

Hunter College High School Chemical Hygiene Plan

Purpose

The HCHS Chemical Hygiene Plan information provides required site-specific chemical safety procedures for Hunter College High School. It was prepared in partnership with the Office of Environmental Health and Safety at Hunter College, the Deputy Director for HCHS facilities, and the HCHS Science Department Chairperson. Additional requirements for working with chemicals at Hunter College High School (HCHS) are identified using words such as “must” and “required.” Non-mandatory guidelines are also included using words such as “should” and “recommended”. Please reference Hunter College’s Chemical Hygiene Plan for more details available on the Hunter College Environmental Health and Safety website (<http://www.hunter.cuny.edu/ehs>) The HCHS Chemical Hygiene Plan does not replace or supersede any rules or procedures of the latest version of the CUNY Laboratory Safety Manual. Additional information may be found in that document, which is available through the CUNY Office of Environmental, Health, Safety and Risk Management (<http://www.cuny.edu/about/administration/offices/ehsrm.html>). All science teachers and lab technicians are responsible for implementing this Chemical Hygiene Plan.

Contact List

Chemical Hygiene Officer and Biological Safety Officer	Philip Jeffery Science Department Chairperson	(212) 860-1279
Associate Chemical Hygiene Officer	Currently Vacant College Laboratory Technician for Chemistry	(212) 860-1285
Associate Biological Safety Officer	Asumana Randolph College Laboratory Technician for Biology	(212) 860-1286
Public Safety	Front Desk	(212) 860-1264
School Nurse	Kenda Ward	(212) 860-1298
HCHS Main Office	Sandi Edmunds	(212) 860-1267
Environmental Health and Safety Officer	Sonya Mosco Deputy Director of the Campus Schools	(646) 963-6345
Environmental Health and Safety Director	Ricardo Franco Director EH&S for Hunter College	(212) 772-4462

Responsibilities

All adults working in science labs and classrooms are responsible for their own safety and the safety of the students.

- Only science teachers may supervise science labs in rooms 307, 311, 407, and 411.
- Science teachers must ensure that students working in the lab under their supervision are familiar with general safety procedures as well as specific hazards of the experiment being performed.
- The teacher must ensure that students are wearing the required eyewear protection during lab experiments and clean-up. Students without eye protection or proper clothing may not be in the lab while the experiment or clean-up is underway.
- The teacher is responsible to check that students are wearing proper clothing and footwear, including the use of aprons and hair ties. Students may be sent out of the lab to obtain the proper protection or they may sit in the hallway outside the lab until the experiment and clean-up have concluded.
- The supervising teacher must ensure that laboratories are maintained in a clean and orderly manner, with debris removed from sinks after each class meeting. Hazards should be reported immediately to the department chair and other adults in the area.
- Doors to lab rooms should be closed during lab experiments and clean-up. Teachers are expected to circulate and monitor student behavior in the lab and be aware of any students who enter or leave the lab.
- Students may not enter Rooms 307 or 311 unless the supervising science teacher is present. At the end of class, the teacher must be the last to leave the laboratory and ensure that all doors are locked. Any adult that unlocks a laboratory is responsible for locking it again.
- Students may not enter the Prep Rooms 309 or 409 unless they are advanced students or teaching interns and supervised by a science teacher or lab technician. Student work in laboratories is restricted by grade level as follows:

<i>Lab Room</i>	<i>Minimum Grade Level</i>
411	7th grade Science or 9th grade Biology
311	8th grade Physical Science
407	9th grade Biology
307	10th grade or Advanced Chemistry
309	Advanced Chemistry or Teaching Intern
409	Research student or Teaching Intern
344	Research student or Teaching Intern

Communication

Weekly meetings of the chemistry teachers and lab technician must be held during the school year for the purpose of discussing upcoming lab experiments in 8th grade, 10th grade and AP Chemistry classes.

A written list of chemicals needed, their amounts, and other materials needed for these labs will be provided to the lab technician and kept in the Prep Room (309) for reference. The following should also be discussed:

- How the chemicals will be dispensed and, for instructional “unknowns”, how each will be labeled.
- A written answer key for instructional “unknowns.”
- The day and time when each of these courses will make the transition to the next experiment.
- Chemical demonstrations planned by the department for each of these courses.
- Potential safety hazards for each experiment or demonstration.
- Whether unused chemicals will be discarded, stored, or used for the following week’s labs.

Chemical Labeling

The following site-specific guidelines reinforce and clarify the information in the CUNY Lab Safety Manual.

- All chemical containers must be labeled correctly and closed when not in use. The label must accurately indicate the name of the chemical or solution in the container.
- Instructional “unknowns” must be labeled as specifically as possible and accompanied by a printed answer key at all times. The word “unknown” should be followed by a chemical identifier (e.g. “UNKNOWN ACID”, “UNKNOWN SALT,” or “UNKNOWN ORGANIC”) and with a letter or number that is identified on the accompanying key.
- For instructional “unknowns”, common hazards must be included on the label (e.g. “corrosive”, “toxic,” or “flammable”). For other chemicals, it is recommended that associated hazards and the solution concentrations be included on all labels.
- When the original containers are used, they must contain the original chemical. If not, they must be relabeled. Handwriting on the cap or manufacturer’s label is insufficient; a new printed label must be applied instead.
- Food items used in labs (e.g. sugar, soda, vinegar) should be clearly labeled with the words “NOT FOR CONSUMPTION.”
- Empty containers may be washed and reused for compatible chemicals. If reused, they must be relabeled.
- The proper orange labels must be filled out and applied to containers of hazardous wastes.

