

CSAAPT Fall 2022 Semi-Virtual Meeting



Chesapeake Section of the
American Association of Physics Teachers
Fall 2022 Semi-Virtual Meeting
October 22, 2022 in Falls Church, VA

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Energy Conversion and Electrostatic Activities using Simple Toy-Like Devices Available Free to Attending Teachers

Saturday, October 22, 2022 4:15 PM (45 minutes)

Summer workshops spearheaded by the Department of Physics in collaboration with the Curry School of Education at the University of Virginia and with Jefferson Laboratory in Newport News developed activities for secondary physics and physical science teachers to use in their classrooms. Specifically, energy, electricity, magnetism, light and optics were the subject areas. In this presentation we will discuss the physics/pedagogy for several energy and electrostatics activities and make available(free) materials needed to conduct these activities including a lesson plan on the specific activity. These are very rudimentary instructions and you are obviously free to develop any set of instructions as you see fit. For the taking, there will be approximately 10 super-cooled gel heating pads; 16 dippy ducks; 14 piezo poppers; 12 build your own solar race cars; 12 electric charging kits with Teflon rods, acrylic rods, almost frictionless rotating holder, and silk cloth; 12 electroscope kits with an almost unbreakable, rugged, portable electroscope holder, 2 charging rods, and silk cloth; and 26 Van de Graaf Wanderama sticks. Selected examples of such activities will be presented and demonstrated focusing mostly on the home-made electrostatic activities. After discussion teachers will be allowed to peruse the activities and take at least 1 item home. You may be permitted to select as many as 2 items if all items are not first exhausted by the attending teachers.

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Session Classification: Featured Talk 3 (Chair: Kent Yagi, Zoom Monitor: Brett Taylor)