SPEdCIAL TECH

Tips for Enhancing Classroom Learning

Leveling Up

Earn CE certificates via many of these free and low-cost webinars, courses, and seminars. See edWeb.net for additional interesting webinars.

- **Classroom Management Help for Beginners With ClassDojo.** See recording on edWeb.net.

- **Visual Models in Math: Connecting Concepts with Procedures.** See recording on edWeb.net.

- **Leading through Persuasion: The Path to Influence,** 4 p.m. Wed., Jan. 7 on

Moderate/severe disability AAC: gaze technology is here and FREE!

by Carmen Watts Clayton
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Despite advances in educational technology, tech tools are often found wanting for students with moderate to severe disabilities such as cerebral palsy, Downs syndrome, autism, and other challenging maladies. Many of these students have medical needs that make it laborious to use these teaching tools.

One of the most promising new technologies that could significantly impact the functional abilities of such students is eye-gaze or gestural-controlled computer technology. Eye-gaze computer control has been developing for a few years. Google Glass is an effort at hands-free computer use. Firms like Tobii Technol-

Carmen Watts Clayton

Free "Minecraft for Educators" course

Canvas Network is offering a free online course on Minecraft for Educators, from **January 26 to March 9, 2015**. The course will introduce you to Minecraft and MinecraftEDU, and teach how to set up your own server, manage classes, and create context and subject-specific materials. It will also present example lesson and curriculum plans for you to use. For more details, go to https://www.canvas.net/courses/minecraft-for-educators; to register, click on the "Enroll" button.

Minecraft works on every platform and supports a variety of applications, such as getting primary-level kids interested in history, running a coding/crafting club for high schoolers, or sparking interest in writing fiction.

Canvas Network offers open, online courses and welcomes yours. It provides a platform where teachers, students, and institutions can connect for personal growth, professional development, and academic inquiry.

Must-see STEM showcase Feb. 17

Looking for exciting, hands-on ways to incorporate STEM instruction into your curriculum? Check out the STEM showcase in Ludington, MI on **Tuesday, Feb. 17** from 8:15 a.m. to 3:30 p.m.

Along with STEM curriculum plans for teachers, there will be discussion of grants available, and presentations on a wealth of exciting learning opportunities for students, which include working side by side with robotics engineers, doing research onboard schooners, using MDOT tools such as motion detectors and magnetic levitation, and much much more.

The cost is low − free if you are from Mason, Lake, or Oceana county, and only $20 if not, to cover the lunch provided.

The showcase will be held at the Baymont Inn, 4079 W. US 10, Ludington, MI. Reference the STEM Showcase for $55/night room charge.

For showcase details, see http://stemshowcase.weebly.com/presentersbooths.html or contact Jeanne Miller at jmiller@wsesd.org or 231-898-1541. To register, go to http://goo.gl/forms/7QXEex83BJ, or register onsite that day. Checks or cash only. ✍

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*Leveling Up, continued from *
edWeb.net.

- **Introduction to Learning Technologies**, Jan. 12 - March 24 on canvas.net.

- **Beyond Hour of Code: How to Keep Students Engaged with Coding**, Tues., Jan. 13 at 3 p.m. ET on edWeb.net.

- **Using Games to Teach Global Interconnectedness**, Tues, Jan. 13 at 4 p.m.ET on edWeb.net.

- **What's Next? After Assistive Technology Consideration**, Thurs., Jan. 15 at 3:30 p.m. on mits.cenmi.org.

- **Empowering Teacher Collaboration with Digital Portfolios,** Thurs., Jan. 15 at 5 p.m. ET on edweb.net.

- **Developing a System-Wide Autism Program: A Training Model for Serving Students with Autism Spectrum Disorders**, Wed., Jan. 21 at 4 p.m. ET on edWeb.net.

- **From Chaos to Calm: Help Children Learn How to Self-regulate, Pay Attention and Care for One Another**, Tues., Jan. 20 at 2 p.m. ET on

edweb.net.

