

## Using Concept Maps for Formative Assessment

According to Nilson (2010), “Concept maps are quite easy to write instructions for and to assess, which is why they make good gradable assignments and tests” (p. 244).

After explaining to students the purpose of a concept map, share an example of an effective concept map and discuss with students what makes it effective. You might also share a partially completed concept map and have students work in small groups or with the full class to complete it. Be sure students are prepared with enough knowledge on a topic and can understand the connections between its subtopics before asking them to complete a concept map as part of an assessment.

Nilson (2010) provides five evaluative dimensions for assessing concept maps:

- The number of concepts included, unless you provide them
- The number of valid propositions (links between concepts)
- The number of valid levels in the hierarchy
- The number of valid cross-links
- The number of valid examples (p. 244)

You might consider using the following grading system, adapted from Novak and Gowin (1984), to assess students’ concept maps.

	Point Value	Number Included	Points Achieved
Concepts	1 pt.		
Propositions	1 pt.		
Hierarchical Levels	5 pts.		
Cross-Links	10 pts.		
Examples	1 pt.		

Scoring Key:

A = 68–75 points

B = 60–67 points

C = 53–59 points

D = 45–52 points

F = 44 points or below

You can also evaluate students’ concept maps with a rubric, like this example from the University of Wisconsin–Stout:

<https://www2.uwstout.edu/content/profdev/rubrics/inspirationrubric.html>