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Leveling Up

Earn CE certificates via many of these free and low-cost webinars and seminars. Register for these and others on edWeb.net and MITS.cenmi.org.

- **Picture This: Engaging Students with Online Images**, Mon., Nov. 3. [See recording.](#)
- **Hands-On Learning to Support Formative Assessment**, Tues., Nov. 4. [See recording.](#)
- **Barriers to Digital Equity in our K12 Schools**, Mon., Nov.

Cont. on [page 2](#)

Overcoming behavior problems with visual communication

EDITOR'S NOTE: The following article is based on an edWeb.net webinar entitled "Time, Travel, and Transition: Using Visual Strategies to Support Successful Participation for Students with Autism Spectrum Disorder" given by Linda Hodgdon, a speech language pathologist and ASD consultant.

Those familiar with special education students, especially those with autism, know that behavior problems are often related to time, travel, and transitions. Special ed students can become upset if something unexpected happens, or if they do not know how long something will last or when they will get their turn. The problem is compounded when the student appears to hear instructions but does not process them.

Linda Hodgdon, a speech language pathologist and ASD consultant, says the best way to communicate in such cases is visually, through pictures, timers, signs, writing, and body language. Thankfully there are many tools to



Linda Hodgdon

Please see [Visual on page 3](#)

Website Review: edSurge.com



A one-stop shop for all things ed tech, edSurge.com lists ed tech products, summits, reports, jobs, events, websites, reviews, and even contests and grant opportunities. Its [Edtech Index](#) lists games, apps, and tools neatly categorized into curriculum subjects, teacher needs, school operations, post-secondary, and more. The site does a good job of finding high-quality technology that would be interesting to teachers, such as [Versal](#), a freemium product that lets you create online courses without coding. (*Versal* is listed under the "Everything Else" category.) EdSurge membership is free and includes free subscriptions to weekly newsletters.

Leveling Up, continued from [page 1](#)

- 10, 4 to 5 p.m. ET on [edWeb.net](#).
- **What's New for Accessibility in iOS 8?**, Tue., Nov. 11 from 3:30 to 4 p.m. Register by Nov. 10 on [mits.cenmi.org](#).
- **Getting the Most out of Integrating eBooks in the Classroom: 10 Proven Lessons You Can Use Now!**, Wed., Nov. 12, 3 to 4 p.m. ET on [edweb.net](#).
- **Universal Supports for Students in Mathematics: Number and Operations K-12**, from 5 to 5:30 p.m.. Register by Tue., Nov. 11 on [mits.cenmi.org](#).
- **Amplifying Student Voices**, on using mobile devices to make global connections for your classroom, Wed., Nov. 12 from 5 to 6 p.m. ET on [edWeb.net](#).
- **Doing Your Part with Hour of Code**, Thurs., Nov. 13 from 5 to 6 p.m. ET, on edWeb.net. See also the "PlayWorthy" article on [page 6](#).
- **Embracing Student, Education, and Career Success in a Globalized World**, on preparing students to engage in a global society, Tues., Nov. 18 from 3 to 4 p.m. ET on [edWeb.net](#).
- **Using Flipagram to Help Students Categorize Knowledge**, on making short videos with Instagram photos, Tues., Nov. 18 from 5 to 6 p.m. ET on [edWeb.net](#).
- **Stealth Assessment in Video Games**, Wed., Nov. 19 from 3 to 4 p.m. ET on [edWeb.net](#).
- **Inquiry Learning Big6-Style: Good Questions = Good Learning!**, Wed., Nov. 19 from 4 to 5 p.m. ET on [edWeb.net](#).
- **Helping Students Read and Write Mathematics**, 5 to 5:30 p.m. Wed., Nov. 19. Register by Tue., Nov. 18 at [mits.cenmi.org](#).
- **Using Hands-on Science to Build Amazing Literature Connections**, Thurs., Nov. 20 from 3 to 4 p.m. ET on [edWeb.net](#).
- **Family Engagement through Music: Using Music to Promote Family Engagement in Children's Learning at School and Home**, Thurs., Nov. 20 from 4 to 5 p.m. ET on [edWeb.net](#).
- **Rebranding Digital Citizenship**, on how to teach students to use technology safely and responsibly, Thurs., Nov. 20 from 5 to 6 p.m. ET on [edWeb.net](#).

About Special Ed Tech / Subscriptions

Special Ed Tech is a free newsletter published monthly from September through June by the director of Aspiring Games Foundation.

We welcome your questions and article suggestions. Direct all queries and subscription requests to editor Becky Palmer-Scott at SpecialEdTechEditor@gmail.com.

About Aspiring Games Foundation

www.aspiringgames.org

Aspiring Games Foundation supports the creation and use of learning games and educational technology for individuals, groups, and classrooms.

