

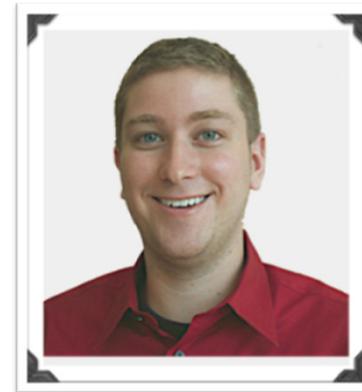


Contemporary Technology for the Autism Classroom

Tuesday, July 21, 2015



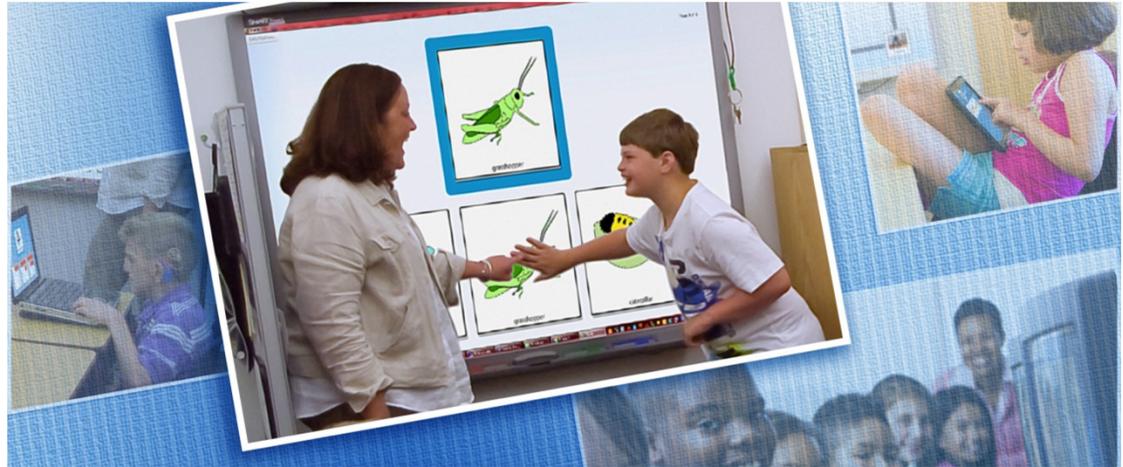
Jeffery Richards, M.Ed.
Instructional Media Coordinator



Chris Karter, M.A.
Educational Technology Specialist
at the Monarch Center for Autism

Join our community on edWeb.net **Teaching Students with Autism**
www.edweb.net/autism

vizzle[®]
visual learning



VizZle is an all-in-one digital resource center for special educators. **Common Core** and **standards-based** content can be customized to meet the needs of special learners. Played on **any device or computer from any location**, VizZle's **easy-to-use** software allows educators to **find, author** and **share** individualized, visual content for differentiated instruction that leads to student engagement and academic success.

*Sign up for a **FREE 30-day trial!***

www.monarchtt.com/edweb



STAR Autism Support (SAS) provides curriculum, materials, workshops and training to school and agency staff who work with students with autism. Our mission is to help others successfully implement research-based applied behavior analysis (ABA) techniques.

We want every child with autism to receive effective instruction!



Join our community on edWeb.net

Teaching Students with Autism

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Teaching Students with Autism
Community URL: www.edweb.net/autism-ed
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Co-hosted by edWeb.net and Monarch Teaching Technologies

Teaching Students with Autism is a professional learning community (PLC) that provides ideas and resources for teachers working with students with autism, particularly advances in technology that can lead to significant breakthroughs in communication and learning. This is a collaborative community where educators can share information to help support the needs of students with autism.

As a member of the community, you'll receive:

- Invitations to free webinars on new ideas and successful practices
- Free CE certificates for attending and viewing webinars
- Access to a resource library with webinar recordings, free resources, and quizzes to receive a free CE certificate for all past webinars.
- Online discussion forums where you can connect and collaborate with

Web 2.0 Tools

- Autism Blog
- Discussion Forums
- Resource Library
- Shared Calendar
- Chat Room
- Polls & Quizzes
- Wiki
- Bloglinks
- Weblinks

Members | Administrators

 Thuji . Educationist Ability Bhutan Society	 Joann Abal Media Coordinator Ashley High School	 I ❤️ CHEER Deanna Acosta librarian topock elem
 Ms. Teri Acosta Special Education Teacher - Impact at UVMS Arlington Central	 Karen A Privatepractice	 Susan Abatemarco LDTC Monroe Twp School District

- ✓ Invitations to upcoming webinars
- ✓ Webinar recordings and resources
- ✓ CE quizzes
- ✓ Online discussions

Join the community
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Go to the Webinar Archives folder

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CE Certificate provided by



Webinar Tips



- For better audio/video, close other applications (like Skype) that use bandwidth.
- If you are having any audio or video issues, try refreshing your browser.
- Maximize your screen for a larger view by using the link in the upper right corner.

