Laboratory Safety

Denver Public Schools
Environmental Services
August 13, 2019

DPS Environmental Services

We are responsible for protecting and improving the environment of Denver Public Schools Buildings….

- Asbestos Management
  - AHERA Plans
    - Annual AHERA Notification [pdf]
  - Abatement
- Hazardous Materials Management
  - Acid Tank Management for Science
  - Blood borne pathogens
  - Science Chemical Management
    - Chemical Management Plan [pdf]
    - Annual Chemical Inventory (HMIS)
    - Disposal
  - MSDS Program (MSDSOnline program)
- Universal Waste Management
  - Lamp/Ballast Recycling (PCBs)
  - Used Oil (motor, cooking) Recycling
  - Battery Recycling
  - Mercury-Containing Equipment
- Indoor Air Quality
  - Complaint Investigation
  - Mold Concerns
  - Radon Testing/Remediation
- Lead-Based Paint Management
  - Current Inspections
  - EPA RRP Regulation
- Water Quality
  - Water Sampling
  - Stormwater Management
    - Stormwater Factsheet
- Vector Control
  - Pigeon Deterrents and Remediation
  - Bat Deterrants
- Underground Storage Tank (UST) Management
- Recycling – CCoD Program

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Class Objectives

From today's short session, participants should be able to:

- Define elements of a safety culture and potential risks
- Understand the Colorado school regulations for labs and pertinent OSHA or other regulatory issues
- Understand and implement routine checks of classroom safety equipment
- Understand how to read and where to find Safety Data Sheets (SDS)
- Recognize and resolve issues with chemical storage and managing hazardous waste

4 Students Hurt, At Least 1 Seriously, In Lab Fire At SMART Academy

September 15, 2014 at 5:20 pm

DENVER (AP/CBS4) – Four students were burned and one suffered serious injuries Monday after a fire erupted in a Denver high school chemistry laboratory while the teacher was conducting a demonstration with methanol, officials said.

METRO

Two high school kids burned in lab accident

By Lorena Mongelli, Natasha Velez and Laura Italiano

"Help me! Help me!" screamed Yanes, who stood only a couple of feet away from the crucibles, according to witnesses. None of the students was wearing goggles.

Yanes dropped to the floor and tried to roll, but precious seconds ticked by until a fire extinguisher and then a blanket were used to extinguish the flames.

THE SCIENCES

Danger in School Labs: Accidents Haunt Experimental Science

Several headline-grabbing accidents have shone light on chronically poor safety records

By Beryl Lieff Benderly on August 1, 2010

The day Sheharbano "Sheri" Sangji, a 23-year-old technician at the University of California, Los Angeles, undertook what would be her last task, she wore a sweatshirt and no lab coat. That late December afternoon in 2008, she started working with a liquid called t-butyl lithium. The chemical requires careful handling, because as a pyrophoric, it catches fire when exposed to air. But equipment malfunctioned, and the fluid spilled, setting the synthetic fibers of her clothing ablaze. Two postdocs ran to help douse the fire engulfing Sangji, but they failed to get her to the nearby shower. Emergency personnel raced to the scene, but they arrived too late. She spent 18 days in a hospital burn unit before she died.

Safety Culture

- Laboratory environment can be a hazardous place
- Safety is everyone's responsibility – students, teachers, supervisors and administrators
- Develop a culture of safety
  - Student safety contract and liability
  - Discussion of general science safety
- Minimizing future hazards

Safety Culture: Law

What's the law?

- A tort is a civil wrong for which the law provides a remedy. Three categories of torts: intentional, negligence, and strict liability
- Negligence –
  - Doctrine of *Res Ipsa Loquitur* is a shortcut to prove negligence. If an injury occurs and the only way it could occur is because someone was negligent, then negligence is automatically granted.
- Governmental immunity can be overturned and courts may hold teachers or school districts liable if they determine that the individual or district has been recklessly negligent.

