Ohio School Boards Association
Helping Kids Succeed!

Success

Timely tips to improve student achievement **August 2019**

Manufacturing camp teaches impact of local industry

Students in grades six through eight participated in a Richland County manufacturing camp, learning about industry and its impact in the county. During the camp, students built a miniature peacock statue and learned how MapCo in Lexington would make a larger version. Students assisted in the production of the final statue, which was delivered to Kingwood Center Gardens. For more, go to **http://links.ohioschoolboards.org/SU568.**

Southeastern Ohio students excel at STEM

A state-sponsored STEM camp in Marietta, organized by Building Bridges to Careers and attended by 21 students in counties from all over southeastern Ohio, provided students an opportunity to learn about STEM applications and resources. The camp was an initiative of the governor's office. For more, go to **http://links.ohioschoolboards.org/SU573.**

Does boredom help students learn?

Boredom can stimulate creativity and support learning according to journalist **Manoush Zomorodi**, who shared the details of her Bored and Brilliant challenge during the International Society for Technology in Education conference. Zomorodi said that when people limit their time with digital devices, they can allow their minds to wander – supporting creative thought and problem-solving. For more, visit **http://links.ohioschoolboards.org/SU569.**

Can mathematical novels better engage students?

Math instruction should blend drama, literature and other creative arts to instill wonder in students and reveal how math permeates throughout curricula, writes professor **Peter Taylor**. The Rabbit Math curriculum that Taylor and his colleagues are developing uses the concept of "mathematical novels" to more deeply engage students. For more, visit **http://links.ohioschoolboards.org/SU570.**

Debate continues over mandatory retention policies

Nineteen states require students to pass reading tests or face the possibility of retention in third grade, but there is some debate as to whether such "mandatory retention" policies help or harm students. There is conflicting data as to whether retention policies or accompanying interventions are boosting students' skills. For more, visit **http://links.ohioschoolboards.org/SU571.**

Student achievement in-depth

Each month, **Success** brings you a research brief or in-depth article to discuss with board members and administrators.

A physical way to learn math

Flagway is a game created by **Bob Moses**, a 1960s civil rights organizer who has devoted several decades to increasing math literacy among low-income students and students of color. Since the 1990s, children and teens have played Flagway in after-school programs started by Moses and his colleagues. In the past three years, however, The Young People's Project has encouraged the development of more formal teams and leagues across seven cities. According to the players, coaches and parents in those leagues, the game has improved students' math literacy, engagement and teamwork. The game involves math skills and figuring out a color-coded course that the students have to complete by running.

When recruiting kids for an Alton, Ill., league, math professor Dr. **Greg Budzban** used a survey to find students who struggled with math. The survey included questions like:

- If you can't solve a math problem quickly, do you give up?
- Do you enjoy playing games where you can be active (tag, basketball, etc.)?
- Would you be interested in trying something other than a traditional math class?

"We're looking for students that the physical engagement piece is something that attracted them," said Budzban, who is dean of the College of Arts and Sciences at Southern Illinois University Edwardsville. All of the students who applied were accepted. He said that on pretests, almost none of the Alton students knew the math skills involved in Flagway, such as finding least common multiples or greatest common factors. On post-tests three months later, many students earned perfect scores.

In a 2009 case study in Chicago, the high school and college students who served as Flagway coaches also reported having increased flexibility with numbers as a result of the game. In Alton, a semester-long training for those coaches plays a role in the younger students' success, according to Budzban. But he also attributes the positive effects of Flagway to the game itself.

"Translating the abstract mathematics into competition and movement helps (students) sort of embody the learning," he said. "You've got more neural pathways that are involved."

To read the article, which contains a link to the case study, visit **http://links.ohioschoolboards.org/SU572.**

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