



MIND MAP

A VISUAL-SPATIAL LEARNING TECHNIQUE

COMPLEXITY	Effort to Facilitate:	Low	Medium	High
	Effort to Participate:	Low	Medium	High

WHAT IS IT?

A mind map is a diagram that visually represents the relationship between a central idea or concept (usually located in the middle of the page) and one or more other components (e.g., related ideas, concepts, events etc., usually arranged around the central idea or concept). Mind maps frequently employ radial hierarchy and tree structures/branching to portray different levels of association and connection to the central concept. For example, concepts that are closely related to the central idea or concept will be connected to it directly. They can either stand on their own or serve as the central idea or concept for a new branch of associations.

ACTIVITY INSTRUCTIONS

1. Write the central idea or concept in the middle of a piece of paper, a writing wall, or a (virtual) white/blackboard.
2. Alone or in groups, students brainstorm what other ideas, concepts, or events are related to the central concept in the middle and write them down in no particular order. When working in groups, students either develop competing mind maps or work on different (pre-determined) sections of the same (single) mind map.

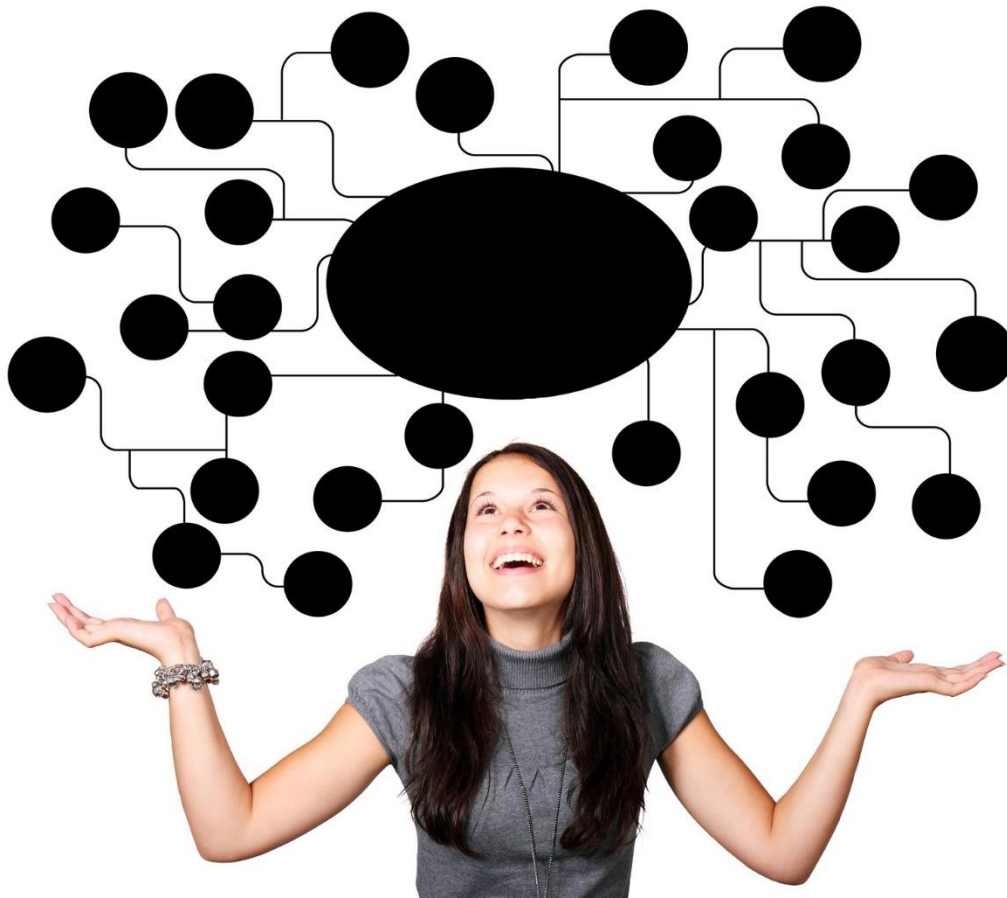
Note: Creation and sourcing of appropriate visual elements can take place in real time.