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Visual, continued from [page 1](#)

help. This article will discuss some tools and apps available to avoid behavior issues and help special ed students develop personal organization, show up on time, and get things done on time.

TIME: Time can be a problem because it's invisible – students don't know when things will happen, and this leads to nervousness and anxiety. Graphically showing the passage of time can alleviate the problem.

- **Timers:** Timers help students know how long something will last or when it will happen again. There are many free timer apps with graphics – just search for “timer” or “countdown” in the app search bar.

- **Visual scheduling apps** help students understand what is going to happen and when. Linda Hodgdon suggests using them not only for main events but for activities leading to the event. Those for special needs include iScheduler (\$0.99), iHomework (\$1.99), Visual Routine (\$4.99), Choiceworks Calendar (\$4.99), Chore Pad HD (\$4.99), First Then Visual Schedule (\$14.99), and iPrompts (\$49.99). **Free calendar apps** with visuals are PocketLife Calendar and Pocket Picture Planner HD.

TRAVELING: Traveling involves change, which can induce anxiety. Students have meltdowns when what they expect doesn't happen. Giving students pictures of where they will be going and what they will be doing can help them understand what's happening and keep calm.

- **Storybooks:** Model Me Going Places (a \$24.95 video) and Model Me Going Places 2 (a free app) are electronic visual storybooks which run kids through common scenarios such as getting a haircut and playing on the playground.

- **Checklists:** NeedFood (\$2.99), a visual grocery list, has proved helpful to special needs students on shopping trips.

- **Traveling and decision making:** The Planner Guide, found at theplannerguide.com, is designed for those with special needs and works on most mobile devices. The app provides good examples of how to visually sequence decision-making scenarios, particularly those needed when traveling.

TRANSITIONS: Special ed students often don't want to switch from one activity to another, or change their surroundings. Hodgdon noted how important it was to validate that

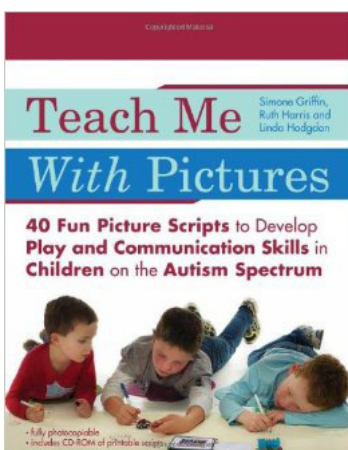
you understand what the student is trying to communicate, then explain why something must happen and help the student sequence through the transition.

Videos are good visual aides. To help a student transition to another school, one teacher made a video showing the door she would enter, with a dialogue explaining each item and place of interest. Videos also help students understand how to do things and show them behavior they can mirror. You can make videos with most smartphones and there are also apps to help. See edWeb webinar, [“Using Flipagram to Help Students Categorize Knowledge.”](#)

INSTRUCTIONAL TOOLS: Webinar attendees shared tools they found helpful: VizZle at monarchtt.com to aid in the creation of visually based lessons; autismapps.wikispaces.com for reliable app suggestions; the Bitsboard app (free) for visual learning; Pictello (\$19.99); Eggy Alphabet (free); Letter School (\$4.99); Writing Wizard (\$2.99); AutismFamilyOnline.com, and [The Learning App Guide by Bronwyn Sutton Speech Pathology](#). Also mentioned were Hodgdon's book [Teach Me with Pictures](#) and her website, useVisualStrategies.com.