Tweet with #edwebchat



Contemporary Technologies for the Autism Classroom

Jeff Richards, M.Ed. &
Christian Karter, MA





Who Are We?



Christian Karter MA

- Monarch Center's Educational Technology Specialist.
- I have worked for Monarch Center for Autism for 8 years.
- I also worked for Monarch Teaching Technologies and helped design elements of VizZle.
- My chief responsibilities are the data system, and introducing new technology into the classrooms.
- Contact karterc@bellefairejcb.org

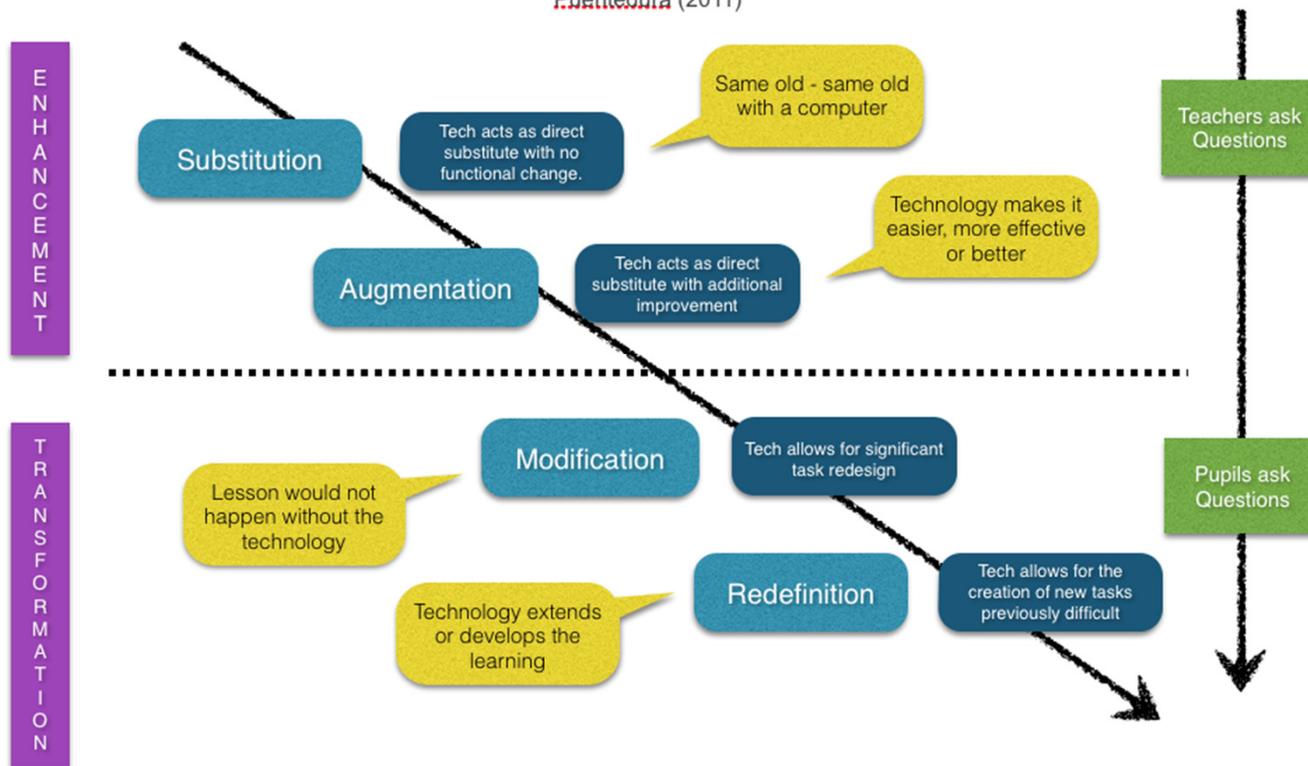
Jeffery Richards, M.Ed.

- Instructional Media Coordinator
- 12 years of experience working at Monarch Center for Autism at Bellefaire JCB
- One of the founding core of Monarch Teaching Technologies, at which I consulted on the software that became VizZle.
- Job responsibilities include researching and implementing new technologies into Monarch School, as well as support and training of all staff on the use and potential of these tools.
- Further, I'm accountable for all resources used in the school for Children with Autism.
- Contact richardj@bellefairejcb.org

21st Century Classroom Models

SAMR MODEL

Puentedura (2011)



Guide to Using Technology

Try to make your goals more **project based**.

It is important to learn real world examples of how a technology can be useful rather than just learning which buttons to press.

Expand your goal writing. Instead of:

“The student will be able to write, send and reply to an email in 4 out of 5 opportunities.”