Safety Culture: Law

- Teacher Liability—Three factors contribute to teacher or school district liability:
  - the actions of the teacher
  - the condition of the school premises
  - and violations of standard regulations or rules by the teacher or school.
- Legally teachers have a duty to:
  - Provide adequate supervision
  - Instruct and warn students
  - Provide a safe learning environment

Safety Culture: Teacher Responsibilities

- Upkeep of Laboratory Equipment: conduct regular inspections, notify Admin of issues
- Recordkeeping: safety training for staff, incidents
- Safety and Emergency Procedures: educate students, provide written and verbal procedures in case of accident, know where shut off valves are
- Maintenance of Chemicals: inventory or know what you have, proper storage, etc.
- Preparing for Lab Activities: weigh risk vs education benefit, discuss safety each time
- Ensure Appropriate Lab Conduct: don't leave students unsupervised, make sure students were PPE, be a good model

From CDC/NIOSH Safety Guide…

Safety Culture: Prevention

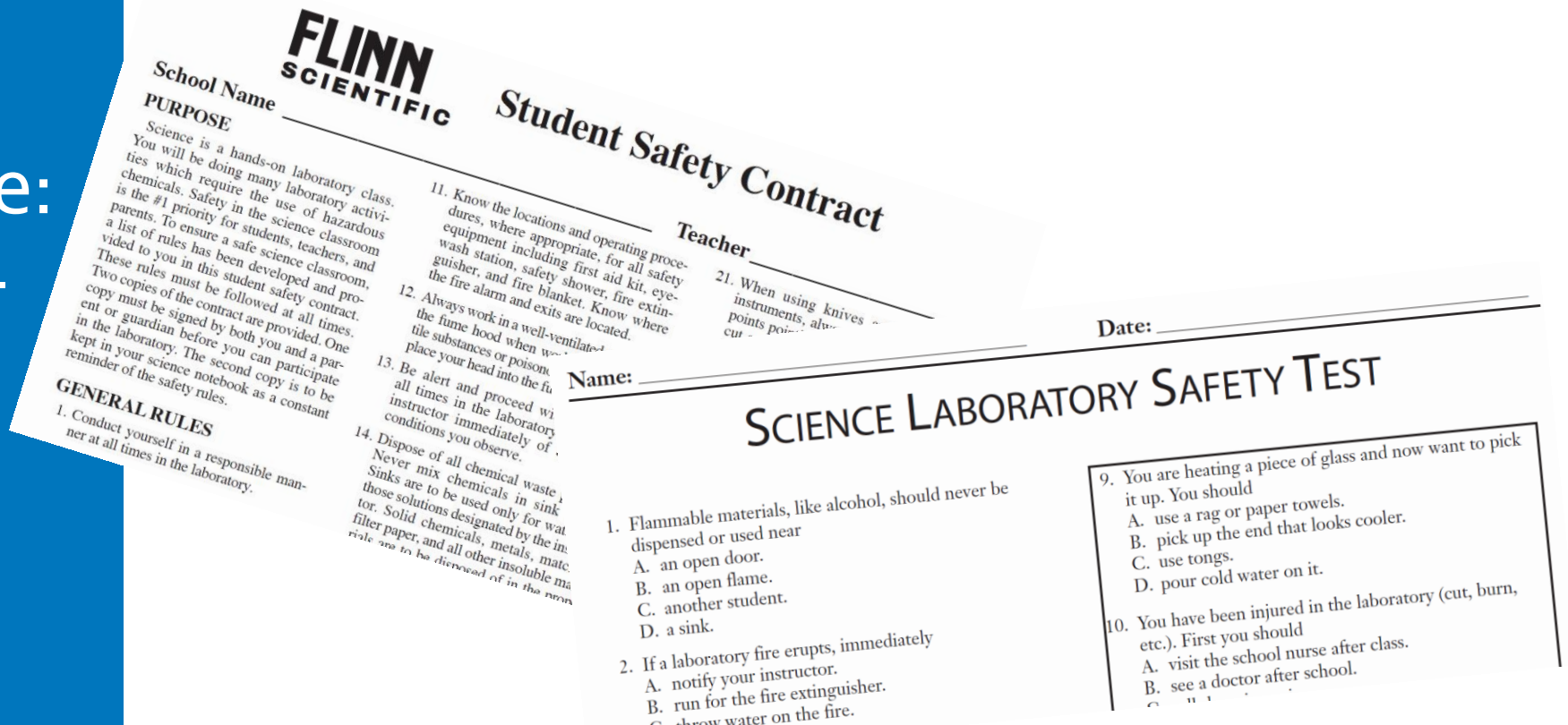
Prevention is less expensive than litigation. It is up to the teacher to do everything possible to prevent science classroom accidents. Best management practices -