Model Me Going Places 2



Math Tech: Calculators

by Kate Fanelli



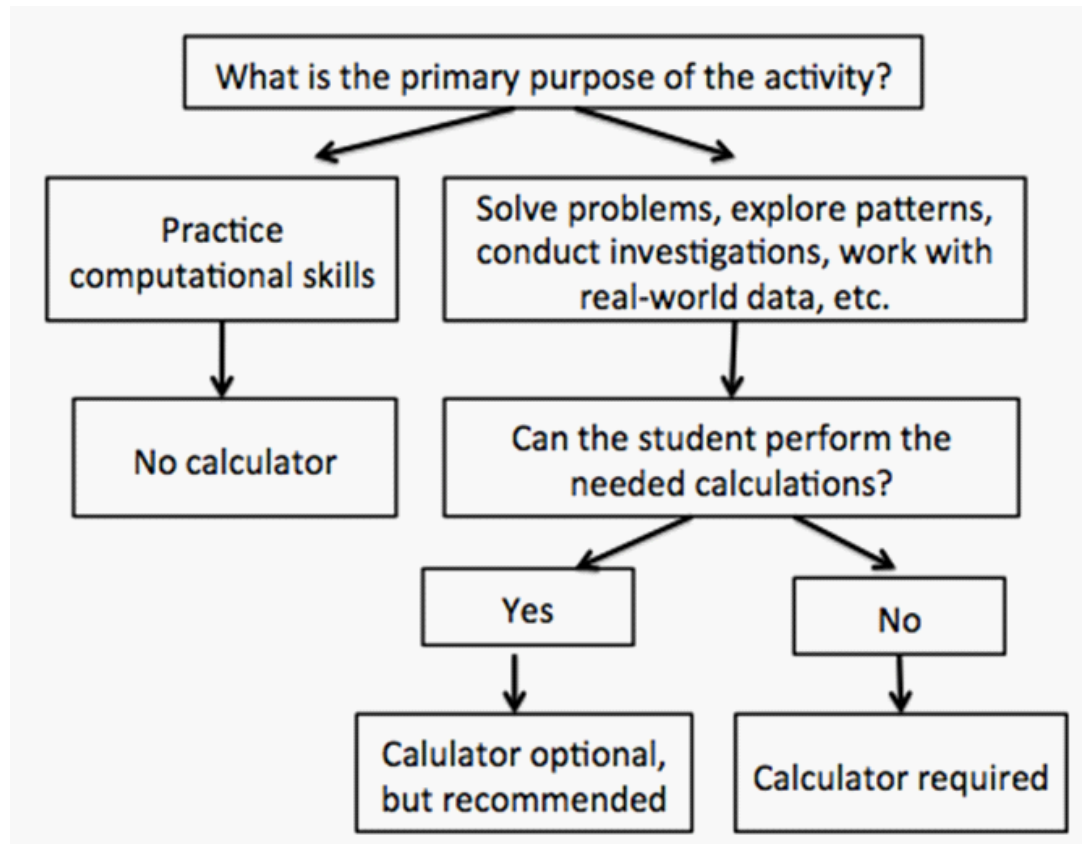
Kate Fanelli

In some cases calculators can help teachers instruct, can help students show what they know, and can serve as tools for ... problem solving, discourse, and structure.

Calculator use in the mathematics classroom is controversial, leaving calculators underutilized by those who could benefit most from their use, and overutilized by those who misunderstand their role in instruction.

In the age of the Common Core Mathematical Practice Standards, there is much talk about the importance of problem solving, mathematical discourse, and using mathematical structures. Calculators may seem to be a workaround, short cut, or even counterproductive to these types of thinking activities. And yet, in some cases calculators can help teachers instruct, can help students show what they know, and can serve as tools most appropriate for just those practices: problem solving, discourse, and structure.

In the article “Beyond ‘Getting the Answer’: Calculators Help Learning Disabled Students Get the Concepts,” the Center for Implementing Technology in Education (CITeD) describes in detail how calculators can be used for teaching and learning, and presents the “Calculator Decision-Making Flow Chart” to guide educators in determining appropriate calculator use.



Students with math-related disabilities have difficulty with fact retrieval, memory, calculation, and language. Using calculators to solve problems, explore patterns, conduct investigations, and work with real-world data reduces the load on memory and fact retrieval, aids in accuracy of calculations (where students are able to set problems and identify appropriate routes to solutions on their own), and can serve as a springboard for communicating mathematical thinking. Graphing calculators and calculators with dynamic geometry capabilities serve as sophisticated visual aids to which students may refer when explaining their thinking.

Please see Calculators on next page

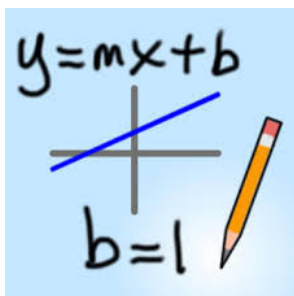
Calculators are available at all price points, with a variety of functions, and that address various disabilities.



Core Math Tools



Panther Calculator



Fluid Math



MyScript Calculator

Calculators, continued from previous page

Calculators are available at all price points, with a variety of functions, and that address various disabilities. When selecting calculators, here are some things you will want to consider:

1. Size – Will your students be able to physically use the buttons and read the display?
2. Capabilities – Does the calculator do everything your students need without distracting them with options they do not yet need?
3. Class sets – Do you need enough for each student to have his/her own calculator?
4. Teacher display – Will you use the calculator for instruction only, and do you need a calculator or could you use a software-based equivalent?

