

## Student-Generated Test Questions

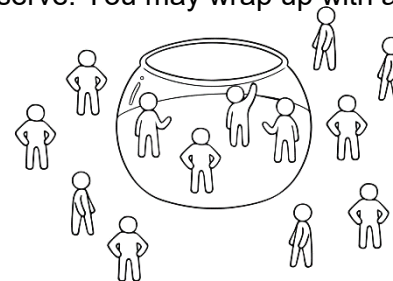
Student-generated test questions provide an opportunity for students to think more deeply about your course content. The act of creating a test question about information recently read, discussed in class, or viewed via video requires students to recall and process content. Ideally, students will create a question and answer that can be used on an exam, within the guidelines required by the instructor (e.g., MCQ, open-ended, essay).

Once written, students can try answering each other's questions or students can work in pairs or groups to write and/or answer questions.

Adapted from: <https://cte.psu.edu/teaching-learning/adopting-a-metacognitive-approach-to-teaching/student-generated-test-questions/>

## Fishbowl

Fishbowl is a strategy for organizing medium to large group discussions. Students are separated into an inner and outer circle. In the inner circle, or fishbowl, students have a discussion. Students in the inner circle unpack their ideas and thoughts on a topic in front of others. Students in the outer circle avoid asking questions, and just observe and take notes, then write a response. Students should be rotated in/out of the inside and outer circle so all have had a chance to discuss and observe. You may wrap up with a full class discussion or debrief.



Adapted from: <https://www.learningforjustice.org/>  
Image from <https://www.funretrospectives.com/fishbowl-conversation>

## Affinity Grouping

This activity is used to break down a topic to identify and classify its parts. Identify, then write each concept on sticky notes (or cards). Then in small groups, or one large group, sort and organize the slips of paper into categories to identify common themes. Create a heading for each grouping. If using small groups, have each group review each other's or have them explain their categories.



Adapted from the Curators of the University of Missouri 2014

## Directed Paraphrasing

Directed paraphrasing is an activity where students provide their own definition or explanation of a concept covered in class. This activity assesses student understanding of a course topic by their ability to translate into their own words. Students may be asked to paraphrase part of a lesson for a specific audience (e.g., fellow students, patient, other health care providers) and/or for a specific purpose.

Adapted from Penn State Harrisburg's Center for Teaching Excellence

## Clinical Case Boardwork Model

This method organizes whiteboard or digital workspace activities to facilitate understanding of clinical reasoning and problem-solving strategies in health sciences. The board should be divided into 4 sections:

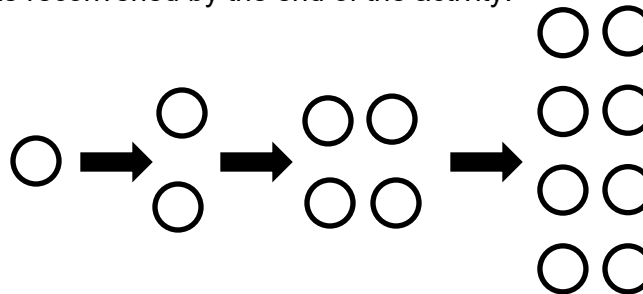
- 1 – Patient Case Background
- 2 – Clinical Reasoning Steps
- 3 – Narrative Explanation
- 4 – Additional Case Variation

Provide a patient case to students. Encourage one student to highlight key details in section 1 necessary for solving the problem. Then, encourage two students to simultaneously complete sections 2 and 3 on the board. Lastly, have another student complete the 4th section. Encourage students to use this model when studying outside of class.

Adapted from the Curators of the University of Missouri 2014

## Snowball Technique

The snowball technique is an active learning strategy that helps students share and teach each other concepts and topics. This technique allows the students to work in groups and build their knowledge gradually. Students begin this activity individually. They then create progressively larger conversational groups by doubling their group size every few minutes until everybody in the large group has reconvened by the end of the activity.



Adapted from <https://lf.westernsydney.edu.au/engage/strategy/snowball-technique>

## Peer Review

To assist students with writing assignments, encourage them to exchange drafts with a partner. The partner reads the answer or essay and comments on what they have read. It is recommended that the instructor provide a grading rubric or item checklist that specifies what should be graded or analyzed in the peer review. Peer reviewers should write specific feedback to help their peer partner improve.

Variations:

- students peer review written SOAP notes
- students peer review critiques of research articles
- students peer review research designs

Adapted from: Active Learning. Center for Excellence in Learning and Teaching, Iowa State University

## Grab Bag

Place problems, topics for discussion, course concepts, etc. on slips of paper into a hat or bag. Students or teams must grab a slip of paper and solve or discuss the problem/topic.