- **Defining Your Ability to be the Difference,** ues., Jan. 20 at 5 p.m. ET on edweb.net.

- **Supporting Children's Development of Early Math Skills through Music and Movement**, Thurs., Jan. 22 at 2 p.m. ET on edWeb.net.

- **Minecraft for Educators**, Jan. 26 - March 9 on canvas.net.

- **Weaving Digital Imagery into Everyday Teaching**, Mon., Jan. 26 at 3 p.m. ET on edWeb.net.

- **Strategies for Summer School for Math Intervention**. Mon., Jan. 26 at 4 p.m. ET on edWeb.net.

- **2015's Top Education Innovation Trends**, Tues., Jan. 27 at 1 p.m. ET on edWeb.net.

- **How Augmented Reality Can Transform the Classroom**, Tues., Jan. 27 at 4 p.m.ET on edWeb.net.

- **Using Pinterest to Become a Better Teacher**, Tues., Jan. 27 at 5 p.m.ET on edWeb.net.

- **Creating Open Educational Resources for Your K-12 Classroom**, Wed., Jan. 28 at 5 p.m. ET on edWeb.net.

- **Using Technology to Engage Learning, Communication & Relationships** (for those with learning disabilities) Thurs., Jan. 29 at 3 p.m. ET on edWeb.net.

- **Being A Tech-Savvy School Leader**, Thurs., Jan. 29 at 4 p.m. ET on edWeb.net.

Eye-gaze, continued from

ogy have developed eye-gaze-controlled augmentive and alternative communication (AAC) which requires glasses to be worn by the user. The system seems to work but the price is out of the range of my poverty-level school district.

However, I recently attended the International Consumer Electronic Show (CES) in Las Vegas and was excited to find the next generation of eye-gaze technology control on the market and at the right price: FREE. By far the simplest and easiest control I have used, it requires no special glasses or apparatus to be worn, and it is a free app that can be downloaded on any device.
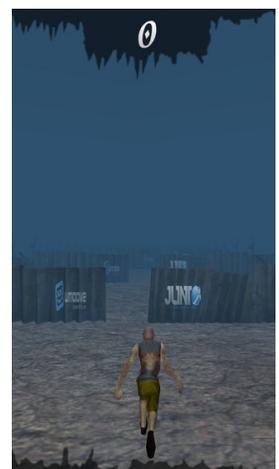
Umoove.me (http://www.umoove.me) offers several games that allow you to experience eye movement technology by tracking your head movement so sensitively it approximates eye tracking. Anyone can do them. I encourage you to try them with yourself, your family, and especially your students. The company claims the app helps one "brain train" for better focus and concentration, and is being widely used with students with ADHD, the fastest-growing attention disability.

- HeadStart is a driving arcade game for Android, where you use head movement to move your car right and left to avoid oncoming traffic.

- Umoove Flying Experience for iPad and iPhone allows you to fly through a 3D village just by moving your head slightly.

- Zombie Watch is a endless runner game for iPhone and iPad that allows the game to be played by using head movement only. The player maneuvers through the gate openings using head-movement.

HeadStart

Umoove Experience

Zombie Watch

HeadStart

Umoove Experience

Zombie Watch

Math Tech:
Subitizing and Sets

Kate Fanelli

To develop mathematics understanding, two critical skills must ber addressed: subitizing (the ability to see quantities without counting) and seeing quantities in terms of fives and tens.

As young children begin to develop early mathematics understanding, two critical skills must be addressed. One is subitizing, the ability to see quantities at a glance without counting. For example, when a die is rolled, most older children and adults can determine the number without having to count individual dots. The second skill is seeing quantities in terms of fives and tens, a skill which not only helps build computational strategies later on, but strengthens understanding of our base ten system through a strong sense of ten.

Subitizing is an important prerequisite to counting for young children, and is foundational to understanding part and whole, connecting number words to quantities, and visualizing and using mental images to strategize and solve problems.

