



ADMINISTRATIVE PROCEDURE

SAN DIEGO UNIFIED SCHOOL DISTRICT

NO: 5110

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CATEGORY: **Support Services, Safety Program**

EFFECTIVE: **7-01-91**

SUBJECT: **Classroom Lab Procedures Dealing With Human Tissue and/or Infectious Agents**

REVISED: **10-21-2002**

A. PURPOSE AND SCOPE

1. To outline administrative procedures governing laboratory investigations involving human tissue, including classroom and laboratory procedures, parental notification, applicability of Universal Laboratory Precautions, acceptable techniques for biohazardous material, and disposal techniques for biohazardous material.
2. **Related Procedures:**

Injury/illness emergencies—staff, students, or visitors	EP 07
Classroom safety	5150
Eye protection in schools	5155
Hazardous materials/waste, handling/storage/disposal	5120
Preregistration and registration, 7-12	6123

B. LEGAL AND POLICY BASIS

1. **Reference:** Board Policy: G-2000, G-3000; California Health and Safety Code Section 25117; California Code of Regulations, Title 22, Section 66261.3; San Diego County Ordinance 75566, Storage and Disposal of Medical Waste, effective July 21, 1989; Penal Code Section 387; 8 California Code of Regulations Section 3203.
2. **The Centers for Disease Control (CDC)** in August 1987 updated its previous guidelines for healthcare workers, referred to as the “Universal Precautions.” The universal precautions are intended to prevent exposure to bloodborne pathogens. Blood is the single most important source of HIV, HBV, and other bloodborne pathogens. Accordingly, infection control efforts must focus on exposure to blood. Normal classroom activities do not require universal precautions but application of certain routines are essential if any human tissue or bacterium is used by students in any experiments that are accepted for instructional credit.

C. GENERAL

1. **Originating Office.** Suggestions or questions concerning this procedure should be directed to the Science Department, Curriculum and Instruction Division, Institute for Learning.

2. **Definitions**

- a. **Sharps:** Include any objects or devices having acute rigid corners, edges protuberances capable of cutting or piercing, and include, but are not limited to, hypodermic needles, lancets, blades, and slides.
- b. **Sharps containers:** Leakproof, rigid, puncture-resistant containers that when sealed cannot be reopened without great difficulty. These containers must be labeled so that the producer's name, address, and phone number are visible for inspection. Needles, syringes, and lancets shall not be clipped or bent prior to disposal.
- c. **Biohazardous (laboratory) waste:** Includes any fluid blood elements, regulated body fluids, bacterial/tissue specimen cultures, cultures and stocks of infectious agents, discarded live or attenuated vaccines, contaminated animal carcasses, culture dishes and devices used to transfer, inoculate and mix cultures or material that may contain infectious agents and may pose a substantial threat to health.
- d. **Solid waste:** Includes empty specimen containers, bandages, dressings containing non-liquid blood, surgical/latex gloves, and decontaminated biohazardous waste.
- e. **Hazardous waste:** A waste, or combination of wastes, that because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either:
 - (1) Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness, or
 - (2) Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed (California Health and Safety Code Section 25117).
- f. **Universal precautions:** Intended to prevent parenteral, mucous membrane, and non-intact skin exposures of healthcare workers to bloodborne pathogens.

- g. **Body fluids** to which universal precautions apply include blood and other body fluids containing visible blood, semen, vaginal secretions, and breast milk. Body fluids to which universal precautions do not apply include feces, nasal secretions, sputum, sweat, tears, urine, and vomitus unless they contain visible blood.
- h. **Protective barriers:** Include gloves, gowns, mask, and protective eyewear. Gloves should reduce the incidence of contamination of hands, but they cannot prevent penetrating injuries due to needles or other sharp instruments. Masks and protective eyewear or face shields should reduce the incidence of contamination of mucous membranes of the mouth, nose, and eyes.
- i. **Infectious agents:** Include, but are not limited to, microorganisms, such as bacteria, fungi, and protozoa, viruses and parasites that are known to infect humans.

D. IMPLEMENTATION

- 1. **Responsibility for Safety.** All employees, students, and visitors should be alert for and aware of safety hazards associated with school activities and property. Any such situation should be reported to principal or designee. Instruction governing the most urgent and/or most common general conditions are detailed in Procedure 5150 and specific biohazard-related instructions are outlined below. Teachers are obligated to give proper safety instruction, administer safety tests, and to enforce district safety policies in classrooms.
 - a. **Principal or site supervisor** is responsible for overall site and lab safety, for employee compliance with all disposal and safety regulations, and for reporting of all work-related accidents that arise out of or occur in the course of an employee's job assignment or any student classroom assignment.
 - b. **All teachers should be aware** of any potential hazards in the laboratory activities they assign to students. If any doubt exists, procedures should be discussed with the science curriculum coordinator, science resource teacher, or safety office personnel. Teachers are obligated to notify parents/guardians, give proper safety and hygiene instruction and to enforce district disposal and safety policies in classrooms. Teachers sponsoring science fair projects should attend Greater San Diego Science and Engineering Fair (GSDSEF) training.

