Royk@glastonburyus.org

Editor's Notes:

1. *Ken is a past member of LSI's Board of Directors.*

2. If you've been enjoying Ken's series, "Safe Science—Be Protected", you'll be pleased to know that LSI has published a collection of articles in a single volume (100 pages, 2002, $24.95 plus s/h). A second volume of Ken's articles is now available.

3. LSI has a wonderful publication for elementary school science safety, *Safety Is Elementary: the new standard for safety in the elementary classroom (SIE).*

   The second edition of SIE was released in January 2010 ($29.95 plus s/h). Ken is one of the co-editors along with Peter Markow and Jim Kaufman.

   Order online at **www.LabSafety.org.**

Laboratory Safety Program Review Checklist

(To be used with the six-point evaluation criteria)

	Component	OK	NAW*	DNE*
1.	Accident Investigation			
2.	Accident Reporting			
3.	Annual CHP Review			
4.	Awareness Posters			
5.	Bulletin Board			
6.	Chemical Hygiene Officer (safety officer)			
7.	Chemical Hygiene Plan			
8.	Chemical Inventory			
9.	Condition of Employment			
10.	Conduct Hazard Determination			
11.	Emergency Equipment Testing			
12.	Emergency Planning			
13.	Fume Hood Testing			
14.	Hazards Review Process			
15.	Inspections			
16.	Management Participation in Inspections			
17.	Management Training Programs			
18.	MSDSs (SDSs)			
19.	New Employee Orientation			
20.	Newsletter			
21.	Off-The-Job Safety			
	* **NAW =** Needs Additional Work **DNE =** Does Not Exist			
	Copyright Laboratory Safety Institute 2018			

Volunteer Internet Marketing and Operations Assistants

LSI is looking for volunteers to assist with both Internet marketing and operations activities. Internet marketing volunteers help by identifying the names and addresses of potential email recipients and by sending email announcements. Volunteer operations assistants help produce the materials that LSI uses at its training programs. This work is performed in our Natick office.

If you have one to four hours per week available, please contact Jim@LabSafety.org or call 508-647-1900

	Component	OK	NAW*	DNE*
22.	Policy Statement			
23.	Provide Personal Protective Equipment (PPE)			
24.	Reference Library			
25.	Regulatory Compliance			
26.	Reward Program			
27.	Rules Agreement			
28.	Safety Budget			
29.	Safety Committee			
30.	Safety Manual			
31.	Staff Training Programs			
32	Vendor/Visitor/Contractor Safety			
33.	Waste Disposal Program			
34.				
35.				
36.				
37.				
38.				
39.				

* NAW = Needs Additional Work DNE = Does Not Exist

Visit LSI on the web at www.labsafety.org

Learn more about ways to use this checklist and how to receive recognition and LSI certification for your lab safety program on page 10.

Thank You!

This September, the Laboratory Safety Institute received a $5,000 donation from the Michele E. Dufault Foundation, created in memory of a 22-year-old student who died in a lathe accident at Yale in 2011. We want to express our deep gratitude for this generous and unexpected gift.

Special thanks also goes to Safety Stratus, Dow Chemical Company, Fisher Safety and the Erlab Group for their continued support of The Laboratory Safety Institute.

And we want to thank our many readers who have become LSI members, volunteers and supporters.

If you would like to support LSI, please go to www.labsafety.org to learn more about donations and memberships. We need your help.

Laboratory Safety Guidelines

"Laboratory Safety Guidelines" was written while I worked for the Dow Chemical Company, in an attempt to share with schools, colleges, and universities what I was learning about lab safety. In 1976, Dow sent copies to 2,000 college and university chemistry departments and received requests for 250,000 reprints!

Since then, Dow (1986), Fisher Science Education (1989), Carolina Biological Supply Company (1994), Fisher Safety (2012), and Workrite (2017) have produced co-branded editions of the Guidelines in various poster formats.

The Guidelines have been translated into 22 languages. In all, over six million free copies have been distributed and reprinted in various forms. The most recent new language is Braille. Our thanks to the Perkins School for the Blind for completing this translation.

In each issue of *Speaking of Safety,* we will publish one or two of the revised and expanded guidelines. The entire collection of revised and expanded guidelines is available in a 50-page booklet for $8.95.

#33. PROVIDE AN APPROPRIATE SUPPLY OF FIRST AID EQUIPMENT AND INSTRUCTION ON ITS PROPER USE.

