

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

MEMS Safety Topic

Interpreting Chemical Labels

This Learning Module contains six (6) units:
Interpreting Chemical Labels Primary Knowledge (PK)
NFWA Ratings / NFWA Diamond PK*
NFWA Diamond Interpretation Activity
NFWA in the Workplace Activity
Interpreting Chemical Labels Activity
Final Assessment
*NFWA (National Fire Protection Association)

The purpose of this learning module is to provide students with the information needed to interpret chemical labels and information about specific chemicals provided on NFWA diamonds and to demonstrate an understanding of this information.

A Learning Module Map is provided as a suggested outline on how to use this learning module.

Target audiences: High School, Community College, University

Made possible through grants from the National Science Foundation Department of Undergraduate Education #0830384, 0902411, and 1205138.

Any opinions, findings and conclusions or recommendations expressed in this material are those of the authors and creators, and do not necessarily reflect the views of the National Science Foundation.

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Website: www.scme-nm.org

Learning Module (LM) Map for Interpreting Chemical Labels

Learning Module: Interpreting Chemical Labels

Learning Module units (6):

- Interpreting Chemical Labels Primary Knowledge (PK)
- NFPA Ratings / NFPA Diamond PK (NFPA: National Fire Protection Association)
- NFPA Diamond Interpretation Activity
- NFPA in the Workplace Activity
- Interpreting Chemical Labels Activity
- Final Assessment

Following is a suggested map on the implementation of this learning module.

IMPORTANT STEPS	KEY POINTS	REASONS
Inquiry Activity	Present the participants with a chemical label and an example of a NFPA Diamond. Ask them to interpret as much as they can of these two items.	This activity will help the participants identify their current knowledge or lack of knowledge of interpreting chemical labels and the NFPA diamond.
Present the <u>Interpreting Chemical Labels PK</u>	Participants should read the PK. A PowerPoint presentation can be downloaded by the instructor from scme-nm.org and presented to all participants.	This brief presentation introduces the participants to the requirements of chemical labels.
Present the <u>NFPA Ratings / NFPA Diamond PK</u>	Participants should read the PK. A PowerPoint presentation can be downloaded by the instructor from scme-nm.org and presented to all participants.	This presentation explains the meaning of the colors and the numbers found of NFPA Diamonds.
Complete the <u>NFPA Diamond Interpretation Activity</u>	Participants will be given several NFPA Diamonds and asked to identify a chemical to which the diamond applies based on the MSDS information.	This activity allows the participants to practice NFPA diamond interpretation before going into a lab or manufacturing facility.

Complete the <u>NFPA in the Workplace</u>	Participants locate several NFPA Diamonds in a working environment and relate each diamond to the chemical it represents.	This activity makes the participants more aware of the NFPA in the workplace and its usefulness in ensuring a safe environment.
Complete the <u>Interpreting Chemical Labels Activity</u>	Participants are required to extract specific information from chemical labels in the workplace, the lab or at home.	This activity ties it all together and places this information at home, at school and at work.
Assessment	Give the participants the learning module assessment.	Participants are evaluated on what they have learned about interpreting chemical labels and NFPA diamonds.

This is one of five safety units offered through SCME. To download the other safety learning modules and to view more learning modules related to microtechnologies, visit the SCME website (<http://scme-nm.org>).