- General safety instruction at the beginning of the year is not enough, needs to be done frequently and or at the beginning of each lab
- Lesson plans are important records showing that a teacher has provided adequate safety instruction and warning for students regarding possible laboratory hazards.. Each lab activity is a unique experience with unique rules.
- Safety Contract and Test for each class at beginning of year
- Lab Rules – which should be reviewed frequently, posted in the room or visible

Safety Culture: Prevention - Safety Contract

What is the value of safety rules and safety contracts?

Among other things, safety contracts document that a teacher is operating under the expected duty of care



FLINN SCIENTIFIC

Student Safety Contract

School Name _____ Teacher _____

PURPOSE

Science is a hands-on laboratory class. You will be doing many laboratory activities which require the use of hazardous chemicals. Safety in the science classroom is the #1 priority for students, teachers, and parents. To ensure a safe science classroom, a list of rules has been developed and provided to you in this student safety contract. These rules must be followed at all times. Two copies of the contract are provided. One copy must be signed by both you and a parent or guardian before you can participate in the laboratory. The second copy is to be kept in your science notebook as a constant reminder of the safety rules.

GENERAL RULES

1. Conduct yourself in a responsible manner at all times in the laboratory.

11. Know the locations and operating procedures, where appropriate, for all safety equipment including first aid kit, eyewash station, safety shower, fire extinguisher, and fire blanket. Know where the fire alarm and exits are located.
12. Always work in a well-ventilated
the fume hood when
tile substances or poison
place your head into the fu
13. Be alert and proceed wi
all times in the laboratory
instructor immediately of
conditions you observe.
14. Dispose of all chemical waste
Never mix chemicals in sink
Sinks are to be used only for wat
those solutions designated by the in
tor. Solid chemicals, metals, matc
filter paper, and all other insoluble ma
rials are to be disposed of in the prop

21. When using knives
instruments, alw
points poi
cut

Name: _____ Date: _____

SCIENCE LABORATORY SAFETY TEST

1. Flammable materials, like alcohol, should never be dispensed or used near
   A. an open door.
   B. an open flame.
   C. another student.
   D. a sink.

2. If a laboratory fire erupts, immediately
   A. notify your instructor.
   B. run for the fire extinguisher.
   C. throw water on the fire.
   D. open the windows.

9. You are heating a piece of glass and now want to pick it up. You should
   A. use a rag or paper towels.
   B. pick up the end that looks cooler.
   C. use tongs.
   D. pour cold water on it.

10. You have been injured in the laboratory (cut, burn, etc.). First you should
   A. visit the school nurse after class.
   B. see a doctor after school.

https://www.flinnsci.com/resources/safety-reference/safety-contracts--exams/

Rules & Regulations: CDPHE

- **Colorado Department of Public Health and Environment (CDPHE)**
  - *Rules and Regulations Governing Schools in the State of Colorado (6 CCR 1010-6)*

    https://www.colorado.gov/pacific/cdphe/colorado-health-safety-regulations-schools

    - **Safety equipment:**
      - Protective clothing, eye protection, safety eye wash/shower stations, etc.
    - **Ventilation:**
      - Exhaust ventilation, fume hoods, etc.
    - **Chemical storage provision:**
      - Inventories of chemical, chemical storage cabinets, lab-graded containers, organization of the materials, etc.