There are some emergencies which can't wait five minutes for EMT's to arrive. Severe bleeding is one of these. A person can bleed to death in three to five minutes depending on the severity. Employees need to be available to deal effectively with this and other serious emergencies.

OSHA specifies in 29 CFR 1910 that first aid kits need to be specified by the consulting physician. Employees should be trained in the appropriate use of the materials provided. First aid and CPR courses can be offered. You can't expect people to respond properly to emergencies unless they have an opportunity to practice.

Proper first aid in the case of a spill of chemicals on a person is to use the safety shower in less than ten seconds and to remove all contaminated clothing immediately. This is no time for modesty (although shower curtains or fire blanket screens are appreciated).

You never get good at anything unless you practice. Make up a card that says: “You have just splashed concentrated nitric or sulfuric acid on yourself.” Drop the card on one of your employees or students two or three times a year to start the safety shower/fire blanket drill.

Order a set of lab safety drill cards at **labsafety.org**

If you generate one or two less data points that day, it’s OK. You’ve just said to everyone (by your actions) that working safely in the lab is more important than making widgets!

Speaking of first aid, what’s the first thing you do if your clothing is on fire? That’s right … stop … drop … and roll.

What’s the second thing? Ah ha! Not as easy. The correct answer is lots of cold water in the shower to take the heat away to stop the “cooking” process.

#34. REMOVE ALL ELECTRICAL CONNECTIONS FROM INSIDE CHEMICAL REFRIGERATORS AND REQUIRE MAGNETIC CLOSURES.

Standard refrigerators should not be used for storage of flammable or reactive chemicals. Electrical connections within the refrigerator can be an ignition source for flammable vapors. In fact, it’s been reported that there are nearly a dozen sources of ignition in a standard household refrigerator.

The motor under the refrigerator is also a potential ignition source. Explosion-proof refrigerators have their motor and compressor assemblies encased

in an enclosure to prevent ignition. In addition, the refrigerator is wired with explosion-proof connections to the receptacle.

If the door has a latch mechanism instead of a magnetic closure, pressure built up in an explosion will blow the door off and cause more serious damage.

Every year two or three refrigerators explode because of improper storage. Make sure your refrigerators are correct for your application.

A refrigerator inspection checklist is available for $1.00 from LSI.

Subscribers/Members

We need your help. Please consider increasing your support for LSI. If you are currently a subscriber, think about becoming a member. If you are a member, consider renewing early or becoming an organizational member. Donations are tax-deductible.

In-kind gifts of equipment, supplies, and services are also appreciated. To learn more about how you can help, contact Jim Kaufman at Jim@LabSafety.org.

LSI Seeks Corporate Sponsors

The Laboratory Safety Institute is seeking corporate sponsors. Assistance is needed to provide EH&S program development services to schools, colleges, and universities; and to fund scholarships for school science teachers. LSI also offers program reviews, facilities inspections, teacher professional development, and administrator awareness seminars with the help of corporate sponsors.

LSI needs your help in identifying Corporate Public Affairs and Community Affairs departments. Please call or email LSI to suggest a potential local corporate sponsor.

LSI Partners Network

Join the LSI Partners Network. Host an LSI course in your area. Volunteer to work with the Institute to offer one of our seminars or short courses for your colleagues and for others in the area.

LSI Partners help with the scheduling of facilities, audio-visual equipment, refreshments, and advertising. Contact Ana Adams (Adams@LabSafetyInstitute.org), Operations Manager, for more information. See the sample seminar and short course schedules at LSI's website (www.LabSafety.org).

ICASE Update

News from the International Council for Associations of Science Education

ICASE will hold its next (2019) triennial world conference in Thailand. For more information, visit the ICASE web site, www.icaseonline.net.

LSI is organizing a symposium on Safety in Science Education and will offer a professional development course on safety in science education.

Science educators from schools and higher education, lab technicians, lab managers, and scientists will be making presentations and discussing laboratory safety issues.

The ICASE committee on Safety in science education is being reorganized to have one representative from each ICASE region.

For more information about the ICASE-LSI symposium at the India conference or to express interest in contributing a paper please email me, jim@labsafetyinstitute.org.

Bob Worley (bobworley4@gmail.com) from Great Britain is the new Chair of the ICASE Standing Committee on Science Safety.

I've enjoyed chairing the committee for the past seven years. I look forward to working with Bob and the committee.