The National Council of Teachers of Mathematics Illuminations website has two excellent games that provide students practice with subitizing, ten frames, and numerals.

Ten Frame presents math activities that help students relate numbers to other numbers. which is helpful when thinking about different combinations of numbers. Ten Frame gives students experience with the "anchor" numbers 5 and 10, helps children see numbers in relationship to 5 and 10, and helps students understand ideas like "3 more than 5" or "2 less than 10".

Ten Frame

Ten Frame includes four games to practice with ten frames. In "How Many?" students identify the number of chips on a ten frame. In "Build" students build a number using a ten frame. In "Fill" students add the number of additional chips that are needed to fill the frame. And, in "Add" students use ten frames to model addition.

Concentration uses the classic matching game to provide children practice matching numeral, dot pattern, and ten frame representations of numbers. Students may play the traditional way, where all choices are covered, or use a modified version where choices are covered by translucent shades. Other matching games are also included.

Kate Fanelli is the math accessibility specialist for Michigan's Integrated Mathematics Initiative (Mi)2, a state of Michigan initiative that promotes and supports high quality mathematics education for ALL students. Follow (Mi)2 on Facebook (www.facebook.com/mi2.page) or on Twitter (MI2_Math). Contact Kate at kate.fanelli@misquared.org.
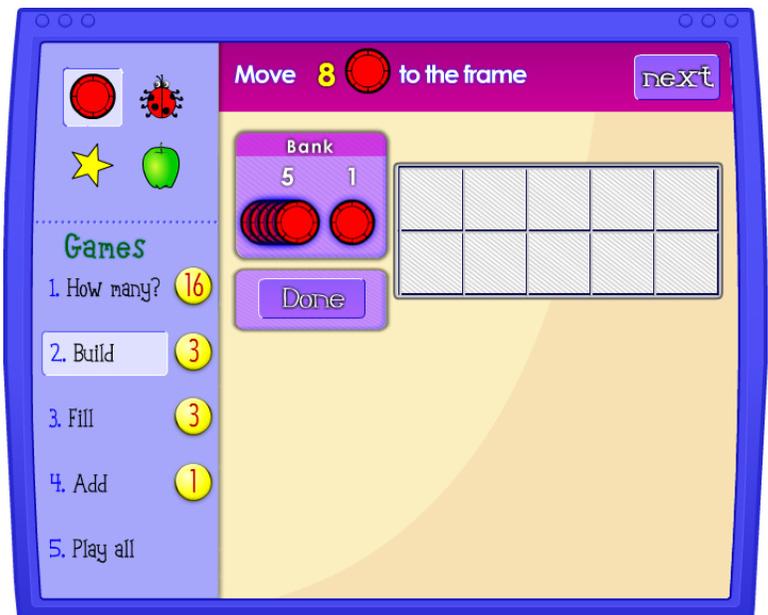
Confessions of a teacher grant-writer

by Carmen Watts Clayton
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I said to myself, "They're not paying me enough to be a teacher and a grant writer!" Then I began to think, who really gains from me applying my ability to write pervasively? The answer is: the kids do! And therefore I do too. As I write, my class won another $1100 of materials and equipment I requested just four weeks ago!

Would you like a tablet, software, art supplies, books, construction kits, musical instruments, and other resources for your classroom? Does your school lack a budget for supplies that pushes you to use your own monies for many class items? I found myself spending over $500 a year to get essential supplies for my room, until I learned how to leverage my basic generosity to provide more for my students. Now I give about one hour a week to support my classroom with many grant dollars.

