Promising Practices:

Resources

Participants will:

- **Develop an understanding of promising practices in active learning.**
- **Review various active learning strategies and discuss application in the classroom.**

The active learning techniques were adapted from content found in the following resources:

AC Library Recommended Resources
http://cis7.actx.edu/ACLibrary/aclweb/ACTS/Active_and_Problem_based.pdf

The University of Texas at Arlington Active Learning for Critical Thinking website
http://activelearning.uta.edu/FacStaff/ALtechniques.htm

Angelo, T. A. & Cross, K. P. (1993). Classroom assessment techniques: A Handbook for college teachers. San Francisco: Jossey-Bass.
(Library of Congress call # LB2822.75 .A54 1993)

Barkley, E.F., Cross, K.P., & Major C.H. (2005).
***Collaborative learning techniques*. San Francisco: Jossey-Bass.**
Paulson, D.R., & Faust, J.L. (2002).

***Active learning for the college classroom*. California State University Los Angeles. Retrieved June 29, 2006, from http://www.calstatela.edu/dept/chem/chem2/Active/index.htm**

McKeachie, W. J., & Svinicki, M. (2006). *McKeachie's Teaching Tips* . Boston, MA: Houghton Mifflin Company.

Low Complexity

Clarification Pause

Use this method to foster active listening.

- Throughout a lecture, particularly after stating an important point or defining a key concept, pause, allow processing time, then ask if anyone needs clarification. Circulate around the room during these pauses to look at student notes, answer questions, etc.

Daily Journal

Use this method to encourage students to think more deeply about a subject or issue.

- Ask students to respond to more complex questions than are answerable during a short time period.

Fish Bowl

Use this method to determine those concepts which may need clarification.

- Students are given index cards, and asked to write down one question concerning the course material. They should be directed to ask a question of clarification regarding some aspect of the material which they do not fully understand; or, perhaps you may allow questions concerning the application of course material to practical contexts.

Muddiest (or Clearest) Point

Use this method to identify points which may need clarification.

- Ask (at the end of a class period or at a natural break in the presentation), "What was the "muddiest point" in today's lecture?"

One Minute Paper

Use this method to determine whether students comprehend the most important aspects of a activity or lecture

- Ask students to take out a blank sheet of paper, pose a question (either specific or open-ended), and give them one (or perhaps two - but not many more) minute(s) to respond.

Note-Taking Pairs

Use this method to assist students become stronger note takers.

- Students, working as partners share class notes with each other.

Response to a demonstration or other teacher centered activity

Use this method to allow students to reflect on what they actually got out of the teachers' presentation.

- The students are asked to write a paragraph that begins with: I was surprised that ... I learned that ... I wonder about ...

Round Robin

Use this method as a brainstorming technique.

- Students are asked to take turns responding to a question or concept. All students must answer.

Student Summary of Another Student's Answer

Use this method to foster active listening and participation by all students.

- In order to promote active listening, after one student has volunteered an answer to your question, ask another student to summarize the first student's response.

Think – Pair – Share

Use this method to encourage students to share their comprehension and view points of course material.

- Students are asked to pair off and to respond to a question either in turn or as a pair.

Wait Time

Use this method to encourage everyone in class to think about the answer to a question.

- Rather than choosing the student who will answer the question presented, this variation has the instructor WAITING before calling on someone to answer it. The wait time will generally be short (15 seconds or so) - but it may seem interminable in the classroom. It is important to insist that no one raise his hand (or shout out the answer) before you give the OK.

Medium Complexity

Active Review Sessions

Use this method to encourage students to problem solve in order to answer a question or address an issue.

- In an active review session the instructor poses questions and the students work on them in groups. Then students are asked to show their solutions to the whole group and discuss any differences among solutions proposed.

Affinity Grouping

Use this method to assist students to think about broad topics in more specific and related terms.

- Students write ideas about a topic on individual pieces of paper. They must then sort the ideas into meaningful categories.

Concept Mapping *

Use this method to help students identify and organize information and to establish meaningful relationships between the pieces of information.

- A concept map is a way of illustrating the connections that exist between terms or concepts covered in course material; students construct concept maps by connecting individual terms by lines which indicate the relationship between each set of connected terms. Most of the terms in a concept map have multiple connections.

Debates

Use this method to encourage students to look at all sides of an issue and help them to develop argumentation skills.

- Students are assigned to debate teams, given a position to defend, and then asked to present arguments in support of their position on the presentation day. The opposing team should be given an opportunity to rebut the argument(s) and, time permitting, the original presenters asked to respond to the rebuttal.

Evaluation of Another Student's Work

Use this method to encourage students to critically think about course content and how to best present their understanding of a topic.

- Students are asked to complete an individual homework assignment or short paper. On the day the assignment is due, students submit one copy to the instructor to be graded and one copy to their partner. These may be assigned that day, or students may be assigned partners to work with throughout the term. Each student then takes their partner's work and depending on the nature of the assignment gives critical feedback, standardizes or assesses the arguments, corrects mistakes in problem-solving or grammar, and so forth.

Puzzles/Paradoxes

Use this method to draw out students' intuitions and prior knowledge about a topic.

- Present students with a paradox or a puzzle involving the concept(s) at issue, and to have them struggle towards a solution. By forcing the students to "work it out" without some authority's solution, you increase the likelihood that they will be able to critically assess theories when they are presented later.

Quotations

Use this method to measure comprehension as well as strengthen critical thinking and analytical skills.

- This is a particularly useful method of testing student understanding when they are learning to read texts and identify an author's viewpoint and arguments. After students have read a representative advocate of each of several opposing theories or schools of thought, and the relevant concepts have been defined and discussed in class, put on the overhead projector a quotation by an author whom they have not read in the assigned materials, and ask them to figure out what position that person advocates.

Role Playing *

Use this method to help students internalize course content and reflect their interpretation of course content.

- Students are asked to "act out" a part. In doing so, students get a better idea of the concepts and theories being discussed.

High Complexity

Case Study

Use this method to help students apply abstract concepts to real-life situations. This method also encourages critical thinking.

- Students, working in groups, are given a real-life problem or scenario to which they must apply course concepts in order to solve.

Cooperative Groups in Class

Use this method to encourage students to problem solve in order to answer a question or address an issue.

- Pose a question to be worked on in each cooperative group and then circulate around the room answering questions, asking further questions, keeping the groups on task, and so forth. After an appropriate time for group discussion, students are asked to share their discussion points with the rest of the class.

Jigsaw Group Projects

Use this method to encourage students to self-identify important content in order to solve a problem, answer a question, or address an issue.

- In jigsaw projects, each member of a group is asked to complete some discrete part of an assignment; when every member has completed his assigned task, the pieces can be joined together to form a finished project.

Send-A-Problem

Use this method to encourage students to critically think about and discriminate among several solutions.

- Students, working in groups, are given a problem to solve. They must write down their group's solution and then pass on the problem to another group. Without reading the previous groups solution, the second group must write down their solution. Repeat this process as often as necessary. Once this process has been completed, compare and contrast the groups' different solutions.