

Concept Mapping

Overview:

A diagrammatic way of representing relationships between ideas, words, or images. The key ideas, words, or images are connected by arrows with linking words that explain the connection between two points, and are arranged in a hierarchical, multi-level fashion.

Purpose:

Concept mapping is an active learning strategy that helps students see connections between concepts, ideas, and facts while also challenging them to think beyond the obvious to see the bigger connection.

Concept maps help students dig into a topic in detail as they start with a topic and then work to identify sub-topics. They help students organize their new learning by making sense of it in a visual manner. Research shows that visual learning produces better recall than auditory learning. The biggest benefit of a concept map, however, is that they not only show you ideas but the relationships and connections between and among those ideas, taking learning to a deeper level.

Application: When and where can I use it?

Students can be asked to create concept maps at the start of a new unit, serving to activate prior knowledge and provide the teacher with some pre-assessment information. Concept maps can also be used as an effective review activity at the end of a unit with students being challenged to organize their thinking, find connections between ideas, and integrate information into meaningful schema. Any time you are presenting students with a chunk of new learning, particularly if that learning involves new vocabulary, you can pause and ask students to make sense of that new learning through the creation of a concept map.

Getting Started: What are some tips for starting and using this routine?

Typically, in a concept map, the “concepts” are represented by ovals or rectangles (labeled with a word or two for the concept). The connections between the concepts are represented by arrows showing the relationship. The arrows often include a connecting word or verb that explains the relationship between the two concepts. Depending on the level and purpose for the concept map (i.e. pre-assessment vs review), you may give the students the concepts/words/ideas you want them to work with or you can ask them to generate what they believe are the most important concepts to work with. You can also differentiate the level of scaffolding or challenging involved by providing students with a concept map template to fill in, or ask them to create their own.

To help emphasize the value of stretching their thinking and finding/articulating relationships between concepts that may not be obvious at first, it can be helpful to have students write each concept on an individual sticky note or index card so that they have the freedom to move the ideas around before settling on the final concept map.

Having students work in small groups to create a concept map, and then asking each group to explain their thinking to the other members of the class promotes communication, collaboration, and compromise while requiring students to explain and justify their thinking as they make connections between and among concepts.

Concept maps can be made using pen and paper; sticky notes, chart paper and markers; or they can be made on a digital device. Encouraging students to add color and visuals to their concept map also serves to help students retain the information on their concept map.

See this Instructional Move in action:

[concept mapping - Bing video](#)

[Teacher Toolkit: Concept Maps \(High School\) - Bing video](#)

Read more about this Instructional Move

[What is a concept map: definition and types | Miro's blog](#)

[Concept mapping as a learning strategy: Impact on undergraduate biology students' achievement, self-efficacy, and metacognition - Research Outreach](#)