

LABORATORY SAFETY

OBJECTIVE/RATIONALE

For the prevention of injury and illness, it is important to adhere to laboratory safety policies and procedures. The student will learn laboratory safety policies and procedures.

TEKS 121.14 1A, 1B, 1C

TAKS ELA 1
Science 1, 3

National Science Education Standards F9-12

National Health Care Skills Standards .01, .02, .03, .04, .05, .06, .07, .08, .09

KEY POINTS

- I. Caution should always be maintained to protect the students and the instructor. The microbiology laboratory contains potential pathogenic microorganisms and toxic chemicals. Standard precautions are practiced throughout each laboratory investigation.
- II. Rules for a safe laboratory environment
 - A. Eating, drinking, the application of cosmetics are strictly prohibited in the laboratory.
 - B. Open toed shoes are not permitted.
 - C. All personal belongings (books, purses, and backpacks) must be kept away from the work surface.
 - D. Tie back long hair.
 - E. Keep hands away from the face at all times
 - F. Gloves and goggles must be worn whenever students are working with microorganisms.
 - G. If gloves become soiled, change immediately
 - H. Always wash hands after removing gloves..
 - I. DO NOT put pencils or pens in the mouth while working with microorganisms.
 - J. Cover and protect exposed wounds should be covered and protected.
 - K. Laboratory coats or aprons should be worn at all times during laboratory investigations.
 - L. Locate all fire extinguishers in the microbiology laboratory.
 - M. Locate the eyewash station. If a sink is used as an eyewash station, always use cold water to flush the eyes.
 - N. Disinfect the work space before and after each investigation. Use the 10% bleach solution for disinfectant.
 - O. Handle all bacterial cultures with EXTREME CAUTION!
 - P. Use a bulb and pipette, NEVER mouth pipette!
 - Q. Notify the instructor immediately if a culture has been spilled.

- R. Place all materials in the appropriate containers upon completion of the laboratory investigation.
- S. Cultures must NEVER leave the laboratory workspace.
- T. If there is a fire drill, turn off all flames and electrical equipment, if possible, and exit in an orderly fashion. (follow school procedures)

ACTIVITIES

- I. Review and practice correct handwashing procedures.
- II. Complete the **Laboratory Safety Exam**.

MATERIALS

Medical Microbiology Laboratory Safety Guidelines and Contract
Medical Microbiology Laboratory Safety Letter to Parents

ASSESSMENT

Completion of Medical Microbiology Laboratory Safety Quiz

ACCOMODATIONS

For reinforcement, the student will review the Medical Microbiology Laboratory Safety Contract.

For enrichment, the student will create and act out a scenario of an unsafe laboratory practice to demonstrate the dangers of not following safety rules and regulations.

REFLECTIONS

MEDICAL MICROBIOLOGY LABORATORY SAFETY AND EQUIPMENT EXAM

NAME:

DATE:

Please write the word safe or unsafe beside each sentence below.

- _____ Eating a candy bar while your laboratory partner assembles the material for the laboratory investigation.
- _____ Holding a bacterial culture with gloved hands.
- _____ Cleaning your work area with soap and water after a laboratory investigation.
- _____ Lab coats may be worn throughout the school day.
- _____ Never apply make-up while in the laboratory.
- _____ Treat all microorganisms as possible pathogens.
- _____ Eating out of glassware in the laboratory is acceptable, as long as the glassware has been autoclaved.
- _____ Glasses can be laid on the work surface while looking through a microscope.
- _____ Notify the instructor of any accidents in the laboratory.
- _____ Don't worry about washing your hands, if you have worn gloves throughout the laboratory investigation.
- _____ Exceptions can be made to standard precautions.

MEDICAL MICROBIOLOGY LABORATORY SAFETY GUIDELINES AND CONTRACT

Rules for a safe laboratory environment:

- A. Eating, drinking, the application of cosmetics are strictly prohibited in the laboratory.
- B. Open toed shoes are not permitted.
- C. All personal belongings (books, purses, and backpacks) must be kept away from the work surface.
- D. Tie back long hair.
- E. Keep hands away from the face at all times
- F. Gloves and goggles must be worn whenever students are working with microorganisms.
- G. If gloves become soiled, change immediately
- H. Always wash hands after removing gloves..
- I. DO NOT put pencils or pens in the mouth while working with microorganisms.
- J. Cover and protect exposed wounds should be covered and protected.
- K. Laboratory coats or aprons should be worn at all times during laboratory investigations.
- L. Locate all fire extinguishers in the microbiology laboratory.
- M. Locate the eyewash station. If a sink is used as an eyewash station, always use cold water to flush the eyes.
- N. Disinfect the work space before and after each investigation. Use the 10% bleach solution for disinfectant.
- O. Handle all bacterial cultures with **EXTREME CAUTION!**
- P. Use a bulb and pipette, NEVER mouth pipette!
- Q. Notify the instructor immediately if a culture has been spilled.
- R. Place all materials in the appropriate containers upon completion of the laboratory investigation.
- S. Cultures must NEVER leave the laboratory workspace.
- T. If there is a fire drill, turn off all flames and electrical equipment, if possible, and exit in an orderly fashion. (follow school procedures)

I have read and agree to follow the above safety guidelines.

I agree to report any accident or injury to the instructor immediately.

I will never use any equipment or supplies without obtaining permission from the instructor.

Print Student name

Student Signature

Date

I have read and reviewed the above guidelines with my child.

Print Parent Name

Parent Signature

Date

August XX, 20XX

Dear Parent/Guardian,

Your son/daughter is presently enrolled in a semester course called Medical Microbiology. Students enrolled in this class will be using a variety of laboratory equipment and supplies, including bacterial cultures. The student must attend a safety demonstration and pass a written safety exam in order to participate in the laboratory investigations.

Before your son/daughter may use any of the listed equipment, the attached contract must be signed and returned. If you have any concerns regarding the Medical Microbiology laboratory investigations, please call me during my conference period, _____, at XXX-XXXX.

Sincerely yours,

The Instructor