

VISUAL THINKING: MAPPING AND DIAGRAMMING

OVERVIEW

Concept mapping can be an effective way to help students gather, organize, and test their knowledge. Similar to mind mapping, which is primarily a brainstorming tool, concept mapping has a specific drive to map connections and interdependencies. Concept mapping requires the inclusion of linking words that indicate relationships (correlational, causal or otherwise) as a key component to the process. Concept mapping can also identify gaps in student knowledge.

MAPPING AND DIAGRAMMING ACTIVITIES

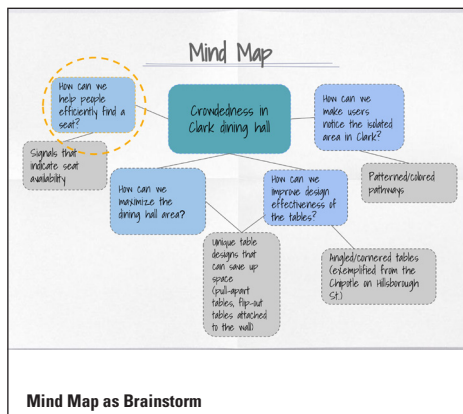
Mind Mapping

Mind mapping is an open-ended and simple way to help students make visible their existing knowledge or preliminary research connected to an idea or problem. It encourages visualizing a “train of thought.” The main components of a mind map are nodes and lines. The general organization of a mind map can focus on broad themes or specific components (who, what, why, where, and how), or it can be chronological. Mind maps are effective in broadening the understanding of concepts and encouraging brainstorming.

They can also be used in the peer-review process. For example, students may trade paper drafts and map their fellow student’s main claim, supporting arguments, and evidence to see how effective the paper is in communicating the main parts of the argument.

Concept Mapping

Similar to mind mapping, concept mapping is a strategy for diagramming concepts and ideas. The main difference between the two is that concept mapping also includes linking verbs that demonstrate a specific relationship between the two ideas. Concept mapping is particularly effective in testing students’ knowledge and understanding of course content, and organizing and demonstrating more advanced research into complex issues.



Mind Map as Brainstorm

READINGS & RESOURCES

Dubberly, Hugh. *Creating Concept Maps*. <http://www.dubberly.com/concept-maps/creating-concept-maps.html>

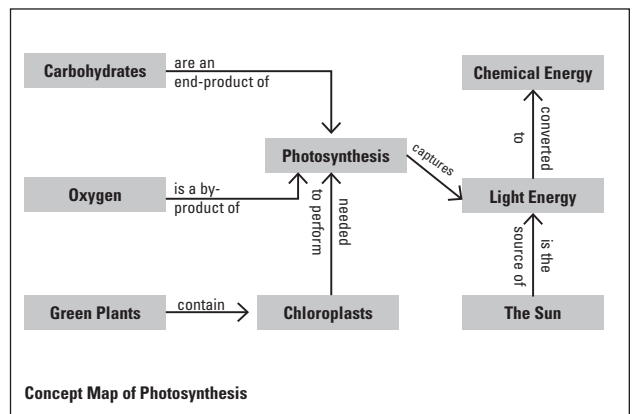
Ritchhart, Ron, Church, Mark, Morrison, Karin. *Making Thinking Visible: How to Promote Engagement, Understanding, and Independence for All Learners*. Jossey-Bass, 2011.

See also:
Collaborative Learning at
<https://think.dasa.ncsu.edu>

The steps of creating a concept map are:

1. Create a list of words/ideas related to the idea you are exploring.
2. Edit that list for relevance.
3. Organize the lists around common terms and ideas. Give those hierarchy.
4. Connect the terms with linking verbs.

Procedural concept maps can start with the first step of the process.



Concept Map of Photosynthesis