

Engineering Mindset: Identify as engineers



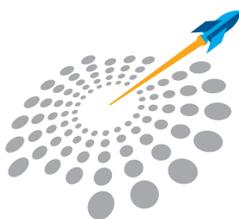
As engineers and youth engage in engineering, they develop their identities as engineers. Engineering challenges help youth understand what engineering is and how it is relevant to their lives. By generating solutions and technologies, youth can see their potential as engineers and problem solvers.

Educators can nurture engineering agency and identity growth in a number of ways. Successful participation in authentic engineering challenges demonstrates to youth that they are capable of engaging in such work. Educators should provide opportunities for youth to engage in meaningful, relevant engineering challenges. Throughout, educators should make connections between the work youth are doing and the work of engineers. For example, referring to the work that youth are engaged in as “engineering” and the youth as “engineers” helps members identify their efforts as engineering. Similarly, as youth engage in engineering practices, these can be called out and links made between what youth are accomplishing and their demonstrated success and identities as engineers and problem solvers.

Actively tackling engineering challenges and collaborating with peers and others to produce engineering ideas, knowledge, and designs also fosters the formation of engineering identities. Having youth generate engineering goals, criteria, constraints, and then holding them accountable to these signals to them that they can meaningfully participate in engineering thinking. Successfully persisting through failure and iteration to solve a problem shows youth they can know, think, and be engineers.

As youth affiliate with a discipline, they often seek out additional opportunities to develop their skills. To envision a future that involves engineering or STEM, youth need to envision themselves in this way. Introducing youth to engineering and problem solving, encouraging them to actively engage in challenges, and connecting their work to their lives and to the work engineers do allows them to develop an identity as an engineer and problem solver.

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