

# Interactive Products Division Numonics Corporation **Case Studies**



## **Numonics Case History, March 10, West Warwick SD**

### **Enthusiasm Plus Interactive Whiteboard Equals Math Success: Deering Middle School**

Seeing is believing and, when math teacher Kristin Tuttle first saw an interactive whiteboard, she became a believer. Rather ironically, her first exposure to the technology was as a student herself — taking a graduate course for professional development. “When I saw the technology,” she says enthusiastically, “I thought it was exceptional. The other students in the class and I were allowed to use it a little bit, and its capabilities were impressive.”

So imagine Tuttle’s surprise when she learned that her school district — West Warwick School District in Rhode Island — had been awarded a grant and that part of the grant money was to be used to purchase interactive whiteboards for the math teachers at the middle school and high school!

### **The Digital Presentation Appliance (DPA II): Up Close and Personal**

The district chose the DPA II from Montgomeryville, PA.-based Numonics Corp. When connected with a computer and projector, the DPA II integrates education software and an electronic pen in a digital interactive whiteboard to change the way students learn. It starts with the ability to control computer applications and display computer images on the board, which can be done with a mouse at the teacher’s desk. However, because a teacher prefers to maintain control by staying at the front of the classroom, she can use the multimedia pen to control all the computer applications on the board in real time. Specifically, all computer functions are transferred to the multimedia pen, such as opening files, running digital video clips, launching Websites, or downloading free content from the Internet.

Additionally, a teacher can choose a softkey to access the presentation tools so they can write and draw on projected images, annotate in color, highlight, and cut-and-paste images in order to improve students’ retention of the material being taught. Note-taking software automatically saves the notations, which is ideal for later picking up where a lesson left off or reviewing before a test. Notations can also be electronically distributed during or after the session.

The DPA II offers an upgrade to RM Easiteach, cross-curricula software that can be used across a wide range of grade levels. Subject-focused toolbars for math, English language arts, science, and geography provide all the resources teachers need to create compelling lessons and stimulating activities. In addition, a range of ready-made primary content packs and fun game packs are also available for elementary and middle school education.

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## **The Teacher: Getting Creative**

“Since technology is high-interest,” says Tuttle, who teaches sixth-grade math at Deering Middle School, “students are naturally more captivated when lessons involve the DPA II. The laptop accesses the Internet, so mathematical simulations are easily tested.

“For example,” Tuttle continues, “we’ve been exploring probability, which can be challenging for middle school students to comprehend. Using the DPA II, students were able to simulate a sample size that would otherwise be impossible or overly time consuming. Through the simulation, the students really got the ‘Aha!’ moment more quickly, and internalized what I had been explaining.”

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Similarly, the DPA II has proven advantageous in teaching algebra, specifically for showing linear and nonlinear patterns. “By displaying a graph and showing the pattern grow,” says Tuttle, “students could readily see the pattern moving. Having the visual tool and enabling the students to come to the board and create a graph themselves was a great teaching moment. It empowered the students who otherwise would not have been engaged.”

Tuttle has also used the DPA II to display different ways in which an algebraic pattern can be represented (to include graphing), to provide examples of different geometric shapes and show distinguishing characteristics of particular shapes, and to display notes that are large, clear, and easily read. With the latter, she notes that computerized examples can be input in the notes. “Notes can be easily modified, as well as printed for students who miss the class or have special needs,” she adds.

The large 77” diagonal size of the board allows for easy student viewing, is something Tuttle appreciates. She also likes being able to use different colors to express different points or break a problem into steps. Finally, she points out that the ability to save work so that it can be addressed in future classes is a great improvement upon a dry-erase board.

## **The Students: Engaged Learners**

“We are in an age where an understanding of technology is vital to our students,” says Tuttle. “Achievement is greater when we can engage our students and make them active participants in their education. When they are excited about their education, then we can truly take them farther.”

And, with the technology provided by the DPA II, Tuttle is seeing that all of her students — special education and traditional learners alike — are stimulated and motivated, which has resulted in increased participation and retention.

“I think the engagement is a great motivator for everyone,” Tuttle says, “and it’s just fantastic to see the students get involved in their own learning. That’s what teachers want and, frankly, we don’t always see that, even when we know that students are capable.”

As far as the future is concerned, Tuttle plans to continue to gain knowledge and expertise with the DPA II so she can better help her students on their pathways to success. “I’m excited to learn and explore more,” she says with enthusiasm. “I feel that there’s so much more I can do with it through practice and time.”