### Icebreakers

**Improv games:** If your classroom is museum-level quiet no matter how you try to liven things up, try some low-stakes (read: not embarrassing) improv activities. In the three things in common game, pairs figure out the most unexpected things they share. Or challenge your students to count to 20 as a group with one person saying each number – but no one is assigned a number, and if two people talk at the same time, everyone starts again at 1.

**Koosh Toss:** Students take turns speaking on a topic. A student can only speak when they are holding the Koosh or some other soft toy and have a specified amount of time to speak (30 seconds to 1 minute is a good starting amount). All students must hold the Koosh at least once before it can be passed to people who have already held it. This activity ensures all students are given an opportunity to speak and helps to prevent the discussion being taken over by one or two people. Points can also be awarded for each person who holds the Koosh. An online version could make use of a digital toy that can be passed back and forth.

### Starting A New Topic

A discussion leader helps participants more fully consider a problem, issue, or Two Column Method concept by employing a two-column method of generating and recording responses to a prompt.

**Quescussion:** Ever played Jeopardy? Then you’re ready for quescussion. It’s like a standard class discussion but only questions are allowed (students call “Statement!” if someone slips up). If you play this game at the beginning of the course, the questions can help shape your course. Make sure to write them down

### Synthesizing Information

**Preconception / Misconception Check:** Focus is on uncovering prior knowledge or beliefs that hinder or block new learning; can be designed to uncover incorrect or incomplete knowledge, attitudes, or values.

**Learning Journal:** Students are asked to reflect in writing about the learning experiences they have undergone. They are encouraged to become conscious, through language, of what is happening to them. A widely used technique in this regard is a learning journal, a reflective log or diary students keep over time.

**One Sentence Summary**: Students answer the questions “Who does what to whom, when, where, how, and why?” about a given topic and then creates a single informative, grammatical, and long summary sentence.

**The one-minute paper:** How much could you explain in one minute? At the end of class, set a timer and ask students to write down their most eye-opening revelation or biggest question. This activity lets students reflect on learning and build writing skills – plus you’ll get a window into their understandings and misunderstandings. Here are more prompts you can use to get students writing.

**Concept Maps:** Use your walls or displays to visually organize ideas. Collaborative concept mapping is a great way for students to step away from their individual perspectives. Groups can do this to review previous work, or it can help them map ideas for projects and assignments.

1. Instructor provides students with clear instructions on the principles and guidelines for concept mapping.
2. Instructor provides students with a topic, question or problem to base their concept maps on. Concept maps may be based on (a) a singular question, (b) a single concept, (c) multiple concepts to compare and contrast, or (d) an explicit list of concepts and/or sources to be incorporated.
3. Students, individually or in groups, identify (or are provided) the key components of their concept map; they discuss relationships between components and the meaning of the links (e.g., are they causal).
4. Students (peer to peer, group to group, group to class), compare, contrast and justify their concept maps (i.e., the relationships and selection of concepts, if applicable).
5. Students/groups of students annotate, and peer review their colleagues’ concept maps, making suggestions for alterations/improvements.
6. Individually or in groups, students analyze their existing concept maps, adding, organizing and linking additional materials.
7. Instructor reviews student concept maps, providing feedback on ways to improve the map.

**Paired Annotations:** Students read and take notes then pair with another student who read the same piece. In this pair, students discuss main ideas, discuss divergent and convergent thinking, and submit a composite annotation that summarizes the group ideas.

**Role Playing:** Students are given a situation and a role to play of a character in the situation. Without practice, they act out the events in the situation.

**Imagine:** Through visual imagery, students create their own ideas. This can be effective as a creative supplement to collaborative learning. It can also serve as a springboard to an independent project that may initially seem overwhelming to students.

**Sketchnoting:** Instead of taking traditional lecture notes, try getting your students to sketch a picture that represents what they’ve learned during class. Remember, it’s not about the quality of the art – it’s about how drawing prompts students to visualize their understanding and look at their learning from a different perspective.

**Brainwriting:** You’ve probably tried brainstorming, but have you tried brainwriting? In this approach, students begin by coming up with their own ideas, either on paper or using visual collaboration software. Building in time for individual reflection leads to better ideas and less groupthink.

### Problem Solving

**Case Study:** These are real world descriptions of problems with all accompanying data. Groups are asked to resolve the problem within a given period of time. Each group makes recommendations while the instructor acts as moderator.

**Jigsaw**: A general topic is divided into smaller, interrelated pieces; each member of a team is assigned to become an expert on (or read about) a single part. Members come back together to teach the other members their part of the topic.

**Jigsaw with Groups:** Help students build accountability by teaching each other. Start by dividing them into “home groups” (4 or 5 people works well). Assign each person in the group a different topic to explore – they’ll regroup to work with all the students from the other groups who are exploring the same idea. Once they’ve mastered the concept, students return to their home group and everyone shares newfound expertise.

**Presentations / Poster Session:** An excellent way to inform students quickly, capture their imaginations, and invite an exchange of ideas among them. A graphic way of enabling students to express their perceptions and feelings about a topic you are currently discussing in a nonthreatening environment.

