DESIGN THINKING SKILLS
TeachEngineering.org

Engineers make a world of difference!

FORMULATING PROBLEMS
Engineers take time to observe, infer and apply their breadth and depth of knowledge to thoughtfully frame a problem within the limits of available time, money, and resources.

SEEKING SOLUTIONS
Engineers incorporate their personal experiences and intellect with empathy and understanding for all stakeholders to develop human-centered products or services.

THRIVING IN UNCERTAINTY
The unknowns and limitations of a problem, especially wicked problems, offer engineers opportunities to be creative in developing innovative and practical solutions.

COLLABORATING CONSTANTLY
Engineering team members bring their own perspective and collective expertise together to scope problems and negotiate desirable, feasible and viable solutions to problems.

PROTOTYPING IDEAS
After generating ideas and gathering information about a problem, the rapid and rough creation of models and sketches (prototypes) inspire engineers to visualize options and inform possible solutions.

ITERATING OPTIONS
Engineers test many versions of their prototypes as they develop, implement, and evaluate possible solutions - which over time improves their understanding of the problem.

REFLECTING FREQUENTLY
Assessing and talking through iteration cycle outcomes allows engineers to simultaneously and repeatedly define and refine both their understanding of the problem and ideas for solutions.