To become a member of ICASE: http://icaseonline.net/bership.html

Laboratory Safety Institute's
Six-Point Recognition System for Laboratory Safety Programs

Background and Mission Statement
Many laboratories apply for and receive certification from, for example, the FDA, EPA, or NIOSH, to demonstrate that their laboratories follow established protocols and methodologies, and good laboratory practices (GLP). They wish to ensure that their results are as precise and accurate as the current technology permits.

LSI has developed a process for auditing laboratory safety programs and providing recognition for the development and continuing improvement of those programs. Our six-point recognition system will allow laboratories to receive both assistance and acknowledgement of achievement as they make progress with lab safety program development.

Our goal is simple: **We want to assist you in creating a more effective lab safety program**

More effective safety programs …
- Identify and control hazards
- Reduce risks
- Prevent accidents, injuries and damage to health and the environment
- Reduce laboratory wastes
- Lower costs of insurance
- Lower employee absences
- Increase morale and productivity
- Increase profits and return surpluses
- Grow a culture of safety

This **six-point recognition system** will indicate that the particular laboratory is increasingly aware of and improving the implementation of safety guidelines recommended by the American Chemical Society, National Research Council, and National Sciences Teachers Association for high schools, colleges, and universities, consensus standards, and regulations established and enforced by OSHA and EPA.

This recognition system would be available to all laboratories world-wide. Participation in this program will indicate a commitment to health, safety and the environment.

Objectives
1. Promote improved health, safety, and environmental awareness in all laboratories.
2. Encourage compliance with all relevant state and federal regulations.
3. Reduce the risk of laboratory accidents and illnesses.
4. Promote networking within the participating laboratories and recognition of best practices.

Program Structure
This is a zero to six point recognition system. The number of points received will depends on the degree of achievement in the development of the laboratory safety program. The LSI lab safety program review checklist consists of 33 program components and associate evaluation criteria.

Poor: The laboratory has become an organizational member of LSI, agreed to participate in the six-point recognition system lab safety program evaluation process, and achieved an average score of at least 1.0 point (Poor). Ya gotta start somewhere!

Fair: In addition to continuing to meet the preceding criteria, the laboratory has completed its first lab safety program evaluation and achieved an average score of at 2.0 (Fair) in their annual lab safety program review.

Good: In addition to continuing to meet the preceding criteria, the laboratory has achieved an average score of at least 3.0 (Good).

Very Good: In addition to continuing to meet the preceding criteria, the laboratory has achieved an average score of at 4.0 (Very Good) in their annual lab safety program review.

Excellent: In addition to continuing to meet the preceding criteria, the laboratory has achieved an average score of at least 5.0 (Excellent) in their annual lab safety program review.

Outstanding: In addition to continuing to meet the preceding criteria, the laboratory has achieved an average score of at least 6.0 (Outstanding) in their annual lab safety program review.

Evaluation
As organizational members of LSI, members receive a 1-2 hour program review teleconference. For some members, this will be sufficient assistance for them to proceed with the program review.

Participating organizations wishing to receive LSI
(Continued on Page 12)

Loose Threads

These questions, answers, and comments are taken from the Laboratory Safety Institute's mail, email, phone calls, and Internet discussion list.

Robin Izzo, EHS Director at Princeton University shared this list of articles. ….

The current issue of Nature includes a number of **articles related to lab safety culture and lab management**, as well as administrative burden in labs. We have convened a group that is creating a business case for ensuring that every lab has a professional lab manager (not just a grad student), either their own manager or shared with a few other labs. These articles touch on many of the topics related to that issue. The challenges noted in these articles have a universal quality to them.

Research institutions must put the health of labs first
Universities should take responsibility to ensure professional science is performed in an environment that is supportive, productive and rigorous.

Some hard numbers on science's leadership problems
A Nature survey of 3,200 scientists reveals the tensions bubbling in research groups around the world.
Richard Van Noorden

How lab heads can learn to lead
Lessons in leadership from outside the laboratory.
Roberta Kwok

Health tips for research groups
Nature asked scientists to recommend one thing that institutional and laboratory leaders could do to make science more productive, rigorous and happy.
David Norris, Ulrich Dirnagl, Michael J. Zigmond *et al.*

Go beyond bias training
Ambiguity in expectations and evaluations harms progress, say Rodolfo Mendoza-Denton and colleagues.
Rodolfo Mendoza-Denton, Colette Patt, Mark Richards

Nine pitfalls of research misconduct
Academic leaders must audit departments for flaws and strengths, then tailor practices to build good behaviour, say C. K. Gunsalus and Aaron D. Robinson.
C. K. Gunsalus, Aaron D. Robinson

Ralph Stuart, EHS Director at Keene State Univ. in New Hampshire shared this announcement.