Safety Equipment

- **Safety equipment required by CDPHE includes:**
  - Eye protection (ANSI Z87.1-2010)
    - Goggles and way to sanitize (UV cabinet)
  - Fire blankets & extinguishers
  - Hazardous placards
  - Hand washing facility
  - Eye wash and safety shower stations
    - Within 7 seconds?
  - Proper ventilation
    - Fume hood
  - Master gas control valve (MGCV)
  - First aid kits
  - Protective clothing (ANSI N49.1-2014)
  - Acid traps

- Classroom assessment

Safety Inspections

Safety Eye Wash/Shower Station:

- First-aid equipment
  - Prevention: PPE
- Documentation of annual testing
- Weekly flush of eye and face stations
  - Clear of potential debris or bacteria
- Provide continuous flow upon activation
- Signage clearly mark station
- Easily accessible and free of obstructions
  - Within 55 ft. from storage or use of corrosive or irritating chemicals
  - Reached within 10 secs or less
- Cover are present to protect the nozzle from contaminates/dust

Safety Inspections

Fume Hoods:

- Protects users by containing and exhausting airborne hazards
- Provide shielding in the event of an explosion or fire inside the hood
- Documentation of annual testing
- A face velocity of at least 100 fpm is achieved by the fume hood
- Tissue paper test
- **Items are not to be stored in the laboratory fume hood**
- **Use when working with chemicals with significant inhalation hazards, high pressure, fire hazards or offensive odor**

DO NOT STORE CHEMICALS INSIDE YOUR FUME HOOD

Storing chemicals inside your hood blocks the baffles, which affects the aerodynamic movement of the air towards the cabinet. Simply, you are compromising your SAFETY.

a safety reminder from: ESCO. WORLD CLASS. WORLDWIDE.

Rules & Regulations: CDPHE

List of **prohibited, restricted and demonstration use only chemicals** (Appendix A)

- https://www.colorado.gov/pacific/cdphe/colorado-health-safety-regulations-schools
- Web page has an alphabetical Excel spreadsheet that can be sorted

In addition to this document, please refer to the Rules and Regulations Governing Schools in the State of Colorado, 6 CCR 1010-6, available at https://www.colorado.gov/pacific/cdphe/colorado-health-safety-regulations-schools.

NAME	CHEMICAL CLASS	FORMULA	CAS #	Hazard	Shelf Life	Limited Shelf Life - Table 2 Require
1-Naphthol (alpha Naphthol)	Restricted	C10H7OH	90-15-3	toxic	Indefinite	NO
2,2,4-Trimethylpentane	Restricted	C8H18	540-84-1	highly flammable; toxic	Limited; refer to expiration date on label	YES

Rules & Regulations: OSHA Hazcom Standard

- The Hazard Communication Standard aka Right to Know
- 2012 OSHA revised the Hazcom Standard to Global Harmonizing System
  - This was to make labels and Safety Data Sheets, easier to understand create consistency – by 2015 SDS and labels needed to be in new GHS format
  - The largest benefit, a completely standardized template of what and how information is listed on the SDS with the addition of universal/global pictograms

Hazcom Std: GHS/SDS

- Global Harmonizing System –
  - 16 Physical Hazard Categories
  - 10 Health Hazard Categories
- Four main communication tools with GHS -
  - Pictograms – graphics or symbols, 8 different ones
  - Signal words – quickly ID hazards
  - Hazard statements – 82 developed
  - Precautionary statements- more than 300 standard statements

GHS Pictograms

GHS01 Explosive

GHS04 Compressed Gas

GHS07 Harmful

GHS02 Flammable

GHS05 Corrosive

GHS08 Health Hazard

GHS03 Oxidizing

GHS06 Toxic

GHS09 Environmental Hazard

GHS Labels

Labels must have:

- Pictograms – remember the 8
- Signal words: Danger or Warning
- Specific hazard info and precautionary statements –

DANGER! Flammable liquid and vapor. May be harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Avoid breathing fumes. Toxic if inhaled. Use only in a fume hood. TLV: 10 mg/m^3. Orl-rat LD_{50}: 3310 mg/kg.

FIRST AID: External: Flush affected area with water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Internal: Immediately call a POISON CENTER or physician.

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FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

A0177 100 mL

ACETIC ACID

glacial, ACS reagent, 17.4 M, assay 99.7%, CH_3CO_2H, F.W. 60.05

★ ***HAZARD ALERT:*** Corrosive to skin and tissue; moderate fire risk (flash point 103 °F); moderately toxic by ingestion, inhalation, and skin absorption. Avoid all body contact. Wear protective gloves, protective clothing, eye and face protection. Avoid contact with oxidizing agents.

