

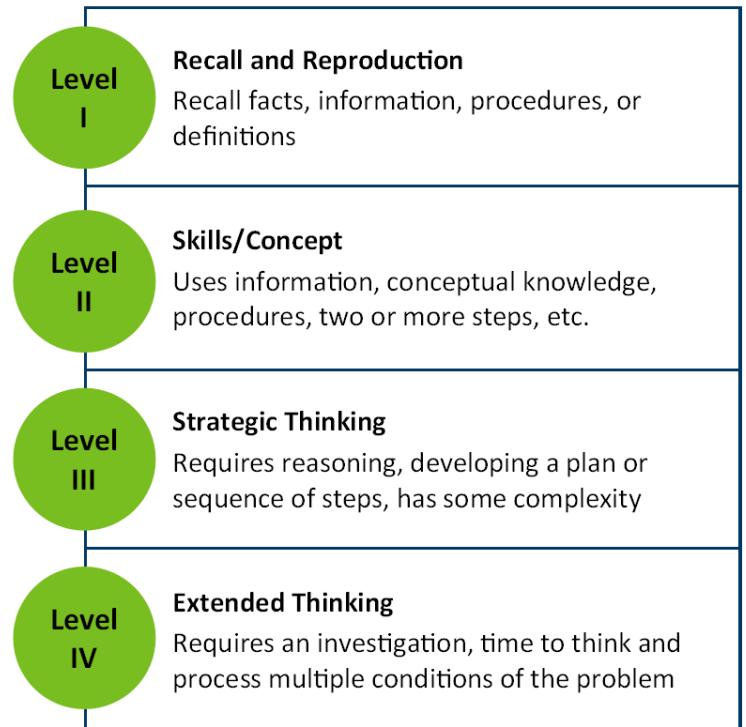
Purpose

Cognitive complexity provides insight into the level of thinking and reasoning required for a particular test item. The mental processes associated with a test item are thinking, knowing, remembering, judging, analyzing, and problem solving. Minnesota uses [Norman Webb's Depth of Knowledge \(DOK\)](#) as a guideline when measuring the cognitive complexity of a test question.

Norman Webb's Depth of Knowledge (DOK) has four cognitive levels: DOK I, II, III, and IV. DOK Levels I through III are assessed on the MCAs as well as in the classroom. DOK Level IV is assessed in the classroom but not on the MCAs. To learn more about the percentage of DOK Level I - III questions on each assessment, please refer to [Test Specifications](#).

Application

The MCAs use Webb's Depth of Knowledge, and it is important to consider the cognitive level of the questions your students have experience answering. Teachers can expect their students to answer DOK I, II, and III questions on the MCAs.



[Cognitive Levels of Webb's Depth of Knowledge](#)



Guiding Questions

Here are some questions to consider when determining the cognitive complexity of a question or classroom activity.

- How many steps must students take to answer the question?
- Are the steps procedural or decisional?
- What is the complexity of the thought process needed to answer the question?
- Is this more of a unique situation or does it mimic a practiced situation?
- How many possible responses could be considered correct?
- Does the question merely require identification or a definition?
- Does the question require the application of a skill to a unique situation?
- Does the question require analysis of a situation and decisions about what method(s) to use for solving?