

# Concept Mapping

## General

Concept mapping is a [cognitivist learning model](#) developed by [Joseph Novak](#) and his colleagues in 1972 as they worked on understanding how children's knowledge of science changes<sup>1)</sup>. First mind maps were proposed by some other authors as well<sup>2)</sup>, concept maps in their almost final form were introduced by Novak in 1981<sup>3)</sup>. In Novak's words, concept map is “a **visual representation of the relationships between concepts** held by an individual, materials of a lecture, textbook, or laboratory exercise”<sup>4)</sup>. Novak's works are based on Ausubel's [assimilation theory](#).

## What is concept mapping?

**Concept maps should help both sides in the educational process** to learn more meaningfully.

Novak describes the concept map building process in following steps:

- **Identification of key concepts of the material**
- **Ranking the concepts** by placing most important ones at the top of the map
- **Adding other concepts** under the main ones
- **Connection of concepts by lines and labeling** those connections with linking words
- If desired **specific examples of concepts can also be added** below concept labels

An example of a concept map about concept maps can be found [here](#).

## Bibliography

[Novak, J. D. Introduction to concept mapping.](#)

[Novak, Joseph D. & Cañas, Alberto J. The Origin and Development of Concept Maps](#)

<sup>1)</sup>

[Novak, J. D., & Musonda, D. A Twelve-Year Longitudinal Study of Science Concept Learning. American Educational Research Journal, 28\(1\), 117-153. 1991.](#)

<sup>2)</sup>

[Stewart, J., Van Kirk, J., & Rowell, R. Concept maps: A tool for use in biology teaching. American Biology Teacher, 41\(3\), 171-175. 1979.](#)

<sup>3)</sup>

[Novak, J. Applying learning psychology and philosophy to biology teaching. The American Biology Teacher, 43\(1\), 12 – 20. 1981.](#)

<sup>4)</sup>

[Novak, J. D. Introduction to concept mapping.](#)

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