CORROSIVE TO BODY TISSUE

LOT:

STORAGE: Organic #1 inside a dedicated acid cabinet. Store away from nitric acid. If acid cabinet is not available store in a Flinn *Saf-Cube*.

ORGANIC #1

DISPOSAL: #24a

SHELF LIFE: Good if stored properly.

SOLUBLE: Miscible with water, alcohol, glycerine and ether.

CAS NO: 64-19-7

UN2789

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H 3 2 0 R
NFPA

Safety Data Sheet (SDS)

- The Safety Data Sheet (SDS) was formerly known as the Material Safety Data Sheet (MSDS).
- Safety information about hazardous substance and toxic chemicals are available from their supplier or manufacture
- A current copy of the data sheet must be provided and available for review for all hazardous substance and toxic chemicals. It should reflect the current inventory and should be on file in case of an emergency or if the Fire Department inspects school and asks for it.
- DPS subscribes to an online service for SDS – this can eliminate need for hard copies, but needs to be readily available.

Safety Data Sheets (SDS)

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 61.00
Revision Date: July 6, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ammonium Nitrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300 **Signal Word** **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 3). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin corrosion or irritation (Category 2). Causes skin irritation (H315).

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ammonium nitrate	6484-52-2	NH_4NO_3	80.04	
Synonym: Nitric acid, ammonium salt				

SECTION 4 — FIRST AID MEASURES

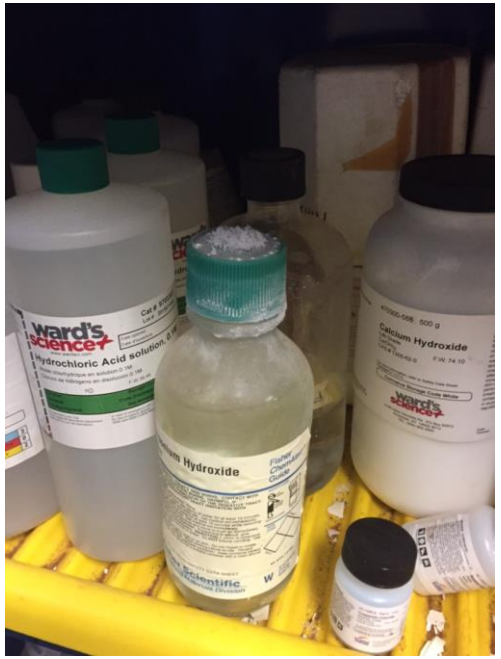
Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351 +P338).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

MSDSOnline quick review - http://hq.msdsonline.com/dps3628

Storage of Chemicals

- All chemicals will be stored in designated room(s) with restricted access
- Store chemicals according to compatibility groups NOT alphabetically
  - Store chemicals on designated shelves or appropriate chemical cabinets (e.g. flammable, corrosives, etc.)
- Store materials at least 4" away from the edge of the shelf
- Do not store chemicals above eye level and on the floor
- Label all containers with chemical name, manufacture name, **date received**, and first use
- Designate areas for properly label working solutions and hazardous waste

What do you see in the photos?



What do you see in the photos?

Suggested Storage Compatibility

ORGANIC #2
ALCOHOLS, GLYCOLS, AMINES, IMINES, INIDES
(Store flammable solids in flammables cabinet)

ORGANIC #3
HYDROCARBONS, ESTERS, ALDEHYDES
(Store flammable solids in flammables cabinet)

ORGANIC #4
ETHERS, KETONES, KETENES, HALOGENATED HYDROCARBONS, ETHYLENE OXIDE
(Store flammable solids in flammables cabinet)

ORGANIC #5
EPOXY COMPOUNDS, ISOCYANATES

ORGANIC #7
SULFIDES, POLYSULFIDES, ETC.

