

Engineering Literacy Dimension: Engineering Habits of Mind

Overview: *Creativity* is the ability to think in a way that is different from the norm in order to develop original ideas. A creative habit of mind enables an engineering literate individual to perceive the world in novel ways, to find unknown patterns, and make new connections between seemingly unrelated information, in an effort to develop innovative ideas or solutions to problems. This Engineering Habit of Mind is important to Engineering Literacy as finding new ways to apply knowledge and experience is essential in engineering design and is a key ingredient of innovation. When everyone thinks exactly the same way, there can be a lack of technological and societal advancement (NAE, 2019).

Performance Goal for High School Learners

By the end of secondary school, engineering literate students should be able to be creative throughout the course of an engineering project/activity through the repetitive use of creativity strategies and tools to develop innovative solutions to the problems they and others face.

Resources

Engineering is Elementary. (n.d.). *Engineering habits of mind*. <https://blog.eie.org/topic/engineering-habits-of-mind>

LinkEngineering. (n.d.). *Habits of mind*. <https://www.linkengineering.org/Explore/what-is-engineering/5808.aspx>

Royal Academy of Engineering. (2014, May). *Thinking like an engineer: Implications for the education system*. <https://www.raeng.org.uk/publications/reports/thinking-like-an-engineer-implications-full-report>