

**Zi<sup>3</sup>: The Zone for Imagination, Innovation, and Inspiration**  
**Creating a culture of student engagement**  
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*Alice laughed. "There's no use trying," she said, "one can't believe impossible things." "I daresay you haven't had much practice," said the Queen... "Why sometimes I've believed as many as six impossible things before breakfast."*

*-Lewis Carroll, Alice's Adventures in Wonderland*

Hands-on learning, PBL, STEAM, the list of educational initiatives that serve to inspire our students as they navigate an ever-changing, complex environment seems never ending. What all of these programs, initiatives, and approaches have in common is the desire for students to problem-solve, persevere, innovate, and critical think. At Westmoreland Central School District there is a learning lab, the Zone for Imagination, Innovation, and Inspiration, Zi<sup>3</sup>, which strives to do just that.

For true student engagement to occur, students need to direct and manage their learning (Ostroff, 2016). Students who are motivated and encouraged to actively participate in the educational environment find learning meaningful, allowing for greater student success. One study, in particular, noted that adolescents were more engaged and found enjoyment when they were appropriately challenged, were in control of the time spent on an activity, and the subject matter and activities were relevant to their interests (Engel, 2011). It is that definition of engagement that has come to life in the Zi<sup>3</sup> learning lab.

Housed in the middle school, the Zi<sup>3</sup> lab seeks to inspire students to be imaginative, innovative, and to be inspired by the work of others. The lab is comprised of two main areas. The first includes the media center, which has morphed from a room where students were expected to quietly read or research independently to a room where imagination and inspiration is encouraged and reinforced. From tables and chairs and bookshelves, the media center houses creative seating arrangements that allow students to collaborate and dream of possibilities. In the computer lab, computers, once in rows, are now placed in pods allowing students to collaborate as they brainstorm and research. Students are effortlessly able to use a digital hub, also located in the former computer lab, to connect and learn with others from around the world using Google Hangout and Skype.

The second space moves learning from the brainstorming and design phase, to creation, innovation, and production. The idea in this space is simple: we provide the tools, students bring the ideas. And tools are indeed plentiful allowing a student's vision to become reality and include seven 3D printers, a digitizer, a laser engraver, a CNC machine, multiple Raspberry boards, as well as a space devoted to culinary arts and varying forms of crafts and work with textiles.

Just how has this space come to life since it's opening last spring? Elementary students created their own designs and, using the laser engraver, made gifts for family members. Middle school students have connected with a Holocaust survivor from the Museum of Tolerance in Los Angeles. The space has seen students building and showcasing robotics and responding to critical thinking challenges during their lunches. Challenge camps where students applied STEAM standards were offered this past summer which included the designing and building of a roller coaster.

Our students are leaders of innovation throughout the school day, while the community has embraced the unique evening learning experiences geared towards adults and families that include painting classes, understanding and constructing CO<sub>2</sub> cars, cake decorating, etc. Not only are the members of our community taking classes but they are also offering workshops, classes, and seminars for others. The Zi<sup>3</sup> lab is a showcase of the district's belief that we are all lifelong learners. The space will continue to grow and evolve with the limitless creativity and passion of our students, staff, and community.

#### References

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