

WELCOME TO ACTIVE STUDENTS LEARN MORE

Walk around the room reading the posters.

Why Use Active Learning Strategies in Your Classroom?

Brainstorm answers to the question based upon the posted quotes.

Stick your answer on the poster.



Carousel Brainstorming (Rotating Review)

https://nau.edu/uploadedFiles/Academic/CAL/History/History-Social_Studies_Education/Carousel%20BrainstormSTEM.pdf

- Choose major topics/concepts that are new or to be reviewed.
- Write a topic/question on the top of a piece of chart paper taped to wall.
- Divide into groups – 1 group to each paper
- Discuss 1-2 minutes (Write comments on page)
- Rotate, repeat
- Discuss as a class

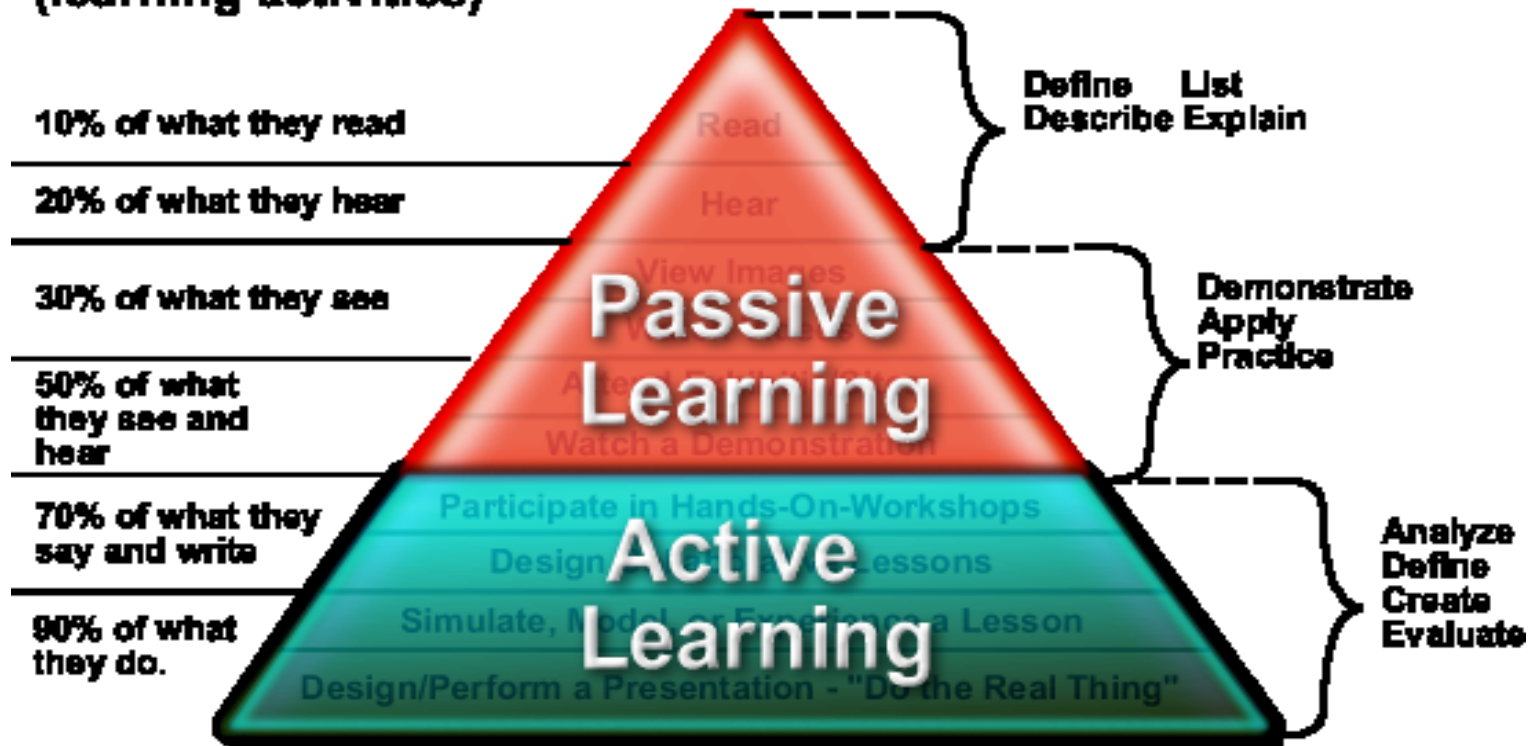


Why Active Learning?