Preparation

Each adult is responsible for donning protective gear and using safe procedures when working with chemicals.

- Each week, up to three different sets of laboratory chemicals are needed for 8th grade, 10th grade, and AP Chemistry courses.
- The day of the week when each course makes the transition to the next experiment will be discussed during weekly meetings of the chemistry faculty.
- Class sets of chemicals should be prepared in Room 344 the week before they are needed and no more than one month in advance.
- These chemicals should be safely transported to the Room 309 at least one day before they are needed and transferred from the cart to the center table in 309.
- When the transition occurs, the new chemicals are transferred to the dispensing areas designated in Rooms 307 or 311.
- When the transition occurs, the old chemicals and containers are transferred to the cart designated for transport back to Room 344.
- Old chemicals are transported back to Room 344. These should be returned to their designated storage area the same day.

Storage

In most cases, chemicals must be stored in the chemical room accessed from Room 344 following the safety guidelines outlined in the CUNY Lab Safety Manual.

- Chemical storage and disposal should be kept to a minimum. This requires planning and communication among all those who work with chemicals.
- Only those chemicals being used for current experiments may be stored in Rooms 307 and 311. These chemicals should be placed in the designated dispensing areas.
- Storage in the fume hood in Room 307 is limited only to experiments currently being conducted and that require the use of the fume hood. No other materials may be stored in the fume hood.
- Only those chemicals for the next week's labs may be stored in Room 309. Such chemicals should be on the center table or countertop.
- Chemicals in rooms 307, 309, and 311 should be stored only on tables with resistant surfaces. Chemicals should not be stored on carts, wooden shelves, bare floors, or AC units.
- Any room where chemical containers are located must be locked when unattended.

Transport

Any adult that takes a chemical out of its designated storage area is responsible for its safe transport. This adult would be a science teacher, lab technician, or trained professional designated by the Hunter College Office of Health & Safety.

- All chemical containers must be tightly capped whenever they are being transported.
- Chemicals transported by hand must be carried in a secondary container such as a plastic bucket or bin.
- Wheeled carts with a high lip (i.e. the large Rubbermaid cart) should be used whenever possible.
- Chemicals should never be transported during student passing between periods or other busy times.
- Instructional “unknowns” must be accompanied by an answer key at all times.
- Transport in the elevator should be restricted to low-use times. The responsible adult must alert other passengers to any hazards before they enter the elevator.

Spills

The adult supervising the use or transport of chemicals is responsible for initiating spill containment procedures and communicating with other adults who arrive at the scene

- Communicate that a spill has occurred and the nature of the chemical spill. Restrict access to the area by directing students away from the spill and initiate first aid procedures, if needed.
- Secure the help of other adults if needed. Do not leave the scene until another responsible adult is ready to take over.
- Use absorbent material or neutralizing solutions, as appropriate, to minimize the hazard while cleaning up the spill.
- Alert public safety and school administration (Room 240) for any spill or other hazard involving a hallway or stairs.

Chemical Demonstrations

The use of safe chemical demonstrations is encouraged for high quality instruction. These must be planned in advance during weekly meetings of the chemistry teachers and chemistry lab technician.

- Demonstrations involving flame, flammable liquids or gases, or strongly corrosive chemicals may only be performed in chemistry lab rooms 307 or 311 and all students must wear protective eyewear.
- Demonstrations involving dilute aqueous solutions may be performed in Room 422 if additional precautions are taken, such as the use of spill barriers and eyewear for those performing the demonstration or sitting within the splash zone. Spills must be cleaned up before leaving the room.
- Tap water and ice are the only liquids that may be used in carpeted classrooms. Spill barriers are required for their use.
- Chemicals for demonstrations should not be transported during student passing. Instead, secure materials in the room ahead of time or make arrangements with another adult to transport materials during class time.

First Aid

Teaching students to avoid injury while working safely in the laboratory is a necessary component of science instruction. Review all lab procedures in advance, reinforce safety rules, and monitor students vigilantly in the lab to reduce the risk of injury. If a student is injured, or has a medical emergency during class:

- Secure the safety of all students. Assess the situation and remove or contain any hazards.
- Treat skin immediately with running water. Have the student use the sink, eye wash, or safety shower as needed for chemical or thermal burns or for minor cuts of the skin.
- Use the buddy system. If the injured student can walk, send a classmate with the student to the nurse or, if the nurse is unavailable to Public Safety. For any chemical spills or ingestion, write down the names of chemicals used to inform the nurse (the students might not know).
- Call Public Safety (#1264) if the student is unable to walk or if there is a medical emergency in your classroom. If there is no answer, leave a message documenting the type of emergency and your location. Then call the Main Office (#1267) or any administrator directly to get help.
- Write an incident record. Once students are cared for, write down what you observed, the names of students, and what intervention was taken. Keep it brief and objective. Send a copy of this record to the Department Chairperson, the designated Assistant Principal, and the HCCS Deputy Director by e-mail as soon as it is safe to do so.
- Follow up after class. Find out what happened to your student. If the student did not see the nurse, please call or e-mail the parent yourself to reassure them with a brief description of what occurred and how you can be reached.

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