



Engineering Fellows

Engineering is essential to solving Washington’s most complex challenges, including efficient transportation, environmental sustainability, affordable housing, and economic security. Engineering fuels our local job creation across every industry - tech, aerospace, manufacturing, clean energy, health and life sciences, agriculture and food manufacturing, construction, and retail. Yet most of our K-12 students have no formal exposure to engineering. In order to increase access to jobs in engineering fields, students need access to knowledge about what engineers do, how engineering is relevant to their everyday life and community, and see engineering as an accessible career option. It is important to provide students with meaningful opportunities to learn about engineering, interact with engineers that they can relate to, and develop an understanding of what engineers do. This is especially true for those students from underrepresented groups in STEM fields.

Engineering Fellows is an immersive one-week summer experience followed by classroom implementation and monthly Saturday sessions for selected 5th-grade teachers, college students, and professional engineers. Participants will work collaboratively in design teams to develop or adapt design challenges aligned with the Next Generation Science Standards. Participants in the Engineering Fellows project gain a deep conceptual understanding of the engineering design process detailed in the Next Generation Science Standards and utilized by professional engineers.

Since 2018, ten real-world engineering design challenges were developed and piloted in classrooms across the Educational Service District 105 region. Design challenges including *Rattlesnake Ridge*, *Farmining*, *Cool Kids*, *Gone with the Wind*, and *Surviving a Flood*, are examples of just some of the design challenges that were developed with a rural context as the focus and are available for classroom use. These design challenges are found in the Classroom Resource drop-down on the South Central Washington STEM Network website.