

**Southwest Center for Microsystems Education (SCME)
University of New Mexico**

Clinical Laboratory Techniques and Microtechnology

This booklet contains four (4) units:
Knowledge Probe (Pre-test)
Primary Knowledge (Reading material)
A Micro-Sized Device Activity
Final Assessment

The Learning Module Map is provided on how to use this learning module.

This learning module is an overview of how microtechnology is used for standard clinical laboratory tests. It covers the advantages and challenges of taking clinical tests out of the laboratory to the point of care (POC). An activity allows you to dig deeper into a specific test or technique and discover how microtechnology is changing medical diagnostics.

Target audiences: High School, Community College, University

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Website: www.scme-nm.org

Learning Module Map for Clinical Laboratory Techniques and Microtechnology

Learning Module: Clinical Laboratory Techniques and Microtechnology

Learning Module Units (4)

- Knowledge Probe (pre-test)
- Clinical Laboratory Techniques and Microtechnology PK
- A Micro-Sized Device Activity
- Assessment

Following is a suggested map on the implementation of this learning module. This map is strictly a suggestion. You may use any unit in this learning module as a stand-alone unit or activity OR in any sequence that best fits your classroom.

IMPORTANT STEPS	KEY POINTS	REASONS
Knowledge Probe (KP)	This is a pre-assessment that the participants should take prior to starting this learning module.	This KP determines the participants' current knowledge of clinical laboratory techniques and how microtechnology has affected these techniques.
Inquiry activity	Ask the participants the following: <i>What type of medical tests have you had done or that you are familiar with?</i> <i>Which of these tests require clinical laboratory testing?</i>	This inquiry gets the participants thinking about what laboratory testing is and how it affects everyone.
Assign the primary knowledge (PK) unit as a reading assignment. Review the <u>Clinical Laboratory Techniques and Microtechnology PK</u> with the participants.	A PowerPoint presentation can be downloaded by the instructor from scme-nm.org and presented to all participants.	This introduction helps participants better understand the various techniques of clinical lab testing and how microtechnology has improved these techniques and in some cases, taken them out of the lab.

Complete the activity “A Micro-Sized Device”	Participants research and study a specific test or technique that has been performed on the macro-scale and is now (or in the near future) being performed at the micro-scale.	This activity allows the students to further research an area of clinical lab testing that is of interest to them.
Assessment	Have the participants complete the assessment.	Participants are evaluated on what they have learned about clinical laboratory testing and how microtechnology has become an important part of this field.

Adapted from Graupp, P. & Wrona, R. (2006) The TWI Workbook: Essential Skills for Supervisors. New York, NY. Productivity Press.

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