Try:

“The student will independently participate in a topic discussion with others in their class exclusively through an email exchange, creating, replying and forwarding relevant email in 4 out of 5 opportunities over a 2 month period.”

Hierarchical Models – A Few Cautions

Our first assumption often is that “Higher is Better”.
This leads to the next common assumption that therefore:
“We should aim so all things are done at the highest level.”

Facts to Recognize

1. All things cannot be readily taught at the highest level.
2. Spending some time at the lower levels of the hierarchy can make the complexity of the higher levels less frustrating and more meaningful.
3. Just remember that more levels are better than any single level.

Therefore, the best way to view Blooms and SAMR is to see them as a guide to developing goals and activities that address as many levels as possible.



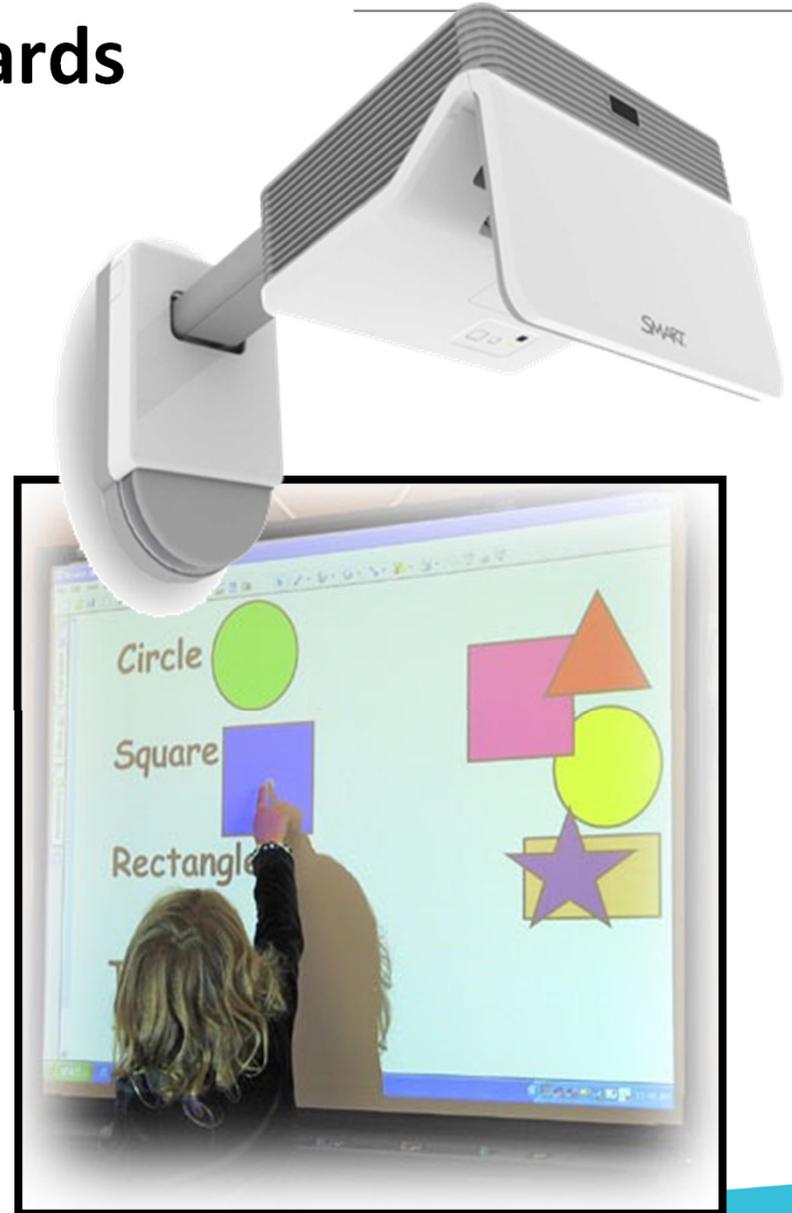
MAGIC Etch A Sketch® SCREEN

current
technology



SMARTBoards

- Smartboards are a great way to engage students either individually or in a group
- At Monarch Center we use 25+ SmartBoards
- Staff build lessons on the SmartBoard Notebook software or Vizzle and share them with each other
- These lessons are customized to the IEP goals and objectives they are working on with the students
- Smart Light Raise
- Ability to project up to a 100" display
- Differentiates between touch and pen use
- Has built-in speakers and microphone
- 2 to 4 touch points depending on the model
- No actual board to damage
- Access to Smart's over 60,000 learning resources