<https://lo.unisa.edu.au/mod/book/view.php?id=610988&chapterid=101290>

**People generally remember...
(learning activities)**

**People are able to...
(learning outcomes)**



Bloom's Taxonomy

Lesson Planning

**Finish Class
with
Evaluate/Create**

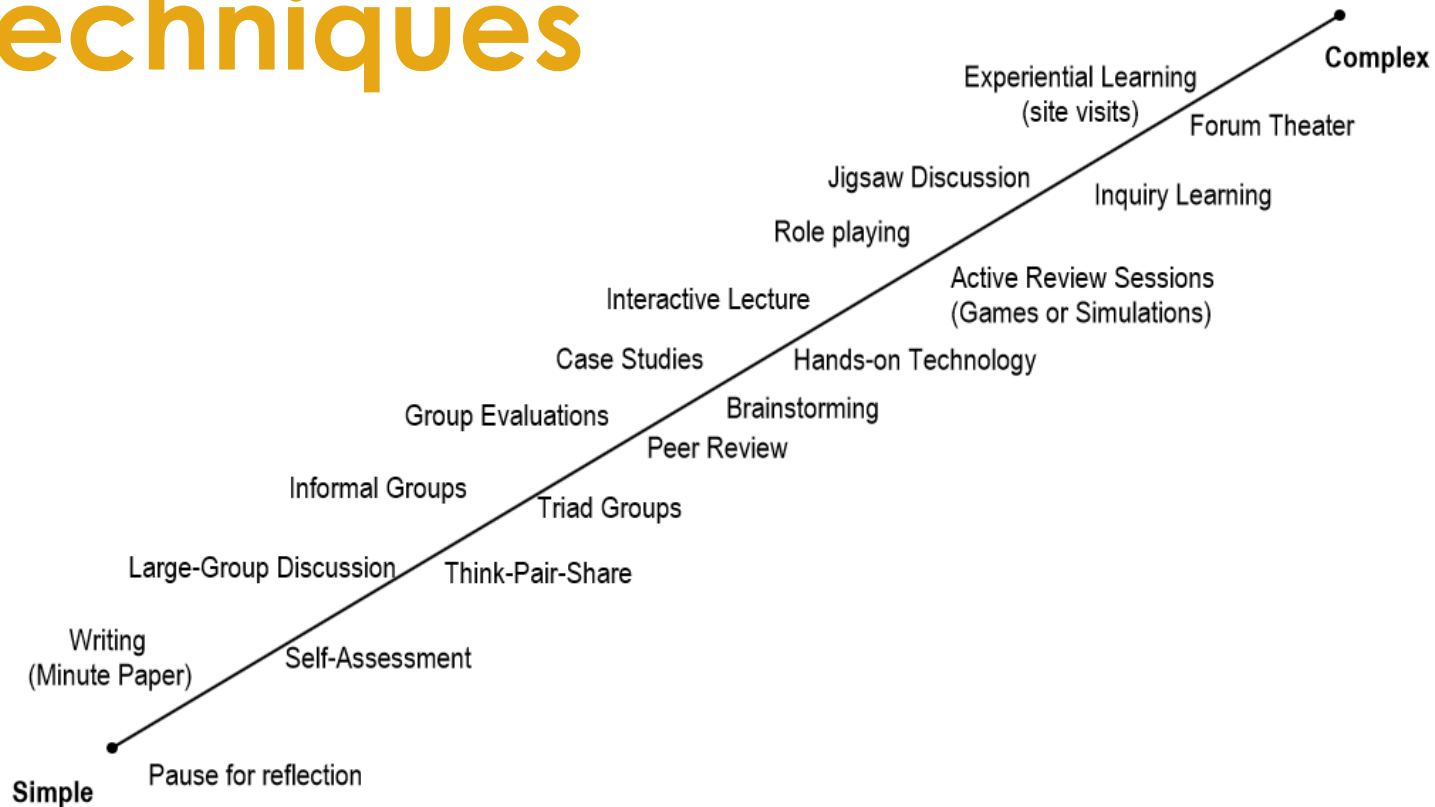
**Fill in the Blanks –Lecture-Discuss
Understanding/Applying/Analyzing**

**Beginning of Class - Summary
Understanding**

Before Class – Remembering



Active Learning Techniques



This spectrum arranges active learning techniques by complexity and classroom time commitment.