ORGANIC #8
PHENOL, CRESOLS

ORGANIC #6
PEROXIDES, AZIDES, HYDROPEROXIDES
(Store flammable solids in flammables cabinet)

ORGANIC #1
ACIDS, ANHYDRIDES, PERACIDS
(Store certain organic acids in acid cabinet)

MISCELLANEOUS

MISCELLANEOUS

STORE SEVERE POISONS IN POSIONS CABINET

POISON

ORGANIC #2
ALCOHOLS,GLYCOLS, ETC.
ORGANIC #3
HYDROCARBONS, ESTERS, ETC.
ORGANIC #4
ETHERS, KETONES, ETC.

STORE FLAMMABLES IN A DEDICATED CABINET

FLAMMABLES.

INORGANIC #10
SULFUR, PHOSPHORUS, ARSENIC
PHOSPHORUS PENTOXIDE

INORGANIC #2
HALIDES, SUFATES, SULFITES, THIOSULFATES, PHOSPHATES, HALOGENS, ACETATES

INORGANIC #3
AMIDES, NITRATES (NOT AMMONIUM NITRATE) NITRITES, AZIDES
(Store Ammonium Nitrate away from all other substances –*ISOLATE IT*!)

INORGANIC #1
METALS & HYDRIDES
(Store away from any water)
(Store flammable solids in flammables cabinet)

INORGANIC #4
HYDROXIDES, OXIDES, SILICATES, CARBONATES, CARBON

INORGANIC #7
ARESENATES, CYANIDES, CYANALES
(STORE AWAY FROM ANY WATER)

INORGANIC #5
SULFIDES, SELENIDES, PHOSPHIDES, CARBIDES, NITRIDES

INORGANIC #8
BORATES, CHROMATES, MANGANATES, PERMAGANATES

INORGANIC #6
CHLORATES, PERCHLORATES, CHLORITES, PERCHLORIC ACID, PEROXIDES, HYPOCHLORITES, HYDROGEN PEROXIDE

MISCELLANEOUS

INORGANIC #9
ACIDS, except NITRIC

(Acids are best stored in dedicated cabinets)

ACIDS

Store Nitric Acid away from other acids unless your acid cabinet provides a separate compartment for Nitric Acid.

Suggested Storage Compatibility

Inorganic Reactives & Metals (I-1, I-10) Sulfur, Phosphorus (double packaged), Arsenic, Solid Metals, Hydrides, Lithium, Sodium	**Organic Toxins (O-5, O-7)** Epoxy Compounds, Isocyanates, Sulfides, Polysulfides
Inorganic Salts (I-2) Chlorides, Iodides, Fluorides, Bromides, Sulfates, Sulfites Thiosulfates, Phosphates.	**Organic Reactives #6** Peroxides, Azides, Hydroperoxides
Inorganic Oxidizers (I-3, I-6, I-8) Nitrates, Nitrites, Borates, Chromates, Manganates, Permanganates, Chlorates, Chlorites, Peroxides, Azides,	**Flammable Storage Cabinet (O-2, O-3, O-4, O-8 & concentrated organic bases)** Alcohols, Glycols, Phenol, Hydrocarbons, Cresols, Esters, Ethers, Propionic Acid, Formic Acid, Glacial Acetic Acid, Lactic Acid
Inorganic Corrosive Bases (O-4) (Dry Chemicals) Dry Hydroxides, Oxides, Silicates, Carbonates, Carbon	**Dry and Dilute Organic Acids & Anhydrides (O-1)** Citric Acid, Anhydrides, Peracids, etc.
Inorganic #5 and #7 Toxins Arsenates, Cyanides, Sulfides, Selenides, Phosphides, Carbides, Nitrides	**Miscellaneous** Household chemicals (vinegar, baking soda, vegetable oils), Dyes, Stains, Agars, Sugars, Gels
Corrosive Base Storage Cabinet (I-4 Liquids) >1.0 molar Ammonium Hydroxide, Sodium Hyroxide, Calcium Hydroxide (limewater), Potassium Hydroxide, Oxides, Silicates	**Non-metal Corrosive Acid Storage Cabinet (I-9 Liquids)** Hydrochloric Acid, Sulfuric Acid, Hydrobromic Acid, Phosphoric Acid, Perchlorid Acid. Nitric acid separately stored in this or another cabinet. Limit Nitric Acid to a 5 year supply.
Dilute solutions at or below 1.0 molar can be stored on shelves rather than in cabinets. Segregate inorganic and organic compounds. Check containers annually for condition of containers, labels and contents. Replace degraded lids, dropper tops and solutions.	*To prevent release of corrosive vapors, avoid storing pipettes holding acids or bases in test tubes taped to the side of bottles. Wrap fritted glass stoppers on acid bottles in parafilm to reduce evaporation. Store Iodine crystals in a sealed plastic bag to monitor degradation of the container's cap and reduce indoor air pollution.*

