Active Learning Techniques

	In the Classroom	Online	Self-study
Writing	**One-minute paper** • A very short piece of writing, usually written in-class without time for planning or revision. • Can be used effectively to activate prior knowledge, reflect on a particular problem or concept, or check for student understanding • Key is to give students a clear question prompt.	**Blogs** • Online writing, by students in their own time. • Can be used as a formal assignment to encourage students to explore a particular disciplinary topic or more informally for students to comment on their learning process throughout the course.	**Literature Review** • An in-depth writing assignment that requires students to research a particular topic and summarize and synthesize the relevant literature • Can be effective as a formal assignment to give students an opportunity to go more in-depth into a topic of their choosing, or to develop their research skills.
	Muddiest Point • A version of the one-minute paper where students write for a minute or two on the concepts or material that most confuses them. • If collected, these statements can be very helpful for seeing whether and where students are getting lost.	**Wikis** • Collaborative web pages useful for group projects. • Ideal for students who do not live in close proximity or who have conflicting schedules, making it difficult to work on the project at the same time. • As participation and editing is tracked, the contribution of each individual is transparent.	**Lab Report** • A formal report that documents a laboratory experiment • Can be used effectively to give students practice analyzing and reporting their results, as well as drawing connections to other research on the subject
Discussion	**Think-Pair-Share** • The goal is to give students a chance to collect their thoughts, and then pair up with a partner to discuss their ideas. • Very useful for encouraging all students to participate in discussions.	**Discussion Groups** • Can be used effectively to encourage students to articulate their ideas, even when outside of class or when alone	**Learning Groups** • Groups of students who study together, both to learn the material as well as to improve their study habits and techniques • Can be used to encourage active learning outside the classroom, and to give students practice developing higher order thinking skills
	Debates • A structured discussion with two sides (individuals or teams) taking opposing positions • Can be used effectively to help students realize the reasoning for different positions and perspectives	**Online office hours** • Provide an opportunity to meet with students virtually. • Can be used also to conduct office hours with many students at once.	**Group Project** • A formal assignment that encourages students to collaborate to develop a specific topic in more detail. • Can be used effectively to provide authentic assessment where students focus on more complex issues and problems to develop solutions and strategies

Visualization	**Flow Charts** • A chart that helps students see how a particular process or activity unfolds • Can be used as an effective study tool, as it provides students with other ways of working with course material	**Matrix** • A grid or table that students construct in order to map the similarities and differences in concepts or theories according to specified criteria. • Matrices can be very helpful supports for students when analyzing and synthesizing complex material	**Concept Maps** • A diagram that illustrates the connections between related concepts. • Can be very useful to help students see patterns or common themes in course material
	Image Quiz • A type of quiz that asks students to locate a particular item on an image or diagram.	**Diagrams** • Depending on the discipline and topic, different types of diagrams may be useful for explaining ideas or results	**Timeline** • Timelines are especially useful for tracking events across time.
Reflection	**Meta-Statement** • Prompts students to write a short paragraph reflecting on their own learning. • For example, one prompt might be to explain how they would improve an assignment if they had the time or opportunity before submitting it. • Can be effective for encouraging students to evaluate their work from more objective perspective whether they write it before handing in their papers or after they have received feedback.	**e-Portfolio** • Encourages students reflect on their learning process and develop their meta-cognitive awareness of their strengths and limits in mastery of course material. • Artifacts (written assignments, concept maps, feedback, images, etc.) from course-work and learning experience are posted online with written narrative explaining their choices and how they reflect their learning.	**Create self-test questions** • Have students design their own exam questions • Can be very useful for helping students improve their learning by thinking about the course material from the instructor's perspective
	Re-order List Quiz • A type of quiz that has students put a disordered list into the correct order. • Can be very useful to check student comprehension of important processes or procedures • Also a technique for helping build editing and evaluation competencies. **One word** • Consideration of how one word captures the experience of the class or activity • Can provide insight into student experience	**Learning Journal** • Students document their learning process; this could be **in or out of class** • Encourages students to reflect on their learning process throughout the term. • Students write regular entries in response to clear prompts related to course material or their understanding of it. • helps students learn to articulate their thoughts and questions, and to see the progress they've made and notice patterns in the course material.	**Reflective Essay** • A short assignment that can either be written in class or at home. • Useful for getting students to step back from the material to think about their own understanding of it (and strategies for moving to the next level) or patterns within it (developing a richer understanding). • It is important to give students a clear prompt to help them focus.

Critical Thinking	**Numerical Response quiz** • A type of quiz that can be administered through Classroom Response Systems or through self-testing • Presents students with a problem or question that has a particular number for an answer.	**Breakout group problem solving** • Students work together to solve an assigned problem • Can be very useful to do as an exercise in class to give students an opportunity to practice problem solving with their peers in a context where the instructor can step in and correct misconceptions	**Problem Sets** • A series of problems related to course concepts and materials that students are assigned as homework • Repeated practice helps students to build their problem-solving skills, and to better understand different types of problems and the different approaches that are effective.
	Peer Review • Can be done in-class, outside of class, or through technology such as Blackboard or PeerScholar. • Students will need instruction for how to give effective feedback (rubrics and models are very helpful for this), • To ensure that all students participate, the exchange of papers should be organized by the instructor or TA.	**Argument Map** • A form of concept map or a diagram • Students identify the connections between the conclusions and the premises and evidence. • Effective way to visualize complex arguments, and provide alternate formats that support diverse learners.	**Critical Review** • A short assignment that asks students to critically evaluate a particular work (book, article, film, artwork) in detail, according to specific criteria • Can be very useful to help students build skills in analysis
Games	**Problem-solving contests** • The class is divided into teams and compete to see which team can accurately solve an assigned problem first.	**Jeopardy** • Based on the TV show of the same name, this game provides students with columns of answers on varying topics and complexity and requires them to articulate the appropriate question. • Individuals compete to see who can win the most by answering correctly the most (or the most difficult) questions	**Flash Cards** • A method for students to self-test. On one side of the card is a question or problem, and on the other side is the answer. Teams or individuals can compete to see who gets the most answers correct
Your ideas?			