Safety Checklist for Science Instruction, Preparation and Storage Area

School: _____ Date: _____

Teacher(s): _____ Room or Area: _____

The Science Center of the Boston Public Schools would like to acknowledge both the Science Safety Handbook for California Public Schools (1999 ed.), and the NSTA Guide to School Science Facilities, both of whose checklists form the basis for this document. Please note that no checklist can include all aspects of each science classroom. Schools are encouraged to develop site-specific instruments for their particular schools.

Science teachers should check their instructional areas periodically to detirmine whether unsafe conditions exist. Teachers who have concerns about safety conditions related to facilities, equipment, supplies, curriculum, classroom occupant load, and so on should notify their department chairperson and school-site sdministrator immediately in writing for assistance in alleviating the condition.

The following checklist may be used to determine whether or not a safe environment exists and to indicate possible areas of concern and danger.

	Category	Guildlines	Good	Fair	Poor	Comments
1	Does good housekeeping prevail?	Tables and isles are clear of materials and apparatus?				
2	Are signs of the location of first-aid and safety equipment visible through the room?	Fire extinguishers, fire blamkets, eyewash stations, etc.				
3A	Is adequate storage space provided for chemicals, materials and apparatus.	10 sq. ft. per student for teacher's storage and preparation space. Separate lockable room or closet. Adequate space for seperation of incompatable chemicals.				
3B	Is the preparations space adequate and secure?	Lockable preparation room, preferabley at least 8' by 16'.				
4A	Are there areas in which students cannot be supervised by the teacher from anywhere in the room?	The classroom/laboratory has no blind spots.				
4B	Is there good infrastructures and	Telephones for emergencies.				

	communications	Network wiring for computers. Cable for video communications. Television.				
5A	Is there adequate classroom/laboratory space for the various learning activities planned?	Both laboratory space and sufficient space and furniture for reading and writing based activities				
5B	Is therre adequate floor space for the students to work safely?	45 sq. ft. minimum per student for laboratory; 60 sq. ft. min for combination laboratory/classroom Sifficient space between desks. 4-ft aisles.				
5C	Is there adequate space for teachers?	Teachers space with secure storage and desk, not in shared classroom				
5D	Is there space for long-term investigations?	Student project room with holding space for long term project, or designated space in classroom				
5E	Is there adequate space for displays?	Shelves and display cabinets				
5F	Does the space meet ADA requirements?	At least one wheelchair-accessible workstation. Accessible safety equipment, doorways, and passages				
6A	Is there counter and workspace for all students to do laboratory activities at one time?	Adult-height counters and tables. Movable lab tables or fixed lab stations. Epoxy resin, corion, or stone work surfaces.				
6B	Are there sufficient electrical outlets	Sufficient for the number of work stations and the intended activities.				
6C	Is natural gas or other heat source available?	Natural gas or hotplate. 1 service per 4 students. Safety shutoff in classroom				
6D	Sink and water faucets. Is the water supply suitable for investigations?	At least 1 sink per 4 students. 1 large sink. Swivel and high arched faucets. Deep bowls. Hot (max 120F) and cold water.				
6E	Ventilation for the laboratory activities planned? Is fume hood provided where it is required?	Fume hood required if hazardous chemicals are used. Fume hood vented to outside of building				
6F	Are a safety shower and eyewash	Dual eyewash within 25 ft. of every				

	provided?	workstation. Eyewash and shower available for simultaneous use.				
7A	Arer there ground fault circuit interrupters (GFCI's) on electrical outlets?					
7B	Are electrical outlets and extension cords kept in safe working conditions?					
7C	Is the power supply adequate and safe?	Ground fault interrupters. Sufficent circuts and outlets to serve program and technology needs.				
7D	Is electrical equiupment such as the refrigerator and the aquarium aerator connectged directly to a wall outlet, and not throuigh an extension cord?					
8	Does the room have at least two exits?	Exits lead to corridors, not storerooms.				
9A	Is the light level adequate?	At least 75 to 100 foot-candles at work surfaces				
9B	Can light level be controlled?	Separate switches for rows of lights. Room darkening shades or blinds.				
10	Are separate designated waste containers provided for:					
10A	Broken glass					
10B	Spent matches, wood splints, toothpicks, and so on.					
10C	Flammable waste chemicals					
10D	Nonflammable waste chemicals					
11	Are quantities of hazardous chemicals kept on hand limited to the amounts needed during one school year?					
12	Proper labels and signs are kept in place on all chemicals and on the storage area					
13	A chemical spill kit is available for emergency use					
14	Chemical containers are inspected					

	periodically. Containers to be checked for leakage or deterioration (such as sediments and discoloration), and approved disposal procedured are followed as necessary.					
15	No cylinder gas is present					
16	Are splash-proof safety goggles, face shields, safety aprons, and so on available to protect the teacher and students when hazardous conditions exist?					
17	Are goggle and face-shield sterilization facilities available?					
18	Are eyewash fountains and safety showers (with drains) easily accessible and flushed weekly by custodial staff to remove scale and rust?					
19	Are fume hoods clean, uncluttered, and have a streamer easily visible throughout the room when in operation.	The hoods are tested periodically by custodial staff to ensure adequate air flow.				
20	Are gas outlets and burners maintained in safe working condition?	All valves are in working order. All staff is rehersed in using emergency shut-offs. No rubber bunser burner connections.				
21	Is a fire extinguisher capable of extinguishing class A, B, and C fires kept in working conditions at all times and in a conspicuous and accessible place?	Custodial staff maintains records of fire extinguishers. Teachers well versed in use.				
22	Dry sand or other appropriate means is available to extinguish class D fires.					
23	Is an approved fire blanket available and kept in a conspicuous and accessible place?	Consult fire department for approved fire blanket information.				
24	Are flammable liquids, ethers, and sodium present?	Flammable liquids, ether, and sodiun are removed from premises.				

25	Are approved fire-retardent storage cabinets (with a botton pan to contain spills temporarily), separate from the classroom, used for storing small quantities of dangerous chemicals?					
26	Are the larger storage containers of acids and bases stored on the lower cabinet shelves?					
26A	Are fire and safety measures in place?	Fire and safety equipment. Adequate exits. Adequate ventilation. Exhausts vented to outside of building.				
27	Is refrigerator certified as exlosion-proof					
28	Is food kept in refrigerators used for storing science materials?					
29	Incompatible chemicals are not stored adjacent to one another					
30	All chemical containers are dated on receipt, and a current inventory is maintained.					
31	Are the locations of the master electrical and gass shut-off controls labeled and redily accessible					
32	Are plumbing fixtures in correct operating condition.	Faucets are equipped with air gaps to prevent backflows. Plumbing is of non-corrosive materials. Hazardous waste traps are in place, location is noted, and regular maintenance is scheduled.				
33	Are animals cared for in an appropriate, safe and humane environment.	Staff knows current Massachusetts laws and MSPCA guidelines.				
34	Is hazardous chemical waste properly stored, handled, and disposed of?	Staff knows procedure (informing Environmental Health Officer) for science waste removal.				
35	Are fire-drill procedured posted					

	and familiar to all teachers and students.					
36	Is the teacher familiar with first-aid and safety measures related to science instruction?	Science staff and school nurse are agreed on procedure				