Variations:

- Students grab cards with ethical scenarios where they must decide on a course of action.
- Students grab patient scenarios including symptoms, test results and medical histories and discuss.
- Students grab medication names and must explain, prescribe and/or match to symptoms effectively.

The options are bound only by your imagination. The intrigue, of course, is in not knowing which slip of paper students will pull out.

Adapted from the Curators of the University of Missouri 2014

## Divide and Conquer

This strategy forces students to teach one another, rather than depend on the instructor to provide all of the material to students (i.e., lecture).

Example 1: Provide pairs or teams with concepts from the course. Have each team present/teach the concept to the class and include an example or demonstration. Each team is responsible for “teaching” their peers the concept and answering other students’ questions.

Example 2: This strategy can be used to conquer a difficult reading assignment. The assignment should be divided up into meaningful sections and each student (or team) should be assigned one section. Ask the students to read and summarize their section. After they all have read the material, have each student read aloud their summary. Encourage students to ask questions and be prepared to emphasize areas students may have overlooked. Lastly, discuss the article as a whole.

Adapted from the Curators of the University of Missouri 2014

## Group Survey

Each group member is surveyed to discover their position on an issue, problem or topic. This process ensures that each member of the group is allowed to offer or state their point of view.

Hints/Variations:

- A survey works best when opinions or views are briefly stated. Be sure to keep track of the results of the survey.
- Incorporate movement by having students stand in a continuum based on a Likert scale (e.g., strongly disagree to strongly agree; never to always) or quadrants of the room (e.g., multiple choice options). This helps visually represent each person’s position on the issue, problem or topic.
- Have groups collect data from their group, then share results with the larger group/class. Compare group vs. class data to emphasize sample vs. population data.

Adapted from the Curators of the University of Missouri 2014

## Role Playing

Role play exercises give students the opportunity to assume the role of a person or act out a given situation. These roles can be performed by individual students, in pairs, or in groups which can play out a more complex scenario. Role playing can help students: 1) stay motivated and engaged, 2) enhance your teaching strategies, 3) provide real-world scenarios to help students learn, 4) allow students to use skills from real-world situations, and 5) provide students with peer observation and feedback opportunities.

Sample role play exercises can include:

- Interviewing patients
- Taking patient histories
- Delivering bad news
- Conflict resolution
- Lifestyle counseling

Adapted from: <https://www.niu.edu/citl/resources/guides/instructional-guide/role-playing.shtml>

## Peer Lessons

Select several problems from related material. Divide the students into 4-5 groups. Give each group one problem and have them work on the solution, using their textbook and class notes, on a white board, flip chart paper, or a section of the board. Have each group come up and explain the problem in as much detail as they can. Have them show their thought processes and methods used in finding the solution. The instructor adds or corrects anything (s)he feels is necessary.

Adapted from the Curators of the University of Missouri 2014

## Send a Problem

This strategy can work in pairs or teams depending on the size of the class. Give the first group a case or a problem and ask them to identify (and write down) the first step in solving the problem or analyzing the case (3 minutes). Pass the problem on to the next group and have them identify the next step. Continue until all groups have contributed.

Variation:

- This can also be used for process-oriented concepts. Have pairs/teams identify the first step in a process (e.g., addressing a public health issue, emergency response plan, medical procedure), then pass the problem to the next group to identify the next step. This is a great exercise to check for understanding on these concepts/processes.

Adapted from the Curators of the University of Missouri 2014

## Give One Get One

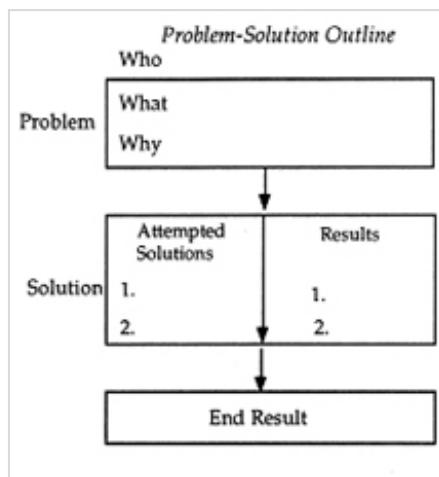
Students fold a piece of paper in half and write "Give One" on one side and "Get One" on the other side. On the "Give One" side, as them to write four insights from today's material. Have them stand up and find a partner. Each student shares one idea from their "Give One" side of the paper and writes down one idea on the "Get One" side of the paper. Find a new partner until your "Get One" side of paper is full of new ideas!