3. Students organize the information by identifying the most important ideas and connecting them to the central idea or concept. Then, they go over the remaining ideas and connect them to other categories

Optional: Students can use color to add additional layers of meaning to their mind maps.

4. Students reorder the information, so the mind map is easier to read.
5. As the final step, this activity may be completed with a review, debrief, or visual walkthrough. This approach provides students with an opportunity to share their thoughts, asks questions, and identify potential misunderstandings

Note: The review/debrief/visual walkthrough may be conducted involving the entire class as a group, affecting changes to the shared mind map in real time, and immediately reproducing the finished item for all participants as a shared record and common base of understanding.



LEARNING OUTCOMES

What will students gain?

- Problem-solving
- Brainstorming
- Organizing ideas
- Study skills
- Creative thinking
- Communication
- Visualization
- Teamwork



As visual learning and thinking tools, mind maps enable students to express themselves through a mixture of linear and visual (non-linguistic and associative) means of communication, and hence can assist in bridging language and other barriers to traditional communication. They also promote the conversion of abstract ideas into concrete and visible representations; scaffolding and advance organization of prior knowledge; the development of structured learning and interpretation; separation of components based on relative importance and hierarchical relationships; and cross- as well as interdisciplinary thinking.

TIME REQUIREMENTS

Activity	Time/student	Time/class
Writing down the central idea/concept:		05 min.
Brainstorming other ideas:		10-15 min.
Organizing ideas:		10-15 min.
Class debrief or assessment:		10-25 min.
TOTAL:		35-60 min.

POTENTIAL CHALLENGES

- Students may not be familiar with the technique or technology-enabled tools. Make sure to provide concrete examples and a brief introduction for everyone (ideally accompanied by written instructions) and offer additional help to those who require it.
- If students work alone or in small groups, there may not be enough time to discuss everyone's mind map in class. Moreover, some students may not feel comfortable presenting their mind maps in front of the entire class. Consider debriefing as a group or using [peer assessment](#) so that everyone receives feedback.

HELPFUL STRATEGIES

- If students work together, furniture should be tucked away to provide maximum space.
- Writable walls or (virtual) white/blackboards can be used to generate various iterations of the mind map(s).
- Mind maps can be photographed and shared using the [Media Collection](#) activity in eClass.
- Technology-enabled tools such as [Miro](#) or [Google Jamboards](#) can help recreate sophisticated mind maps and pin layers of content and supplemental images.

ADDITIONAL RESOURCES

Budd, J.W. (2010). Mind maps as classroom exercises. *The Journal of Economic Education*, 35(1), 35-46. <https://doi.org/10.3200/JECE.35.1.35-46>.

Eppler, M. J. (2006). A comparison between concept maps, mind maps, conceptual diagrams, and visual metaphors as complementary tools for knowledge construction and sharing. *Information Visualization*, 5(3), 202-210. <https://doi.org/10.1057/palgrave.ivs.9500131>

Farrand, P., Hussain, F., & Hennessy, E. (2002). The efficacy of the 'mind map' study technique. *Medical Education*, 36(5), 426-431. <https://doi.org/10.1046/j.1365-2923.2002.01205.x>

Willis, C.L., Miertschin, S.L. (2006). Mind maps as active learning tools. *Journal of Computing Sciences in Colleges*, 21(4), 266-272. Retrieved from <https://dl.acm.org/doi/10.5555/1127389.1127438>

Moodle Media Collection plugging (description): https://moodle.org/plugins/mod_mediagallery

Miro online collaborative learning platform and mind mapping tool: <https://miro.com/>

Google Jamboard (Google login required): <https://jamboard.google.com/>

Would you like to learn more?

Contact us at Teaching Commons for additional resources, handouts, applications, courses, workshops, examples, advice, assistance, one-on-one consulting, and everything else related to teaching and learning. We are happy and eager to assist you!



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