I really like it. It provides a charming counterpoint to the comment: "I've been doing this for years and I've never had a problem."

Editor's note: About 20 years ago, I taught a lab safety course at Princeton. Robin was the lab safety manager. She told a story about an incident that occurred in 1966. A compressed gas cylinder fell over, the valve sheared off, and the tank went through a cinder block wall and killed a graduate student in the lab next door.

DCHAS Hazard Recognition Video Available

The final version of the Lab Risk Assessment Video is now available at http://dchas.org/2018/06/11/dchas-lab-risk-assessment-video-available/

The video carries a non-commercial, by attribution Creative Commons license and can be downloaded at the web site above.

Our thanks for their help with this video to :

1. Rachel Brian of Blue Seat Studios for her creativity

2. Tim Gallagher of the University of Bristol in the UK for suggesting this video and his ongoing collaboration in developing the content

3. The more that 300 people who viewed previous versions of the video and the many people who provided helpful suggestions for improving those versions.

4. The ACS Innovative Projects Grant program for funding this project.

Six Points (continued from page 10)
recognition certificates will submit a written report with supporting documentation for our review, evaluation and confirmation of program status. The fee for this review and evaluation will be $795.00

Some organizations may wish to have on-site consultation assistance with the development of their lab safety programs. LSI's standard consultation fees would apply for these services.

Recognition
LSI will provide a certificate to organizations participating in the six point recognition system acknowledging their level of achievement.

LSI will maintain a list of organizations that have achieved four and five star recognition. With their permission, the names of these organizations will be included on LSI's lab safety program honor roll on our website. The list will be updated regularly and publicly announced at least once a year.

Getting Started
Order a copy of LSI's publication, *Audits and Inspections,* $7.95 plus shipping and handling. It contains 30 years of lab inspection recommendations, the audit checklist and evaluation criteria. You can do it yourself. You can't argue it costs too much. Or, you can request that free copy of our Excel scorecard. If you want LSI's assistance, we recommend that your organization become an LSI organizational member. See above.

Bottom Line
After all, *"The Main Point is Your Health and Safety"*

For more information: Dr. James A. Kaufman, jim@labsafety.org, 508-647-1900

Free Lab Safety Webinar

LSI is offering to provide every state's science supervisor with a free webinar for his/her state's K-12 science teachers. Contact your state science supervisor **http://www.csss-science.org/members/** or LSI for more information.

2018-19 Webinars

Chemical Handling and Storage: Jan 25, May 3
Complying with the OSHA Lab Standard: April 18
Compressed Gases: Jul 18
Electrical Safety: Aug 15
Eye and Face: Jan 4
Chemical Labeling and GHS: Oct 19, Oct 4
How to Convince Others: Sep 21, Sep 19
Lab Ventilation & Fume Hoods: Nov 16, Nov 14
Leadership in Safety: May 22
Legal Aspects: Feb 1

All webinars and courses are available on request. Please contact Mary Thompson more information: mthompson@labsafetyinstitute.org.

LSI provides **free** webinars "Creating a More Effective Lab Safety Program" or "Safer Science Demos" for K-12 science teachers through their state science department of education or state science teacher association. Please contact your local association and ask them to request these free science teacher webinars!

New Free Live and Web Q&A Sessions

This year, LSI is offering the opportunity to find out everything you wanted to know about lab safety but were afraid to ask. Free question and answer sessions every month are live on the Web, and most are available in-person in our classroom in Natick as well.

If you come to our classroom, beverages and snacks will be provided. On the Web, sorry it's BYO. ;-)

Space is limited to the first 100 on the Web and first 20 in our Natick office. Sessions held from 10:00 to 12:00 a.m. EST.

The dates are: Oct 4, Nov 30, Dec 4,.Jan 11, Mar 8, May 17, Aug 23, Oct 18, Dec 13. Please let us know you are attending in person.

For more information, call Ana Adams, 508-647-1900, email ana@labsafety.org, or register online at www.labsafety.org

Seminar Calendar 2018—2019

Many courses offered are available live as webinars. Please call if you are "remotely interested"(sm) in distance learning options.