Incompatible Chemicals:

- Acetic acid ≠ incompatible with nitric acid, peroxides, permanganates
- Hydrogen peroxide ≠ combustible materials, flammable liquid
- Iodine ≠ ammonia
- Oxygen ≠ flammable materials, hydrogens, oils
- Sulfuric acid ≠ chlorates, perchlorates

Game Time!

General Shelve:

Flammable Cabinet:

Corrosive Cabinet:

Hazardous Waste:

Hazardous Waste

- Not all all chemical waste are hazardous waste
- **Hazardous waste:**
  - Any chemicals classified as prohibited by CDPHE
  - Heavy metal compounds: barium, cadmium, chromium, lead, mercury, etc.
- **Non-hazardous waste:**
  - Household items: food products, sugar, starches, vegetable oil
  - Animal fats, enzymes, and protein
- All hazardous chemical waste must be stored by compatibly in a designated space within the chemical storage area in appropriate containers awaiting disposal.

NOTE: Organic material/liquids should NEVER go into a drain connected to an acid trap

Chemical Spill Response

- Chemical spill response kit/center
  - 3 empty 5-gallon pails
  - 50-lb kitty litter or oil dry (absorption)
  - Dry, clean sand (reactive, contains and controls)
  - Sodium carbonate (aka soda ash) (acid spills, neutralizes)
  - Saran wrap
  - Plastic broom and dustpan
  - Heavy duty trash bags
  - X-Large rubberbands
    - https://www.youtube.com/watch?v=ZiLbImUYk3I watch create kit
- Reference DPS Emergency Management Plan or Classroom Emergency and Safety plan and other emergency
- Evacuate and contact the appropriate officials before clean up
  - **Call** DPS Safety and Security Fire Department
  - Contact DPS Environmental Services
- Appropriate training is needed to respond to chemical spills, but if you can contain or take some measures that helps a lot

DPS Chemical Management Plan

- ***Laboratory Hazardous Materials & Chemical Management Plan***
- Establish and enacts policies and procedures to minimize hazards in laboratories
  - Chemical management and training
  - **Purchasing procedures**
  - Chemical storage & safety equipment
  - Chemical waste disposal & alternative lab
  - Chemical spill response/accidents

Other Science Resources

- **Flinn Scientific (flinnsci.com):**
  - http://labsafety.flinnsci.com over 180 safety videos
  - safety contracts for students middle and high school
- **OSHA Laboratory Standard Compliance Training (osha.gov):**
    - https://www.youtube.com/watch?v=EcP4I402ziY
- **ACS (American Chemical Society – acs.org):**
  - acs.org/content/acs/en/chemical-safety/responsibilities-of-chemistry-professionals-and-their-organizati.html
  - acs.org/content/dam/acsorg/about/governance/committees/chemicalsafety/publications/chemical-safety-manual-teachers.pdf
- **NFPA (National Fire Protection Agency - nfpa.org):**
  - nfpa.org/News-and-Research/Publications/NFPA-Journal/2015/September-October-2015/Features/Unsafe-Science
  - Safety checklist and other info
- **CDC (cdc.gov/niosh)**
  - School Chemistry Laboratory Safety Guide
- **NIH (National Institutes of Health - nih.gov)**
  - Enviro health links – laboratory safety
- **NSTA (National Science Teachers Association – nsta.org)**
  - safe handling of Alcohol in the laboratory

Final Notes… Questions?

- Exit slip for Env. Services –
  - Joni_Rix@dpsk12.org; 3-1903
  - Anna_Insy@dpsk12.org; 3-1872
- Teal Day survey for Doug … https://tinyurl.com/TEALDAY1819

Thank you for attending!