

Abstract Submitted
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Undergraduate ROV Outreach KIP HACKING, RANDY HURD, GEOFF WRIGHT, TADD TRUSCOTT, Brigham Young University, SPLASH LAB TEAM — Grumpy smelly, and apathy stricken middle school students often find science to be “uncool” and “hands-off.” We are changing this in our local area through an outreach program at ten participating middle schools building underwater remotely operated vehicles (ROV). Participants (300) were mentored by undergraduates (70) from BYU and instructed on various STEM topics including: electrical circuits, buoyancy, material science, design, and simple robotics. Through weekly visits these undergraduates provided teachers with immediate personal support to start their local ROV program, and enhanced their engineering curriculum at the middle school level. Each undergraduate also designed and built an instrument in an on-campus instrumentation class that were compatible with the younger student’s ROVs. Designs, videos and building instructions were posted online for current and future student access. This project culminated in a timed competition where students from each school used their ROVs to collect dive rings and maneuver through an underwater obstacle course. In this talk we will discuss how to increase your own outreach efforts by connecting undergraduates with local K-12 students using inexpensive ROVs and instrumentation projects.

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