



HOLMDEL TOWNSHIP SCHOOL DISTRICT

"A COMMITMENT TO EXCELLENCE"

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MOVERS AND SHAKERS AND "MAKERS" AT HOLMDEL HIGH SCHOOL

HOLMDEL (December 22, 2016) –The spirit of the holiday season may have only recently been in the air, but the spirit of innovation has certainly continued to breathe fresh life into the students of Holmdel High School through the introduction of a Makerspace.

What is a Makerspace, you ask? According to Makerspace.com, it is "a collaborative work space inside a school, library or separate public/private facility for making, learning, exploring and sharing that uses high tech to no-tech tools". Simply put, it encourages users to create, innovate, and expand the way they think through collaboration and invention. And in the increasingly technological world that our students live in, this is crucial to their learning and development.

The idea to bring such an opportunity to Holmdel was truly a collaborative, innovative, and learning experience in itself. Two years ago, Holmdel student Erica Wu, now a junior at the high school, had submitted a grant to the Holmdel Foundation for Educational Excellence (HFEE), which funds student and teacher projects that benefit all district schools. Erica's grant was for a creative technology invention kit called Makey Makey, which she had hoped to pilot with the middle school students. As she presented her project to the HFEE, she got the attention of Caren MacConnell who was very impressed with Erica's initiative. MacConnell, a Holmdel graduate, former Holmdel teacher and technology coach, and now Supervisor of Technology, Engineering, and Media Centers in the district, found a perfect partner in Erica, as somebody she could work with on creating a Makerspace for the high school students.

After getting help from administration to purchase some startup equipment and meeting with students to pilot the program last year, Wu and MacConnell applied for an additional grant from the HFEE and were successful in supplying their Makerspace with more tools for students to experiment with. Starting in September of this year, the ladies opened up the Makerspace for all students in a conference room during lunch periods every few weeks. The workshop has not only attracted technologically adept students, but creative and artistic students as well. Wu sees it as a place where students can not only collaborate, but also "a space to try new things, be creative, keep learning, and not be afraid to fail". As a student aspiring towards a career in applied mathematics or neuroscience, Wu has appreciated her work with Makerspace as a way to inspire others while spreading her own creative wings in the process.

The Makerspace currently boasts a number of cool tech toys. Sphero robots, remote-controlled by an app on your mobile phone, help teach programming. Makey-Makey is a tool that turns

everyday objects into controllers and touchpads for a computer. A 3-D pen is able to create 3-D artwork via the use of plastic filaments. Raspberry Pi, a credit card sized computer, and Arduino coding and circuit kits are available for tinkering by the hardware geeks. A 3-D printer, also donated by the HFEE, complements the tech tools by allowing students to print out their creations.

As word spreads about the Makerspace and the work being done, MacConnell is sure that it will attract more students from all disciplines, and all areas of interest. A recent session had students building a robot from scratch, while simultaneously providing tips for other students working with the 3-D pen. The Sphero robot whizzed on the floor as another student programmed its route, all while a student-designed holiday snowman was slowly taking shape in the 3-D printer. As MacConnell questioned one student about how much time he puts into his robotics projects outside of school, he casually noted that he “put in” about 40 hours in the week prior. She marveled at his dedication and hopes the Makerspace will continue to inspire others like him to explore and learn, at school and in their “down time”.

Both Wu and MacConnell’s goal is to continue adding on to the Makerspace and attract more students so they might eventually find a permanent home for it and make it accessible throughout the school day, as well as after school. MacConnell believes that input from the students is what will make the space a truly innovative and collaborative place for students to explore the world, and themselves, as Holmdel High School continues its journey into 21st century learning.