Full schedule online:
www.labsafety.org/courses-calendar

One-day Courses
Offered in Natick, MA
(unless otherwise noted)

Biosafety in the Laboratory
Dec 18, Mar 21, June 25, Sep 24

Developing a More Effective Lab Safety Program: Oct 4, Feb 14, Oct 3

How to Be a more Effective CHO
Nov 14, Jan 10, Mar 7, May 16, Aug 22, Oct 17, Dec 12

Lab Waste Management:
Dec 19, Mar 19, Jun 26, Sep 26

Safety in the Laboratory:
Nov 13, Jan 29, Mar 20, May 1, Sep 25, Nov 13

Safety in Secondary School Science Labs: Oct 3, Dec 5, Feb 13, Apr 4, June 12, Jul 17, Aug 14, Oct, 2, Dec 4

Safety is Elementary:
Oct 2, Dec 4, Feb 12, Apr 3, Jun 11, Oct 1, Dec 3

The following five courses are offered on request:

- 8-hr HAZWOPER refresher
- Ergonomics
- Fire safety
- Laboratory ventilation
- Radiation safety
- Regulatory compliance
- Safe labs can be green labs

info@labsafety.org

2018 two-day short courses:

Oct 2-3	Knoxville, TN
Oct 9-10	Edmonton, AB
Oct 9-10	Natick, MA
Oct 16-17	Kansas City, MO
Oct 23-24	Houston, TX
Oct 30-31	Indianapolis, IN
Nov 6-7	Oklahoma City
Nov 13-14	Albuquerque, NM
Nov 19-20	Natick, MA
Nov 27-28	Nashville, TN
Dec 4-5	Sacramento, CA
Dec 11-12	Natick, MA

2019 Two-day Short Courses:

Jan 8-9	Natick, MA
Jan16-17	San Diego, CA
Jan 23-24	Richmond, VA
Feb 6-7	Natick, MA
Feb 20-21	Tempe, AZ
Feb 27-28	Wilmington, DE
Mar 5-6	Natick, MA
Mar 13-14	Calgary, AB
Mar 26-27	Ft. Worth, TX
Apr 10-11	Cincinnati, OH
Apr 16-17	Natick, MA
Apr 24-25	San Jose, CA
May 1-2	Atlanta, GA
May 8-9	Nashville, TN
May 14-15	Natick, MA
May 22-23	St. Paul, MN
Jun 5-6	Seattle, WA
Jun 18-19	Natick, MA

Online Courses

Safety In the Lab Series (2018)

SITL: An Introduction (12 Topics)
SITL: Extended (18 Topics)
SITL: Comprehensive (23 Topics)

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2019 24-Hour Short Course
24-Hour Boot Camp
(Tentative Dates and Locations)

May	IL
May	Canada
Jun	PA
Jun	AL
Jun	NY
Jul	SC
Jul	CA
Aug	TX
Aug	MA

On-Demand Tutorial
Many of LSI's training programs can be provided on-demand at our Natick training center. *You pick the date.*

Bring LSI to your location!
Would like to be a host site for a seminar or short course. For smaller groups, hosting will be more economical.

And, it's not too late to add other locations for 1-day, 2-day, and 24-hour programs.

Contact *Ana Adams* to discuss:
Ana@labsafety.org

Hosting & Sponsoring
If you would like to sponsor or host an LSI seminar or short course, please contact *Mary Thompson* to discuss your needs.
Mary@labsafety.org

