

Engineering Literacy Dimension: Engineering Habits of Mind

Overview: *Conscientiousness* is the ability to focus on performing one's duties well and with the awareness of the impact that their own behavior has on everything around them. A conscientious habit of mind enables an engineering literate individual to maintain the highest standards of integrity, quality, ethics, and honesty, when making decisions and developing solutions, to ensure the public's safety, health, and welfare. This Engineering Habit of Mind is important to Engineering Literacy as engineering has a significant ethical dimension. The technologies and methods that engineering literate individuals develop can have a profound effect on people's lives. That kind of power demands a high level of responsibility to consider others and to consider the moral issues that may arise from one's work (NAE, 2019).

Performance Goal for High School Learners

By the end of secondary school, engineering literate students should be able to be conscientious when making decisions throughout the course of an engineering project/activity, through repetitive questioning and critiques, to develop ethical 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>