

Health & Safety Fact Sheet

K-12 Science Checklist



Check your responses to items that apply to your area(s). "NA" means that the question is not applicable.

Your Name _____
 School Inspected _____

Inspection Date _____
 Name of Local _____

SECONDARY SCHOOL SCIENCE *(Elementary Science see page 4)*

Chemical Hygiene Plan (CHP)

	Y	N	NA
1. Is there a (CHP) developed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The CHP includes standard operating procedures, criteria to reduce employee and student exposure, use of personal protective equipment, hygiene practices and medical monitoring.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is there a designated Chemical Hygiene Officer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Chemical Hygiene Plan is followed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. CHP is annually reviewed and evaluated and updated as necessary.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The CHP is readily available to all employees and they are familiar with its contents and location.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Material Safety Data Sheets (MSDS) provided for chemicals and are readily available.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. There is a Chemical Hygiene Committee representing all science departments, security and buildings and grounds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Procedures for assisting disabled and dealing with disturbed, upset, or violent students are specified in CHP.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Training

1. All employees who come in contact with lab equipment have training on hazards of chemicals in their areas (incl. signs & symptoms of exposure.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Employees trained on operating procedures for working with chemicals (incl. disposal and disinfecting).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Employees trained in emergency operating procedures (spills, fire).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Instructors trained in location and use of	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Emergency Equipment and Fire Safety

	Y	N	NA
1. The following emergency equipment is provided and location is posted: <ul style="list-style-type: none"> ▪ Eyewash ▪ Emergency shower ▪ Fire blanket ▪ ABC fire extinguisher ▪ Spill kits for mercury, acids and bases ▪ Fully stocked first aid kit ▪ Class D fire extinguisher if active metals are present 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Equipment is in good condition/operable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Emergency telephone numbers posted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Eyewashes provide 15 min. of tempered, potable water.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Eyewashes and showers tested every 3-6 months.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Fire extinguishers fully charged and visually checked every month.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Access to emergency equipment clear and unobstructed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Ground fault circuit interrupters (GFCI) on electrical outlets or circuits located within 6 ft of water sources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Emergency electric, gas & water shut off switches provided in rooms with 3 or more gas or electrical outlets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Personal Protective Equipment (PPE)

1. PPE appropriate for substances used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Chemically resistant gloves and goggles provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Lab coats or acid-resistant aprons provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Y	N	NA		Y	N	NA
4. Face shields available if needed (i.e. pouring or transferring chemicals).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Flammable storage cabinets or rooms available and used for storage at other than the point of use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. PPE is cleaned/disinfected after each use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. Hazardous materials limited to small quantities- no more than one year's supply.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. PPE available for working with radioactive materials.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. Shelves in good condition with lip ledges to prevent sliding.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Housekeeping/Work Practices</u>				7. Cabinets/storerooms secured with locks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. Safety instructions given before starting experiments/demonstrations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. Shelving is secured to walls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. No food/beverage rules followed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. Chemical containers covered.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Counter and floors kept clean and uncluttered.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. Storage of water reactive chemicals marked with warning signs – “In Case of Fire DO NOT USE WATER” .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Required PPE is worn.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11. Refrigerators for storing flammable or combustible chemicals explosion-proofed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Tools and equipment in good condition and not subject to damage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12. Explosives/Explosive Peroxide forming chemicals not used in Secondary schools (i.e. ethylether, picric acid, and perchlorates).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Procedures developed and followed for disinfecting equipment and PPE.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Chemical Storage Areas</u>			
7. Instructors notified of individual student health concerns.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Storage areas have minimum of 4-6 air exchanges per hour.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Razors, scalpels and other sharps kept in locked cabinet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Air exchange monitoring instruments checked on a regular schedule.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Glassware free from cracks, chips, and other defects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Flammable Storage Cabinets</u>			
0. Pipetting done mechanically (e.g. bulb attachment).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Flammable storage cabinets are properly labeled (“Flammable Storage Cabinet); NFPA approved and can be locked.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. Excess reagent solutions not reused.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. No storage on top of cabinets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Electrical cords in good condition and not subject to damage (in path of equipment/foot traffic).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Gas Cylinders</u>			
3. Extension cords only for temporary use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Valve caps are on cylinders when not in use for more than 10 days.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Guidelines for appropriate personal appearance posted (i.e. no long loose hair/beads, open shoes/sandals).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Cylinders are stored securely to prevent falling over.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CHEMICAL USE				3. Cylinders are properly labeled.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Chemical Labeling and Storage</u>				<u>Acid Cabinets</u>			
1. Chemical inventory done annually by trained personnel and available to staff.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Volume stored in cabinet is maximum two-year supply. (More than a two-year supply, cabinet is vented to the outside through proper acid trap and serviced regularly.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Chemicals labeled properly indicating contents, hazards, emergency first aid measures and date of receipt or preparation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
3. Chemicals stored properly by reactive class (acids separated from bases, oxidizers from flammables, etc...).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