I know when kids are challenged, engaged, and happy to come to school then everybody wins, and testing gradually proves this as well, sometimes radically so. This is what motivated me and got me busy applying grant writing skills I honed in a former job, into expanding the scope of my curriculum. I refined fundraising strategies for my classroom; raising $2500 the first year; over $15,000 the second year (including a classroom set of iPads); and this year an additional $3,000 in technology, supplies, and materials so far. My kids simply can't wait for the economy or the school budget to get better, or Common Core Standards to be fully implemented. My kids need to prepare for their future in the present, and because I care about their future, I am willing to try to get them the tools and technology they need now. I found it pretty easy to win grant money for my classroom and think you will too if you keep in mind rules of the road and a few simple tips as you go:

1. Start small. Begin by designing project proposals that are small and reasonable, preferably under $500 in scope. Easier to win, you can probably do many in the course of a school year with minimum time commitment.

2. Make sure you are eligible. Many grants and donors have specific things they fund and deadlines for applying. Take them seriously and don't waste time applying for funding you don't qualify for or can't get together on time.

3. Use social media fundraising services online to help you win donations and write successful grants! Be sure they are reputable and be aware of the fees they charge. Nonprofit services charge the least. They also help walk you through the process of setting up the request, shopping for items, and finding donors to supply your list of materials, books, supplies, and even field trips.

4. Remember donations to your class are tax deductible and usually remain the property of the school. Anyone can donate, but nobody knows the needs of your students like you. Nobody can tell the students' story, what strengths, dreams, and struggles exist in your classroom and community like a passionate

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Funds, continued from previous page

teacher. Through a teacher's storytelling, passionate commitment, student-centered approach, and careful organization, and a little persuasive writing skill, students CAN have all the technology and other materials they need.

I assure you there are both small and large grants for teachers. Most are fairly easy to request. Guidelines to remember when starting:

• Grant opportunities can easily be found online. GetEdFunding.com and BigDealBook.com are just a couple places to get started. A search will find blogs and newsletters to sign up for to help keep abreast of what is available.

• Besides grant proposals, write letters to local and regional businesses that employ 20 or more people. Local companies often have giving programs and frequently target children's needs. Locally is a great place to ask for assistance because many local businesses and foundations give back to the communities they do business in.

• One good way to start writing your own grants is to locate and use donation sites designed to help teachers meet project goals, such as http://www.donorschoose.org or http://www.adoptaclassroom.org/.

• There are online crowd funding sites designed to help you raise money for any project, some popular ones are Move Your Mountain, Go Get Funding, Go Fund Me, Razoo, MoolaHoop, Give Forward, Crowdrise, and Start Some Good. Be aware of websites that spin their services as "free." All crowd funding websites charge fees; site, processing and per donation fees are the most common. Do some comparisons and careful reading before signing on.

• I find the most helpful sites are non-profits and find the fees more reasonable. My favorite is Donors Choose. This site is easy to navigate and they do an excellent best job of walking the teacher through the process in a helpful well-designed step-by-step manner. Prompts help teachers define their needs, shop for the items online, tell their classroom story, and thank the donors appropriately once the project is funded.

Don't forget to let family, friends, colleagues, and community groups know of your efforts to raise funds for your class! Sending emails and newsletters, word of mouth advertising, even posters on bulletins helps fund the cause of better education. The site helps you find donors and partnering corporations whose matching dollars leverage other donations. Before long your goal is met, the supplies ordered, and items delivered directly to your school. The technology and materials you win belong to your class for long after the initial project is complete.

I love having new materials arrive all year long. Teachers shouldn't have to wait for technology and materials we know will increase students' engagement. I often feel like a hero for producing the many boxes of goodies that arrive, and I feel somehow far more appreciated in my job, even though I'd done most of the work to raise the project funds! Parents are impressed, and seem to be more likely to contribute in future class projects and field trips. Grant writing for the classroom sounds like extra work, but I am satisfied the extra hours I've put in really have a profoundly positive impact, and who doesn't want to feel a little more inspired, a little more appreciated, in their daily routine. ✍

Through a teacher's storytelling, passionate commitment, student-centered approach, and careful organization, and a little persuasive writing skill, students CAN have all the technology and other materials they need.

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