Here is a list of calculators that can get you started in your search for calculator-based instruction and learning:

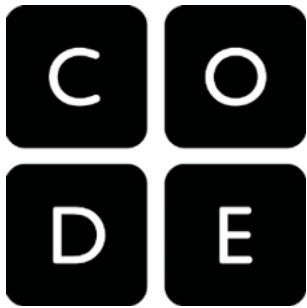
- **Core Math Tools** – A free software download from the National Council of Teachers of Mathematics with computer algebra system capability, dynamic geometry software, and statistics operations
- **Texas Instruments** – This company sells a variety of calculators for all ages and grades. Their Nspire and TI series come with software, classroom management systems, hardware and peripherals that expand the capabilities of these graphing calculators.
- **Panther Calculator** – Designed with Universal Design for Learning in mind, Panther Paper and Panther Calculator apps allow people with writing disabilities to input mathematical expressions.
- **Fluid Math** – This product takes handwriting and writing gestures on a screen and turns it into rendered digital text, graphs, tables and sliders. It is available as an app, online, and as a software download.
- **MyScript Calculator** – This free app turns handwriting on a screen into rendered digital text and solves.



TI Nspire

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.

Play Worthy



Hour of Code Created by Code.org

Reviewed by Becky Palmer-Scott, Editor
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Hour of Code, found at code.org/learn, is part of a free browser-based computer science curriculum for grades K-8. It is sponsored by code.org, a nonprofit founded in 2013 dedicated to expanding participation in computer science by making it available to more schools and increasing participation by women and under-represented students of color.

Hour of Code teaches basic computer programming in a series of increasingly difficult puzzles where players direct an avatar through a maze. Engaging and accessible, the game deftly guides players from writing a simple two-step program into using repeat loops and if/then/else statements. With videos by luminaries such as Bill Gates and Mark Zuckerberg, and avatars from *Angry Birds* and *Plants vs. Zombies*, it brings a glamour factor to programming.

To promote the product in schools, code.org is holding a [CS Education Week](#) from December 8 - 14. Participants will be entered into a drawing to win \$10,000 worth of technology and video chats with special guests.

Using drag-and-drop code blocks, the building process looks nearly identical to [Scratch](#), the programming language designed for kids by MIT. Where Scratch gives users more creative freedom, Hour of Code provides better instruction.

The code.org website presents other teaching activities as well, including creating a “flappy bird” game, creating art with code, an intro to JavaScript, app programming for IOS and Android, a taste of Python programming, tutorials to build games, and several 20-hour online courses in [Code Studio](#). Teachers who register can add students and track progress, a useful classroom feature.

At a glance

Name: Hour of Code

Genre: Puzzle game

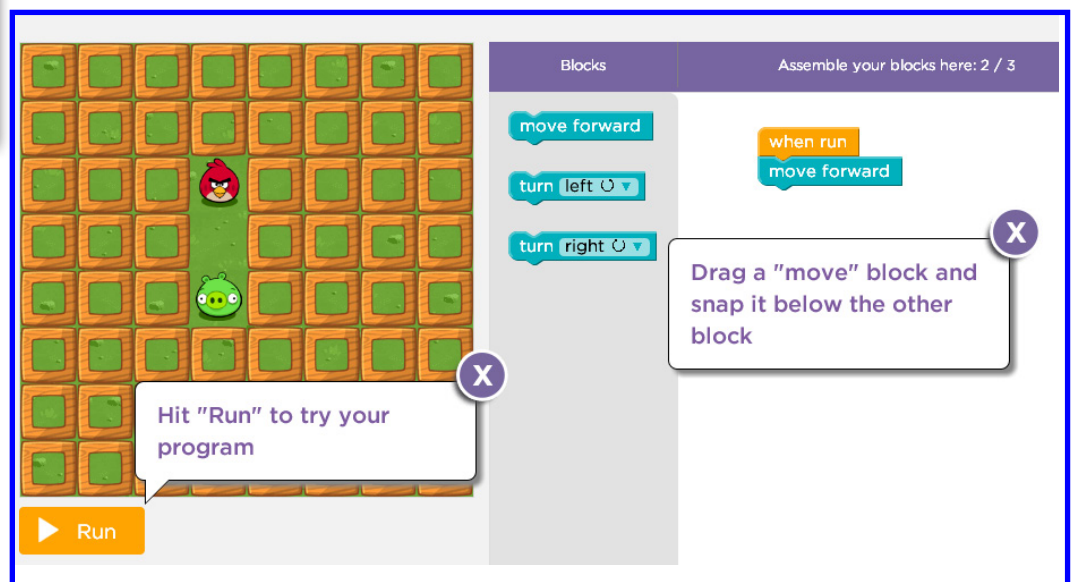
Topic: Computer science

Cost: Free

Platform: Windows, Mac, Linux

How to get: Play at code.org/learn

Code.org is holding CS Education Week from December 8 - 14, 2014. Participants will be entered into a drawing for \$10,000 in technology and video chats with special guests.



Do you know of good learning games you would like to tell others about? Write to our editor at SpecialEdTechEditor@gmail.com.

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