<u>Local Exhaust Ventilation</u>	Y	N	NA	<u>Disinfecting Procedures</u>	Y	N	NA
1. Fume Hoods used for all experiments using toxic or volatile chemicals and flame tests as specified in the CHP standard operating procedures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Lab surfaces cleaned, disinfected or decontaminated after work performed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Fume hoods located away from doorways, high traffic area windows and other structures that could create hood airflow disruptions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Spill paper used to minimize surface contamination.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Fume face velocity is 80 –100 feet per minute at the designated sash height.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Disposal of Hazardous Waste</u>			
4. Hood fan located outside of the building.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. List of materials allowed/not allowed to be disposed of in sinks is available, known to employees and posted near sinks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Ventilation exhaust located away from building air intakes and project at least 7 ft above the roofline.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Chemicals are disposed of based on label shelf life or within 5 years if no shelf life listed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Velocity indicator / alarm installed in hood (desired but not required).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Proper disposal procedures are posted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Fume hoods not used to store chemicals or equipment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Waste is properly containerized, segregated and labeled.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Equipment located at least 6 inches behind sash opening.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. Sharps containers for scalpels and razors are provided and used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Safe operation position of sash clearly marked on side of hood.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. Accumulated waste is disposed of after each semester (minimum).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Demonstrations first practiced without students present.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. Hazardous waste is disposed of according to local, state and federal regulations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Demonstrations involving sudden release of energy: sash is completely closed, all cracks covered.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. Biological and radioactive waste is properly marked and containerized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Before Using: Visual inspection conducted to insure slots are not blocked hood provides required face velocity; sash not cracked and slides freely; no obvious defects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. Waste material containers not accumulated on floors, corners or under shelves and tables.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Fume hoods tested quarterly and up to date inspection stickers are on side of hood.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. Dissected biological specimens disposed of according to CHP.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Ductless hoods (same as above <i>and</i>):				<u>Transporting Chemicals</u>			
- Turned off when not in use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Carts have raised edges or guardrails to prevent chemicals from falling during transport.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Used only with low-hazard chemicals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Student transport of chemicals <u>not</u> allowed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Access to hood and chemicals used are carefully controlled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
- Have schedule for regular filter replacement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
15. All unattended reagent and solvent containers are capped.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

OTHER SCIENCE AREAS	Y	N	NA
<u>Physics/Physical Sciences</u>			
1. Lasers regularly checked, as per CHP, to ensure they are in good working order.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Laser, high intensity or high-energy light sources in use marked on doors and inside.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Specially designed containers & safety shield are used in radiation experiments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Biology</u>			
1. Latex or other appropriate gloves provided for dissections (non-latex if allergic).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Preserved specimens rinsed to remove excess preservatives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Formaldehyde not used to preserve organisms, or use of formaldehyde is being phased out.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Proper clothing worn when collecting specimens to avoid hazards such as water, scratches and tick bites.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Only non-pathogenic species cultured for use in K-12 schools.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Universal precautions are used for contact with human body fluids.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Human body fluids used for instruction are treated as medical waste.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Goggles used for dissection procedures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Contact lenses not used during dissections.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Mold experiments/activities conducted in sealed containers or re-sealable bags.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Hand washing mandatory after handling plants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Earth Science</u>			
1. Rockets do not contain combustible chemicals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Flame tests performed in fume hoods.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Y	N	NA
3. Mineral tests using acid performed in well-ventilated areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Diatomaceous earth (contains silica) handled to minimize dust/avoid inhalation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. No experiments use powerful oxidizers (i.e. ammonium dichromate).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Mercury barometer not handled by students in K-12 schools.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Pets/Animals</u>			
1. Potentially dangerous animals (poisonous, aggressive) not allowed in classrooms. SED rules followed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Animal cages kept clean.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Hand washing is mandatory before & after touching animals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Handling of animals is minimal. Students handle animals only with adult supervision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Animal waste disposed as per CHP.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Students not allowed to bring animals in or out without prior permission of instructor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ELEMENTARY SCHOOL SCIENCE

<u>General</u>			
1. Student workstations are adequately lit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. There is reinforcement for student glove use (non-latex).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. No activities conducted that pose impact or irritant hazard to eyes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Non-glass beakers, cylinders & other containers are used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Students engaged in science activities are under adult supervision at all times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Propane burners & alcohol lamps not used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>