

BPUB Backs STEAM Education Among All Ages

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Education has always been an important part of the community mission of the Brownsville Public Utilities Board (BPUB). This is especially true for activities involving Science, Technology, Engineering, Arts and Mathematics (STEAM). So, it should come as no surprise that BPUB is very active in performing outreach among local schools to spread interest about STEAM.

BPUB's educational outreach extends from the youngest students to the lifelong students (adults). The activities coordinated by BPUB reach thousands of people every year. Here's a look at some of the activities that BPUB does, broken down by age range.

Elementary students

- **Career on Wheels** – BPUB crews participate in a number of these events every year and across many different schools. Crews typically bring one of their big vehicles, like a bucket truck, so that the children can see how the vehicle works and learn more about the crews do in their normal daily job routine.
- **Leo the Lineman** – BPUB's unofficial mascot is a frequent figure at many community events and schools. Leo uses an interactive display to teach people, both young and old, about how electricity works and how to stay safe around it. For many students, it might be their first exposure to many of these ideas. While there is a lot of basic information about electricity, the real focus is safety.
- **Vello** – BPUB is participating in this program through United Way of Southern Cameron County for the second year. There is a roster of BPUB employees who agreed to volunteer their time to assist third-graders who are behind in their reading skills. These volunteers take some time out of their work days to engage with these students and read with them for 30 minutes once a week. Using the intuitive online interface, volunteers never have to leave the office and can read along with the students and guide them should there be any tricky words. While this program doesn't focus on science, math and engineering, it does give children a better grasp on the use of technology and helps establish a reading base that will benefit them through the duration of their schooling.
- **Junior Resaca Explorers** – Seeing a need to educate the youth of the community about the importance of the city's resacas, BPUB came up with an activity program that allows students to visit the zoo with a focus on resacas. The activities shine a light on the resacas as well as the zoo, making learning easy and fun.
- **Children's Museum of Brownsville** – BPUB takes a lot of pride in the close collaboration that it has with the Children's Museum of Brownsville. Out of that collaboration came a permanent outdoor exhibit dedicated to the Resaca Restoration Project. While the zoo program focuses more on the wildlife within the resacas, the museum exhibit looks more at the resaca themselves and how BPUB cleans them. The hands-on exhibit allows children to see first-hand the engineering concepts that have allowed the Resaca Restoration Project to be such a success.

Middle School

- Career Day – It's during these school years that so many students are trying to find themselves, discover who they truly are and where their interest are. These Career Days allow middle school students to directly interact with BPUB personnel and ask questions about their jobs. This is a great opportunity to spark these students' interest in science, math and engineering.
- Science Fair judging – BPUB's engineers have often been asked to come judge schools' science fairs. This allows BPUB employees to get more directly involved in school activities and is an ideal opportunity to reach out to those students showing an aptitude for science, math and engineering.
- Scout Government Day – BPUB has long been a participant in Brownsville's Scout Government Day in which four Scouts are assigned to BPUB in different roles. These students get a behind-the-scenes look at some of what goes on at BPUB. This includes tours of Silas Ray Power Plant, water treatment plants, BPUB's Analytical Lab and more. One of the highlights is a climbing demonstration by BPUB line workers. Spending nearly the entire day with BPUB employees, participants get a thorough introduction into BPUB.

High School

- Career Panels – Much like the Career Days, BPUB employees are frequent guests at these school events. BPUB workers who participate are allowed to provide information about where they work and what they do, and then the students get to ask questions. BPUB's engineering professionals say they hope these events help inspire students in the audience to pursue these types of careers.
- Internships – As a community partner, it makes sense that BPUB would open its doors to high school interns. BPUB typically takes in four high school interns per year. Assignments for the students can vary, but many aspiring engineers get their taste for their work as interns here at BPUB.
- Science Fair project assistance – In addition to judging science fairs, BPUB workers have also contributed to students' science fair projects. BPUB's Analytical Lab has been used to perform tests on water samples on behalf of students, and other employees have also done their part to make sure the students got the information they needed for their experiments.

College

- Internships – In addition to the high school internships that are offered, BPUB is also a big supporter of college internships. There are several programs that BPUB has participated in the past, including a mentorship program for engineering students through the American Public Power Association. Interns are given important project on which to work, making contributions to BPUB while getting real-world experience at the same time.
- Engineering panels – These panels cater more to students who are already pursuing an engineering degree. With so many different avenues that engineering graduates can go, these panels help provide some focus for the students by giving them the chance to hear first-hand about what engineers at BPUB do. This knowledge can help determine the direction these students will ultimately go in their careers.

- Facility tours – Classes and clubs often utilize BPUB facilities to give college students a better understanding of what BPUB does. These college students are likely pursuing careers related to utilities, so this exposure allows them to get an insider look at how drinking water is created, electricity is harnessed or wastewater is handled. This can help shape their continued studies and ultimately lead them to a career in it. Tours need to be scheduled in advance. Facilities that are frequently toured include: Silas Ray Power Plant, Southmost Regional Water Authority (SRWA) desalination plant, Robindale Wastewater Treatment Plant, Water Treatment Plant No. 1, South Wastewater Treatment Plant and the Resaca Restoration Project. Groups interested in scheduling a tour can reach out to BPUB to figure out the place to tour. In addition to the facility tours offered to high school students, tours of college students are especially popular.
- STIAC - Students from the South Texas Industrial Assessment Center (STIAC) at University of Texas Rio Grande Valley (UTRGV) provides free energy productivity and waste assessments to small-and-medium sized industrial facilities. Students visit businesses and audit their use of energy. Afterwards, they provide an assessment their recommendations on how the business can save energy and control costs. Students work with BPUB's Key Accounts Department to learn how to read bills and gather contact information for local businesses.

Adults

- Leo the Lineman – Think that Leo the Lineman is just for kids? Think again. The information that Leo imparts is just as important for the adults as it is for the children. Leo is a frequent presence at many community events, which gives him the opportunity to reach not only children but their parents and grandparents as well. The interactive display draws them in and makes difficult concepts easier to understand.
- Community tours – Twice a year, BPUB opens up its doors for community tours. The spring community tour examines the water and wastewater infrastructure, while the fall community tour is a look at the electrical side. Space is limited, so those who are interested in participating are encouraged to keep an eye out for an announcement about when the tour will be held and to sign up as soon as possible.
- Community presentations – BPUB speakers are frequents guests at many different local clubs, businesses and organizations. The goals of these presentations are to keep residents informed of what their local utility is doing and to raise understanding of what BPUB does. Past presentation topics have included Resaca Restoration Project, water conservation, pretreatment, electrical system projects, SRWA and more. The Pretreatment Department also reaches out to local businesses, apartment buildings and churches to give presentations letting people know how to avoid problems with their pipes and keep Brownsville's drinking water supply safe.

BPUB has reached out in many different ways, and it will continue to seek out other ways to educate the population and get them interested in the work utilities do. If you're interested in scheduling someone at BPUB to appear at your school, business or club, please call 956-983-6281 to discuss how BPUB can help.