Engineering OST Pathway

1 Engineering activities

short, hands-on experiences conducted at home or included as part of an afterschool program. They introduce kids to the creative nature of engineering and build confidence in their ability to come up with novel solutions and construct technologies. Examples include Teach Engineering.
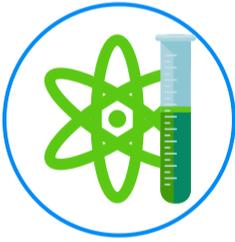
2 Engineering units

are conducted as part of afterschool programs. These extended, project-based units devote more time to developing engineering mindset. They set a meaningful context for the problem, and present engineering as a multi step process that includes various phases, such as conducting background research, brainstorming ideas, building technologies, and testing/evaluating solutions. Examples include Engineering Adventures, Design It!

4 Club-based engineering competition teams

These engineering clubs meet regularly under the supervision of a leader or instructor who helps prepare the club for some kind of team competition. In the club meetings, kids work together to complete a specific project that will be submitted for judging.

3 Afterschool engineering clubs

Devoted exclusively to engineering, these clubs allow kids to form a community and encourage the engineering mindset by working in teams, persisting through failure and creating a culture of innovation. Examples include Girls Who Code Clubs, Future Engineers.

5 Summer engineering camps

Multi-day immersion allows for powerful opportunities for kids to build relationships with peers and mentors and to develop science and engineering practices and habits of mind. Students see their own skills developing and begin to self-identify as engineers.Examples include Girls Who Code Summer Immersion, TryEngineering Summer institute.

7 Mentoring opportunities

connect kids with role models through work with local engineering professionals. Students build their engineering mindset through experience in academic, industrial, or governmental workplaces. In addition, students receive guidance on their career and personal development. Examples include Girls Who Code Camps.

6 Engineering competitions

Many companies, governmental agencies, and nonprofits have created competitions to drive engagement in STEM. Some of these initiatives are national in scale, with substantial prizes for students. Although students may work in groups to complete their projects, membership in a club is not required.

MILLION GIRLS MOONSHOT

This sequence does not reflect a linear progression of knowledge and skills but a a framework to think about how students might develop their skills and provide "hand-off" points between categories.