Give one, Get one	
Give One	Get One
My insight 1	
My insight 2	
My insight 3	
My insight 4	

Adapted from: Active Learning. Center for Excellence in Learning and Teaching, Iowa State University

## Problem-Solution Outline

Start by posing a problem to the whole class. Small groups of students will identify the Who, What, and Why of the problem. Groups share out and write the details on the board. Each small group then formulates a proposed solution. Groups swap solutions, as each group attempts to apply the other group's solution. Each group will detail the results discuss the proposed solution. Eventually a workable solution is identified and the whole group comes together to debrief.

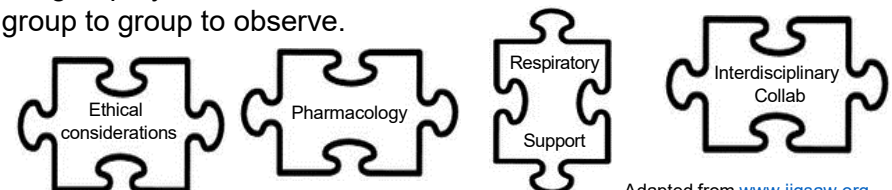


Adapted from <http://www.writedesignonline.com/organizers/sequence.html>

## Jigsaw

Divide students into 4-6 person jigsaw groups (or number of topic segments). Appoint one student from each group as the leader. Divide your lesson or reading into 4-6 segments (or equal to the number of topic segments).

Have each student learn one segment and provide them time to become familiar with it. Form temporary "expert groups" by having one student from each jigsaw group join other students assigned to the same segment. Expert groups discuss and clarify their segment, then join their original jigsaw group. Each "expert" will present their segment to the rest of the group so that each segment is taught to the group by individual students. The instructor should float from group to group to observe.



Adapted from [www.jigsaw.org](http://www.jigsaw.org)

## Stations

This activity offers an alternative to traditional lecture. It engages students by requiring them to move around the room and interact with learning materials as they examine, question, exchange ideas with peers, respond to prompts, and formulate their own thoughts.

Set out various "exhibits" around the room (e.g., flip chart paper, letters, quotes, multimedia presentations, charts, photos, cultural artifacts, specimens). Student groups will move among stations and complete a provided worksheet that gives directions and questions about each station in the exhibit.

Adapted from Student Engagement Techniques (Barkley, 2010)

## Hearing the Subject

Students "listen" to a text passage film clip, or audio clip, paying close attention to its forms of expression but refrain from evaluating or interpreting the work. Then in small groups, they paraphrase as much of what they witnessed to their team members as a warmup to a larger group discussion.

This activity encourages students to practice being still and to focus and concentrate on only audio cues.

Variation:

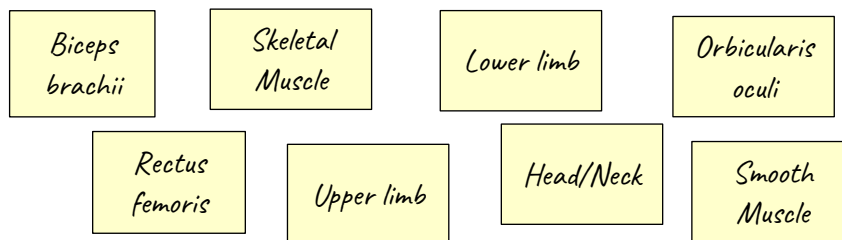
- Students listen to a segment of an educational podcast and discuss what they learn/heard
- Students listen to patient information and discuss a diagnosis
- Students listen to another health care provider and discuss how they may collaborate on a patient's care

Adapted from Student Engagement Techniques (Barkley, 2010)

## Moveable Elements

Give each group a set of cards or slips of paper with concepts or terms. Ask student groups to organize, sort, classify, and/or categorize the items.

Conclude the session by debriefing the answers, conversations, and discussions in the larger group by having each small group answer (and clarify, if necessary) their answers and categories.

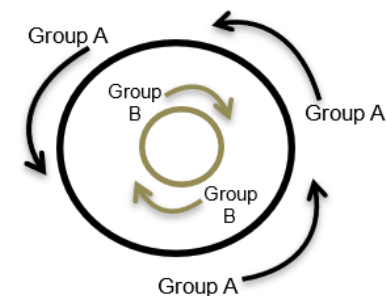


In anatomy, students sort and categorize various muscles with regions.

Adapted from Student Engagement Techniques (Barkley, 2010)

## Speed Dating

Students write definitions, concepts, quiz questions, etc. on index cards and form two concentric circles, facing each other. For thirty seconds (or 60), they share their knowledge with the person opposite them. Then, the outer circle "rotates" so that everyone has a new partner, and the sharing is repeated. This can be done until each student has completed the circuit.



Adapted from: Active Learning. Center for Excellence in Learning and Teaching, Iowa State University