**Generating Test Questions:** Students generate test questions and model answers for critical areas of learning.

**Create Scenarios / Simulations:** This presents cases, problems, scenarios, etc. in which the students must role play. A critical situation is discussed and analyzed, and decisions are made about how to resolve the situation.

**Pyramiding / Snowball Groups:** Given a problem, students first work alone, then in pairs, and finally in foursomes and compare, refine, and revise their conclusions/recommendations.

**Focused Listening:** Focuses students’ attention on a single important term, name, or concept from a lesson or class session and directs students to list ideas related to the “focus.”

**Memory Matrix:** Students complete a table about course content in which row and column headings are complete, but cells are empty.

**Think, Pair, Share:** Students turn to someone near them to summarize what they’re learning, to answer a question posed, or to consider how and why and when they might apply a concept.

**Think-pair-repair:** In this twist on think-pair-share, pose an open-ended question to your class and ask students to come up with their best answer. Next, pair learners up and get them to agree on a response. Get two pairs together, and the foursome needs to do the same thing. Continue until half the group goes head to head with the other half.

### Checking for Understanding

**Muddiest Point:** Considered by many as the simplest assessment, students respond to one question (What was the muddiest point in \_\_\_?); well suited to large, lower division courses but not to those which emphasize integration, synthesis and evaluation.

**Student Response Systems / Polling:** Short, self-grading assessments not completed for an accuracy grade. Answers (and distribution of student answers) are provided to the students after completing the poll.

**Chain notes:** Write several questions on pieces of paper and pass each to a student. The first student adds a response (use a timer to keep things moving quickly) and then passes the page along to gather more responses. Multiple contributions help build more complete understanding. A digital alternative involves using apps to share responses both simultaneously and anonymously. Then your class can examine the responses and identify patterns and missing pieces.

### Encouraging Critical Thinking

**Peer Review:** The process of peer review is as old as academia, and it’s never too early to start. Have students swap drafts of their essays, proposals or lab reports, and then come up with comments and questions for each other. Make sure to be clear about what the goals are (using rubrics helps). For example, students could identify compelling arguments, unanswered questions and holes in logic.

**In the News:** An interesting way to get students involved and arouse their interest in the topic even before they attend the class. This approach will also result in a wealth of material and information that can be shared with all students.

**Mystery quotation:** Test how well students can apply their understanding of an issue or theoretical position. After they’ve explored a topic, show them a quotation about it they’ve never seen before. Their task is to figure out the point of view of the person behind the quotation – and justify it to the class. Students can debate this issue in small groups before beginning a whole-class discussion.

**Idea speed dating:** Have students cycle through your space, sharing insights about a topic or their elevator pitch for an upcoming project. As they present their learnings multiple times on several “speed dates,” students’ presentation skills and perspectives will grow.

### Discussing Values and Attitudes

**Structured Controversy** is a systematic, and sequential method for stimulating critical and creative thinking, promoting student collaboration, and ensuring that students view an event or problem from multiple perspectives.

**Empathy mapping:** Take a page from the designers’ handbook and get students to explore deeper by embracing a perspective. It’s deceptively simple – write down what a person says, thinks, does and feels. The ability to slow down and immerse yourself in another point of view is valuable. In design thinking, empathy maps help designers create better products for users. But this process can be just as valuable for analyzing characters from literature, historical figures or political stances.

**Reciprocal Peer Questioning:** Instructor provides question stems such as Describe...in your own words, What does \_\_\_\_\_\_\_ mean, How are \_\_\_\_\_ and \_\_\_\_\_ similar, Explain why \_\_\_\_\_ and how \_\_\_\_\_, etc. Students then develop specific questions from the given stems and provide answers.

**Classroom Opinion Poll:** Students indicate degree of agreement or disagreement with a statement or prompt.

**Corners:** Questions are placed in each corner of the room and students split into groups. Groups go to corners and come to consensus on an answer and respond directly on the paper. Groups rotate and revise, expand, illustrate the response with additional information.

**The Silent Question:** Students respond to the prompt “A question I still have about this topic but have been afraid to ask is...” Instructor then addresses questions if time permits, or at the next class.

**Idea line up:** Choose a question that has a range of responses, and then ask students where they stand – literally. Have them come to the front of the classroom and organize themselves in a line, based on where on the spectrum of answers they find themselves.

**Real-time reactions:** When students are watching a video, a mini lecture or another student’s presentation, have them share their real-time reactions. This helps students spot trends and consider new points of view. You can set up a hashtag to allow for live tweeting, or use cloud-based collaboration software displayed at the front of the room to get the same effect with none of the distractions.

**Gallery of Learning:** This activity is a way to assess and celebrate what students have learned over a course of study.

**Fishbowl:** The instructor asks for four or five volunteers to perform a given task. The task might be a physical procedure such as preparing a specimen slide for a microscope, or an analytic activity such as debating the pros and cons of an issue.As the group of volunteers engage in the task (in a virtual “fishbowl”), the other students observe, taking notes or assessing their performance. The instructor can ask observing students to focus on specific aspects of task performance. After the students in the fishbowl have completed their task, the other students report on what they observed or what they learned from watching. The fishbowl activity works well in large classes where it might not be possible for everyone to engage in the same task: the students in the fishbowl act as proxy learners for their peers. The observing students learn not by doing the task but by reflecting on how the task is being done.