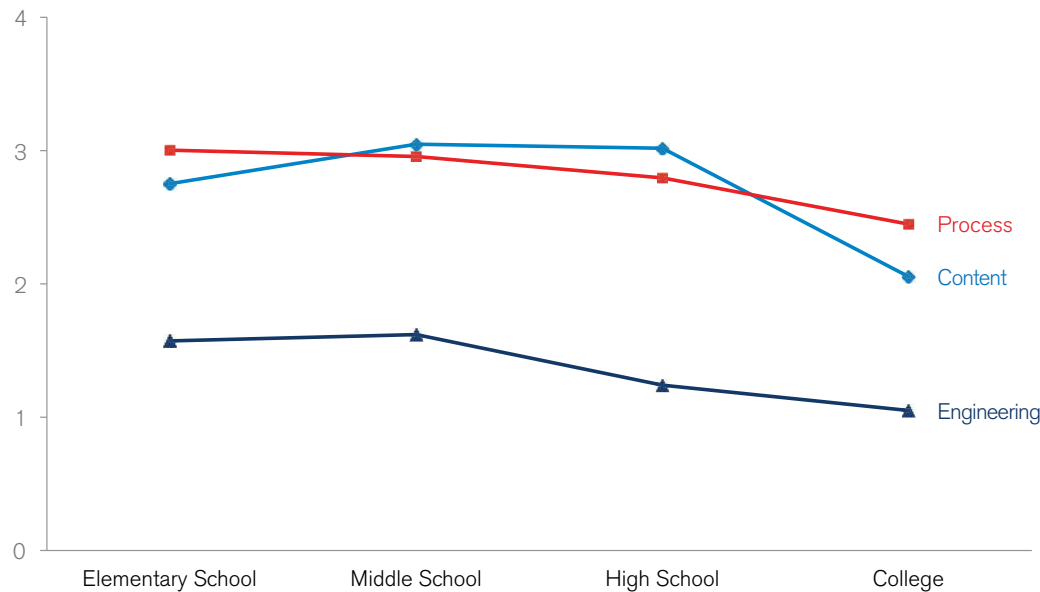


ACT National Curriculum Survey®: K–12 and College Science Educators’ Ratings of Science Content Topics, Science Process Skills, and Engineering Practices and Topics

Average Importance Ratings for Science Content Topics, Science Process Skills, and Engineering Practices and Topics



Note: Importance ratings in the survey were labeled as follows: 0 = Not Important, 1 = Low Importance, . . . 4 = High Importance.

Because the framework for the recently released Next Generation Science Standards includes engineering as a primary component of K–12 science curricula, we asked participants in the 2012 ACT National Curriculum Survey to rate the importance of a group of engineering practices and topics.¹ This group included both content and processes specific to engineering. We also asked participants to rate the importance of general science content topics (the established body of knowledge about physical and natural phenomena) and of general science process skills (e.g., making observations and measurements, designing and refining experiments,

considering variables, making predictions, and drawing inferences and conclusions).

Survey participants rated engineering practices and topics as much less important than science content topics or science process skills. These results suggest that, in contrast to its prominent inclusion in the Next Generation Science Standards, engineering is not an important part of the current science curriculum. ■

¹ ACT, Inc., *ACT National Curriculum Survey 2012: Science* (Iowa City, IA: Author, 2013). <http://www.act.org/research/policymakers/pdf/NCS-Science.pdf>.

Instructors at all levels consistently rate engineering practices and topics much lower in importance than both science content topics and process skills.

Every three to five years, the ACT National Curriculum Survey asks educators about what they teach (or don't teach) in their courses and how important they feel various topics in their discipline are for students to know to be successful in future coursework. The survey also asks educators for their opinions on educational topics of current interest, such as the college readiness of their students or the implementation of improved standards like the ACT College and Career Readiness Standards or the Common Core State Standards.

This brief highlights a finding from the 2012 *Science* survey.