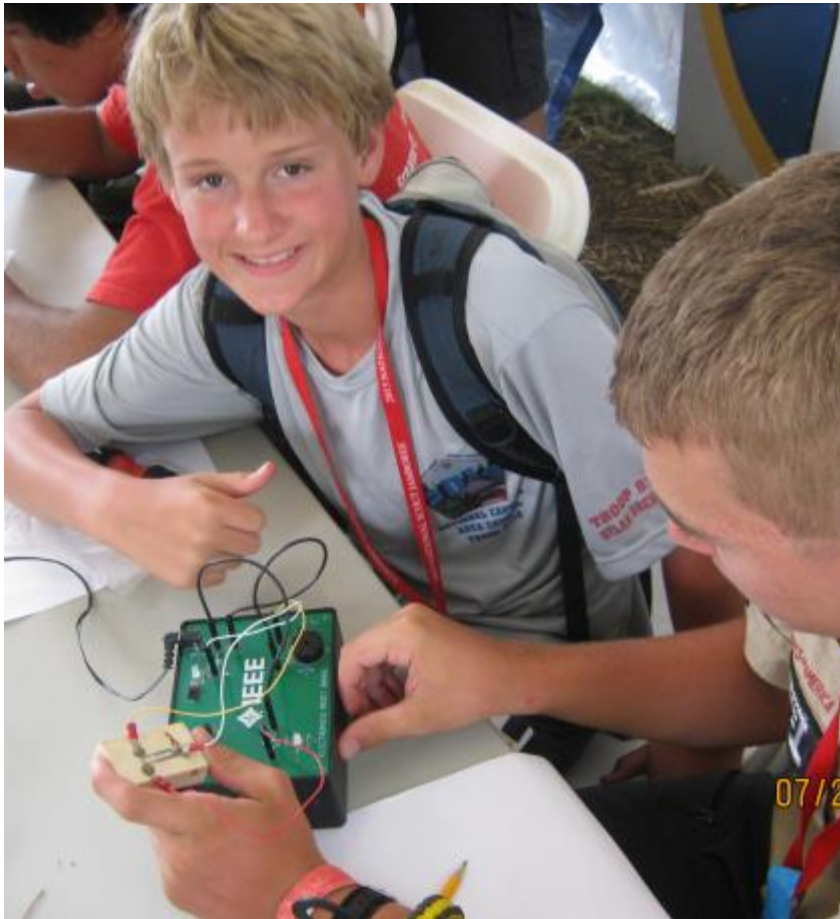


IEEE *emeritbadges* Project

2017 National Jamboree Program

emeritbadges Vision



- ▶ Global pre-university technology education program for boys & girls.
- ▶ Increase public awareness & understanding of technology & how it can be used to benefit humanity.
- ▶ Develop program around Electricity & Electronics Merit Badges.
- ▶ Present program at 2017 National Jamboree in Glen Jean, WV.

emeritbadges Audience



▶ 2017 National Jamboree Participants & Visitors

- Middle School & High School Boys & Girls
- Participants from USA & all 10 IEEE Regions
- Adult Staff
- Global Visitors
 - Parents
 - Teachers
 - Media
 - Government & Industrial Leaders

emeritbadges at the National Jamboree



- ▶ The IEEE emeritbadges.org STEM Project is an expansion of an IEEE pre-college education program that started in 1981
- ▶ The IEEE has provided leadership for the Electricity and Electronics Merit Badge Booths at the National Scout Jamborees in 1981, 1985, 1989, 1993, 1997, 2001, 2005, 2010 and 2013.

emeritbadges at the National Jamboree



- ▶ The National Jamboree will be held July 19- July 28 at the Bechtel Summit in West Virginia
- ▶ Attendance to exceed 30,000 boys and girls in Scouting from around the world. More than 2,000 Scouts from Region 2 will be there.
- ▶ Over 1,000 Scouts and guests will visit the IEEE emeritbadges tent and IEEE MOVE truck during Jamboree.
- ▶ Over 500 boys and girls will earn either the Electricity or the Electronics Merit Badge at Jamboree

emeritbadges Electronics Merit Badge



- ▶ Show how to solve a simple problem involving current, voltage and resistance using Ohm's Law.
- ▶ Draw a simple schematic diagram. Name 3 types of test equipment.
- ▶ Build a control circuit.
- ▶ Tell about audio circuits.
- ▶ Tell about the basic principles of digital electronics.
- ▶ Show how to change decimal numbers into binary numbers.
- ▶ Describe the safety precautions to building and repairing electronics.
- ▶ Show the right way to solder and de-solder.
- ▶ Show how to read the schematic for your project and explain how your circuit operates.
- ▶ Build and demonstrate your project.
- ▶ Find out about careers in electronics.

emeritbadges Electricity Merit Badge



- ▶ Know how to deal with electrical emergencies. Complete a home safety inspection
- ▶ Make a simple electromagnet
- ▶ Explain AC and DC current. Explain Voltage, Current, Watts, Ohms, Conductor and Resistance
- ▶ Tell how a battery and electric bell work
- ▶ Explain why a fuse blows and a circuit breaker trips. Explain an overloaded circuit
- ▶ Draw a floor plan with a wiring diagram for lights and outlets
- ▶ Learn how to read an electric meter
- ▶ Discuss ways to conserve electrical energy
- ▶ Build 2: Buzzer Bell Lamp / simple electric motor / SPDT Switch / Rheostat

emeritbadges at the National Jamboree



Funds are needed for

- ▶ Teaching the Electricity and the Electronics Merit Badges
- ▶ Operating a Careers Booth with the goal of introducing visitors to STEM related careers
- ▶ Operating a demonstration booth to provide an awareness and understanding of technology and its impact on society
- ▶ Participating in Day of Service in communities near the Jamboree
- ▶ Using the IEEE-USA MOVE Vehicle to show visitors how technology can help people during disasters

emeritbadges Needs



- ▶ Volunteers (30)
 - Electricity & Electronics Instructors
 - Careers Coordinator
 - Demonstrations Coordinator
 - Public Relations & Social Media Coordinator
 - Facilities Coordinator
- ▶ Inexpensive Storage Space – 275 Sq. Ft.

emeritbadges Funding Sought

- ▶ Project Funding Required for 2017 - \$32,000
- ▶ Funding Sources
 - Funds on hand - \$6,000
 - IEEE Industrial Applications Society - \$5,000
 - IEEE Region 1 - \$2,500
 - IEEE Region 3 - \$2,500
 - IEEE Richmond Section - \$2,500
 - IEEE Baltimore Section - \$2,500
- ▶ Funding received to date – \$21,000
- ▶ Proposals outstanding
 - IEEE Power & Energy Society
 - IEEE Regions 4 & 6
 - the Cleveland Foundation via IEEE Cleveland Section
 - IEEE Santa Clara Valley Section
 - Corporate donation of printed instructional material
 - Lowe's for lumber to construct merit badge booth floor and walls



emeritbadges Contact Information



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