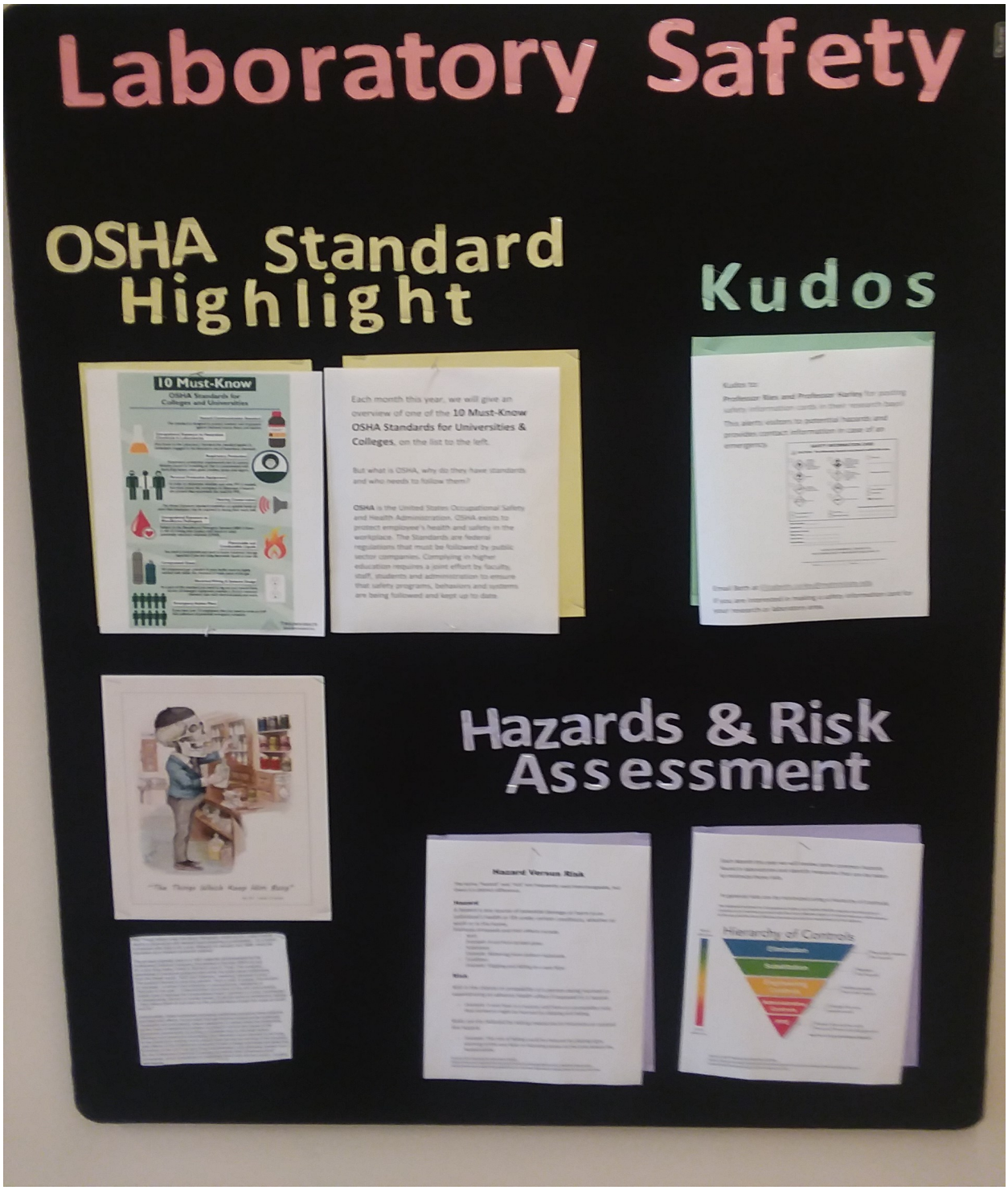
Larger groups and programs that are shared by two or more sponsors are more cost-effective.

To Register or for more info:

The Laboratory Safety Institute
192 Worcester Street
Natick, MA 01760

Phone: (508) 647-1900
Fax: (508) 647-0062
register@LabSafetyInstitute.org

Register online at:
www.LabSafety.org



Elizabeth Curley wrote to share. “I wanted to share one of my completed summer projects - a safety bulletin board. The goal is to rotate new information monthly..” There is a second board with case studies, emergency planning, get involved, the three Cs, and more. What does your lab safety bulletin board look like? … JAK

Get more involved. Increase your support of The Laboratory Safety Institute!

Become a Member…

www.labsafety.org/membership

Membership Benefits	Organizational [$250]	Individual [$75] Student [$25] K-12 Teacher [$25]	[Free]
Subscription to LSIs Newsletter	✓	✓	✓
Mailings of Lab Safety News, Courses & Specials	✓	✓	✓
Free Resource Downloads (Members Only Section)	✓	✓	
Toll-free Members' Lab Safety Hotline	✓	✓	
1 Free Standard Webinar*	✓	✓	
10% Discount on all Publications / Products	✓	✓	
15% Discount on all Courses & Online Courses	✓	✓	
Online Video Rentals & Free Safety Videos (Vimeo)	✓		
5% Discount on Consultation Services	✓		
Free Program Development Review or CHP 10 point check up	✓		
Free Copy of LSI's Publication "Audits and Inspections"	✓		

**Student Membership is for full time students. Copy of ID required.*
**K-12 Teacher Membership requires a copy of teacher's ID.*
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✓Individual 1 Year Membership [$75]
✓Student 1 Year Membership [$25]

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Speaking of Safety

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192 Worcester Street, Natick, MA 01760-2252

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See page 12 for more information