Prepared by Chris O'Neal and Tershia Pinder-Grover, Center for Research on Learning and Teaching, University of Michigan



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Objective: Students will Master a Procedure that has Steps or Multiple Parts

JigSaw Activity

- Complete Part A of your True or False Quiz over Formative Assessments.



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Objective: Students will Master a Procedure that has Steps or Multiple Parts

JigSaw Activity

- You were given a playing card.
- Find others in the room with the same suit of (hearts/clubs/diamonds/spades) card you have.



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STOP!



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Warning! - Be sure you----

- **Have a Quiet Signal.**
- **Give directions of what the new group is to do – before the students move to the NEW group.**
- **Post directions on the slide – have them typed on the worksheets.**



Objective: Students will Master a Procedure that has Steps or Multiple Parts

JigSaw Activity

- You groups have been given an article on three types of assessments.
- Your group has a paper with the name of one of these assessments and some questions.
- Follow the directions on your paper.



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Objective: Students will Master a Procedure that has Steps or Multiple Parts

JigSaw Activity

- You were given a playing card.
- Find others in the room with the same suit or number of card you have (All the 2's, all the 3's, all the Kings, etc).



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Objective: Students will Master a Procedure that has Steps or Multiple Parts

JigSaw Activity

- Each person in your group is an “expert” on one of the assessment types.
- For the next few minutes – take turns and teach the other members of your group what you learned about the assessment type you studied.



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Objective: Students will Master a Procedure that has Steps or Multiple Parts

JigSaw Activity

- Complete Part B of your True or False Quiz over Formative Assessments with your group.



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Objective: Students will Master a Procedure that has Steps or Multiple Parts

JigSaw Activity

- Complete Part B of your True or False Quiz over Formative Assessments.
- How do your answers compare with your original answers?



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JigSaw Activity

https://www.newcastle.edu.au/__data/assets/pdf_file/0016/109600/Jigsaw-learning-activity.pdf

- A general topic is divided into smaller, interrelated pieces (JigSaw Pieces)
- Divide class into groups to study a topic (piece of the JigSaw) and become an “expert”
- Experts form groups with 1 member from each topic group to teach other members – Puzzle is assembled



Objective: Students will Master a Procedure that has Steps or Multiple Parts

JigSaw Activity

- Students are sorted into groups.
 - You will need at least as many students in the original groups that you will have groups in part 2.
 - If you have too many students, you can have 2 groups working on the same material.



Interactive Lecture

<https://serc.carleton.edu/introgeo/interactive/index.html>

Instructor breaks up the lecture at least once per class for an activity that lets all students work directly with the material.

- Students are asked to show their responses to the class and discuss any differences.



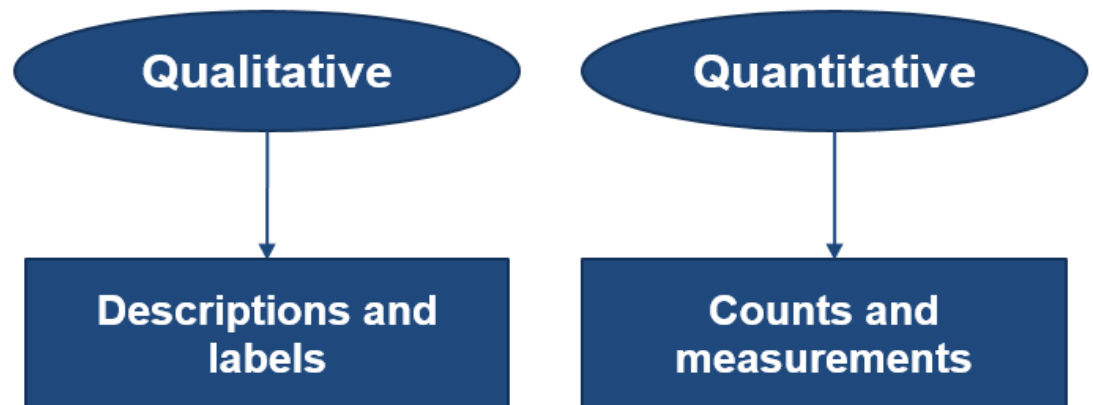
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Objective: Students will Sort Items into Categories Using Definitions

Interactive Lecture

Divide the stack of cards into these two categories.

