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On October 26th, there was a building-wide event (over 1,000 attendees expected!). The Coastal Virginia STEM Hub, based in Newport News, is a regional hub dedicated to promoting STEM education throughout Coastal Virginia. This hub is a collaborative effort between industries, educators, museums, libraries, and various non-profit organizations to build strong STEM skills across all ages. It focuses on STEM while maintaining a commitment to diversity, equity, and inclusion. CoVA STEM focuses on inspiring future generations of STEM Professionals. CoVA STEM serves the Coastal Virginia region, including Hampton Roads. It is funded by the City of Newport News, and gains support from organizations like the Society of American Military Engineers and the Virginia General Assembly. It also works in collaboration with Virginia Peninsula Community College. It helps to host community events, such as the one we were involved in. Overall, CoVA STEM acts as a driving force in STEM education in Coastal Virginia. It is actively shaping the future STEM workforce in the region.

Our contribution to the event was through the Sphero BOLT. The Sphero BOLT is a programmable robot ball designed to engage students and individuals of all ages in coding, robotics, and STEM skills through interactive play. The Sphero is a round, durable plastic sphere. It has an LED matrix display on top, which can show graphics,

animations, and more, allowing for personalized interactions. It can be programmed using different coding levels based on skill. The easiest level allows for the users to simply draw paths that the Sphero will then follow. The next version of programming is Block-Based Coding or Scratch code. Block coding allows the individual to drag-and-drop lines of code regarding movements, lights, sounds, and more. For more advanced users you can code in JavaScript, allowing for more detailed and precise programming and customization.

The Sphero BOLT robots can communicate with each other as well, as they have Infrared Communication. They are constructed with a compass and gyroscope. Built-in sensors allow the Sphero to know directions and stay oriented, making it suitable for complex navigation. There is also an incorporation of App Integration. The Sphero Edu app is the means in which the coding takes place. It provides coding activities, tutorials, and a community where you can share projects. You are able to code and control the Sphero remotely on a variety of devices, including tablets, smartphones, and computers. As stated prior, the Sphero BOLT is widely used in educational settings for teaching programming, robotics, and critical thinking.