

POWERPOINT PRESENTATION FOR DAY ONE

OBJECTIVE/RATIONALE

The medical laboratory is important in identifying microorganisms that affect health and wellness. The student will learn the relationship of the medical laboratory and microbiology to the field of health care.

TEKS 121.14 (c) 1B, 3C

TAKS ELA 1, 4, 6

National Science Education Standards A9-12; C9-12; E9-12; F9-12

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

KEY POINTS

PowerPoint Presentation

I. Microbiology

- a. What is it?
- b. Who studies it?
- c. Why do we study it?
- d. Where do we study it?
- e. What knowledge will a student gain taking this course?

II. Medical Microbiology is the study of microorganisms affecting health and wellness.

- a. Bacteria
- b. Fungus
- c. Parasites
- d. Viruses
- e. Most can only be seen with the microscope!

III. Medical Microbiology

- a. Studies are usually performed on client specimens and are used to identify pathogenic organisms.
- b. Medical Laboratory Technicians and Medical Laboratory Technologists perform the studies.
- c. Education level: 2 year AAS or 4 year BS

IV. Medical Microbiology

- a. Pathogenic microorganisms cause disease in humans.
- b. Microbiologists determine the pathogen causing the disease and identify a substance, usually an antibiotic, to inhibit the microorganism.
- c. Microbiologists research microorganisms to discover new antibiotics.

V. Safety

- a. Laboratories post signs as constant reminders of safety and infection control.
- b. Safety hoods are used to avoid splashing and inhaling possible pathogens.
- c. Standard precautions

- d. Refrigeration is a necessary component of the microbiology laboratory for the accuracy of patient results. Reagents, such as those used in this strep screen, aid in the diagnosis of disease.
- VI. A hospital laboratory picture is shown in the PowerPoint.
 - a. Blood cultures are incubated and monitored electronically for bacterial and fungus growth.
 - b. High tech instruments are used to aid in the identification of microorganisms.
 - c. Teamwork is essential in all types of laboratories, including the school laboratory.
- VII. What is growing on the agar plate? It is Proteus vulgaris. This bacteria swarms on the plate, creating a “wave” of growth. It is found sometimes in urine cultures.
- VIII. At the end of this course, the student will gain knowledge in the following:
 - a. Normal flora of the human body.
 - b. Microbiological disease states related to the human body.
 - c. Media/Agar used to grow microorganisms
 - d. Biochemical reactions of microorganisms
 - e. Identification of microorganism!

ACTIVITIES

- I. Complete the First Day Quiz

MATERIALS/RESOURCES

Introduction to Medical Microbiology PowerPoint Presentation
H.O.T. Jobs Book

ASSESSMENT

Completion of First Day Quiz

ACCOMMODATIONS

For reinforcement, the student will write a report about why the study of microbiology is important in health care.

For enrichment, the student will research and identify the functions performed by the CDC, Center for Disease Control.

REFLECTIONS

MEDICAL MICROBIOLOGY INTRODUCTION QUIZ

NAME:
CLASS:

DATE:

Please answer the following questions in **complete sentences**.

1. Define Medical Microbiology.
2. Name two types of professionals employed in a Medical Microbiology laboratory.
3. Why is it important to study Medical Microbiology?
4. Why is teamwork an essential component of any medical laboratory?
5. What do you expect to gain by taking this course in Medical Microbiology?

BONUS: What was growing on the agar plate shown in the PowerPoint presentation?