Qualitative vs. Quantitative Data



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Objective: Students will Sort Items into Categories Using Definitions

Interactive Lecture

Take the pile of cards that you put in the Qualitative Pile and sort them Nominal or Ordinal

Levels of Measurement - Qualitative

Data at the **nominal level** of measurement are qualitative data consisting of labels or names.

Data at the **ordinal level** of measurement are qualitative data that can be arranged in a meaningful order, but calculations such as addition or division do not make sense.

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Objective: Students will Sort Items into Categories Using Definitions

Interactive Lecture

Levels of Measurement - Quantitative

Take the pile of cards that you put in the Quantitative Pile and sort them into interval or ratio.

Data at the **interval level** of measurement are quantitative data that can be arranged in a meaningful order, and differences between data entries are meaningful.

Data at the **ratio level** of measurement are quantitative data that can be ordered, differences between data entries are meaningful, and the zero point indicates the absence of something.

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Objective: Students will Sort Items into Categories Using Definitions

Interactive Lecture

Take a picture of your sorted cards with your phone to use as an example as you do your homework.



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Objective: Formative Assessment

Search & Rescue Quiz or Wrap Around Quiz

We need a volunteer – go stand by one poster.

Answer your question.

Find another poster with the answer to your current question. Move to that poster.

Repeat – until you are back where you began.



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Search and Rescue Quiz

<https://www.k-state.edu/assessment/toolkit/measurement/Special-Report-designing-better-quizzes.pdf>

- Create a set of quiz questions. On the bottom of the page write 1 question – on the top write an answer to one of the other questions in the quiz
- To create these – Create your questions and answers in order to form a chain with the answer to the last card on the first.
- THEN – go back and randomly number (or letter) the questions.



Search and Rescue Quiz

<https://www.k-state.edu/assessment/toolkit/measurement/Special-Report-designing-better-quizzes.pdf>

- Students rotate around room answering a question on their answer sheet, then finding that answer on another poster to go to the next question.
- Create a Rescue station, if desired – where students can go for help if needed (teacher – book – formula sheet)
- Expect students to talk to each other and you.



Objective: Formative Assessment

Search & Rescue Quiz

Tips for Search and Rescue:

- For a larger class, use multiple copies of each quiz question or create “dominoes”
- The first time – STUDENTS will need a LOT of help.
- Have enough questions (or multiple copies) so that each person (or group) has one to go to initially.
- Set ground rules!!!!!!!



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Objective: Formative Assessment

Help student's identify type of problem

Think – Pair - Share



One of these things is Not like the others....



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Think – Pair - Share

<https://serc.carleton.edu/introgeo/interactive/tpshare.html>

Provide a topic or question to students.

1. Students **THINK**.
2. Students pair up and talk about their results. (Provide an amount of time for each person to talk)
3. Share – Pick a few groups to share with the class.



Reflect

Success is more likely to be experienced by students who engage in reflective thinking about their learning experiences, elaborate on them and transform them into a form that connects with what they already know or have previously experienced

- *(Bruner, 1990; Ewell, 1997; Flavell, 1985; Svinicki, 2004; Vygotsky, 1978).*



<https://drive.google.com/drive/folders/1oRR2gaYkaXmAfPurjTDHOQliCArddZEj?usp=sharing>

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How to Make Groups

- Let Students Choose
- Hand out post it notes – group by colors
- Hand out a little toys or candy
- Create Problems – Students complete the problem and everyone with the same answer works together
- Animals
- Number off (1, 2, 3, 4)

<https://educationnorthwest.org/sites/default/files/InstructionalGrouping.pdf>



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