- c. **In the event of a student injury** or exposure to potential infectious agent, a school employee is protected by district liability insurance coverage *as long as the employee has acted within the scope of his/her regularly assigned duties*. Classes or groups that are too large (or instructional spaces that may be too small) to assure adequate safety, or lack proper/appropriate equipment or facilities to assure adequate safety, should be brought to the attention of the principal.
2. **Science Department** shall coordinate with the Business/Risk Management Department, Business Operations Branch, on the program governing handling, storage, and disposal of biohazardous waste and on inservice workshops for site personnel.
3. **Classroom and Laboratory Safety Precautions.** “Science Safety Handbook for California High Schools” provides general guidelines (pages 17-22) for laboratory safety. The following guidelines apply specifically and only to any classroom laboratory work that involves the obtaining or manipulating of any live or attenuated bacteria, fresh or nonfixed and preserved human tissue. Only the most urgent and/or most common conditions that might occur and related detailed instructions are outlined below. Some procedures used in magnet schools or advanced classes may not be covered and require individual attention by the science or safety office personnel.
 - a. **Parent/guardian notification slips** must be sent home notifying parents/guardians of the specific lab work to be performed by the class, naming the bacteria or tissue to be utilized and outlining any risks of infection. Any parent/guardian may deny permission for his/her child to participate in work involving human tissue or bacteria by signing and returning the notice to the teacher or school office. The teacher should assign alternative work for students who do not participate in the lab work.
 - b. **Only fresh or unfixed human tissue or infectious agents** are considered as hazardous. Preserved, fixed and/or stained tissue does not constitute any known hazard to human health. Any human blood, blood product, or tissue used in the classrooms or in individual student projects must be certified free of acquired immune deficiency syndrome (AIDS) and hepatitis prior to use.

- c. **Any lab procedure involving obtaining tissue or blood samples must be done on a voluntary basis only.** Volunteers must obtain human blood, fluid, or tissue from themselves. No one may assist in obtaining blood tissue from another student. Alternative work is to be made available to any students not wishing to participate in taking their own blood or other tissue collection.
- d. **Students conducting individual projects or research** involving human blood, blood products, tissue or infectious agents for school credit or for participation in the Greater San Diego Science and Engineering Fair must submit the appropriate hazard control or vertebrate tissue forms. These forms are available on line at www.gsdsef.org. The approval form must include:
- (1) Specific parent/guardian permission for the procedures to be used.
 - (2) Written certification by a qualified professional that the blood, blood products, or tissue is free of acquired immune deficiency syndrome (AIDS) and hepatitis prior to the student receiving the material.
 - (3) Identification of genus, species, and strain of any bacteria, protozoa, or fungi used, and the source of the microorganisms (no pathogenic microorganisms may be used).
 - (4) The experimental procedure, identification, and source of any microorganisms for approval by the instructor prior to the onset of the actual laboratory work or no later than November 15 of the school year in which the project (or Greater San Diego Science & Engineering Fair) is to be submitted.
- Any projects about which the teacher has questions, or is unable to evaluate, must be approved by the GSDSEF.
- e. **Lancets and other sharps should be placed by the individual student into a sharps container or beaker.** Lancets should not be bent, clipped or broken. The sharps container or beaker should be emptied or disposed of, when finished or full, through the school nurse.
- f. **Hygiene and sterile precautions** include washing of student hands with soap, washing of all lab surfaces to be used with appropriate disinfectant solution before and after each lab procedure, use of proper latex (not plastic) gloves, and approved protective eyewear whenever any danger of splashing exists. Glass microscope slides used for any fresh blood, bacteria or tissue observations need

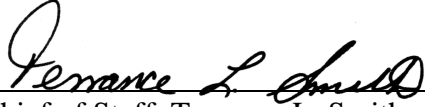
to soak in a 10 percent bleach solution for 24 hours, then be washed in a disinfectant solution. Person disinfecting the slides must use latex gloves and due caution.

- g. **Housekeeping includes wiping all environmental surfaces** where students routinely work with a 1 percent bleach solution or a phenol disinfectant product (follow manufacturer's instructions for appropriate use and dilution). Cleaning and removal of any soil should be done before and after any lab work involving human tissue or bacteria.
- h. **No opened or inoculated bacterial plates may be disposed of** until they have been autoclaved at 15-20 psi for 20 minutes. All materials for disposal must be properly bagged and labeled as "sterilized waste." After this process is complete, plates may be disposed of in ordinary trash containers. Autoclavable disposable bags are available through the district Science Order Guide (Nonstock Order Number BAG 1300 or 1350). All opened inoculated culture plates must be immediately sealed with tape and not reopened.

E. FORMS AND AUXILIARY REFERENCES

1. Emergency Procedures, Poster, Stock Item 22-E-5101
2. Science Safety Handbook for California High Schools, State Department of Education, Publications Division, available on line @ www.cde.ca.gov/ci/SciSafety.pdf
3. GSDSEF Approval Form for Student Research, available on line @ www.gsdsef.org

F. APPROVED BY



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For the Superintendent of Public Education