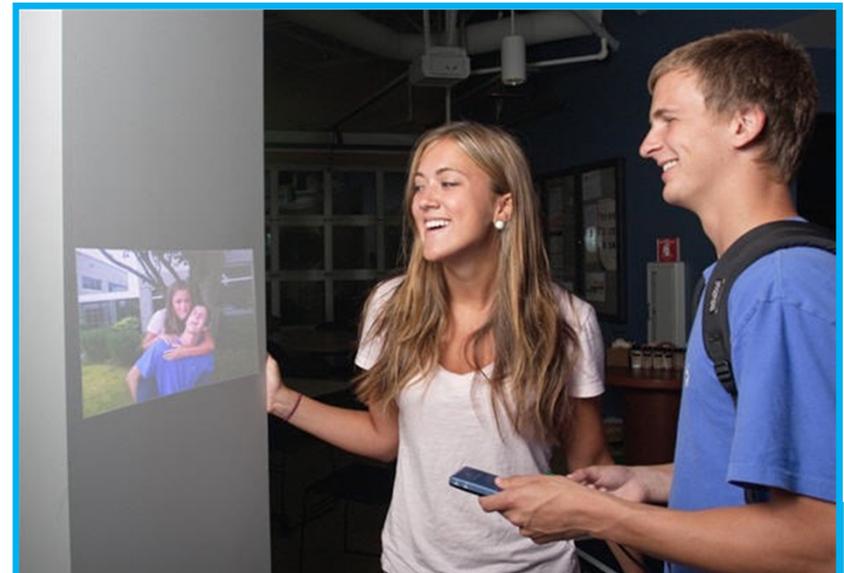
SmartResponse System SmartDocument Readers

- SmartResponse System – for gaging student feedback
- Anonymous feedback from students, eliminate negative feedback from other students
- Smart Document Reader allows you to project onto the SmartBoard a document
- From here you can freeze the image and use the SmartBoard to mark it up. Great if you already have analog worksheets or materials



Mini Projector

- At Monarch Center we have started to test a Mini Projector aka. Pico Projector
- These are usually used in the business field for the traveling salesman.
- Need: Some students require a 1 on 1 interaction in a separate environment then the group
- With an iPad connected to a Mini Projector a staff member can set up a classroom activity almost anywhere
- We are currently trialing the AAXA P2JR
- Works with both android and iPad devices
- Also accepts HDMI and component connections
- Can play back video and images from an SD card as well. This can also eliminate the need to bring another device with you
- 120 minute battery life



Touch Screens



Example we use:

HP Compaq L2206tm 21.5-inch LED Backlit Touch Monitor
Currently \$299.00 or less

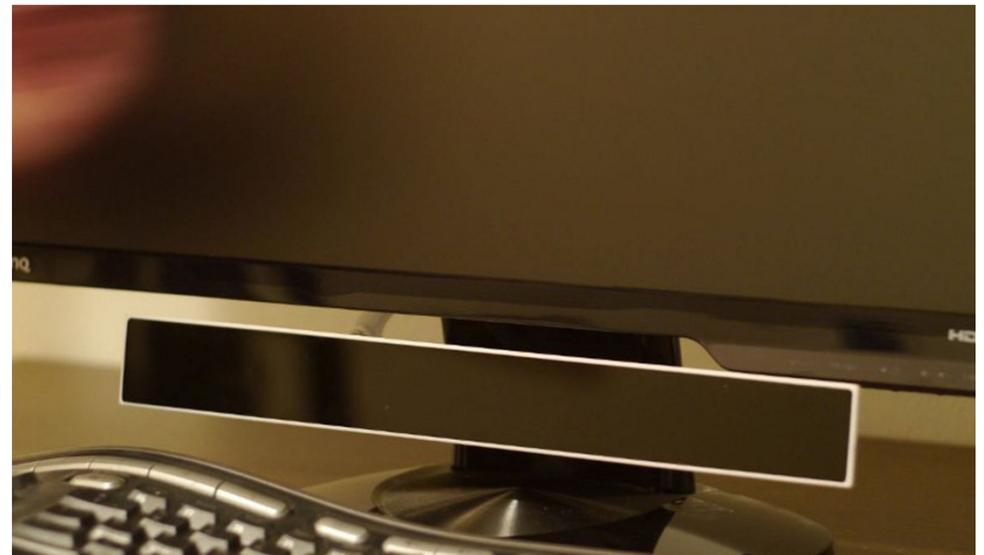
Other options:

Dell S2240T 21.5-Inch LED
\$359.00 or less

Acer T232HL- 23" IPS LED HD
\$299.00 or less

Gazepoint GP3 Eye Tracker

- Use to track student focus in order to identify and minimize distractions
- Open standard API
- ± 15 cm range of depth movement
- Portable – 320 x 45 x 40 mm (250g)
- Compatible with 24" displays or smaller
- System Requirements: Intel Core i5 or faster, 4 GB RAM, Windows 7 (also supports Windows 8, XP, Vista); Mac and Linux not supported at this time.



Price: \$495

TeachTown



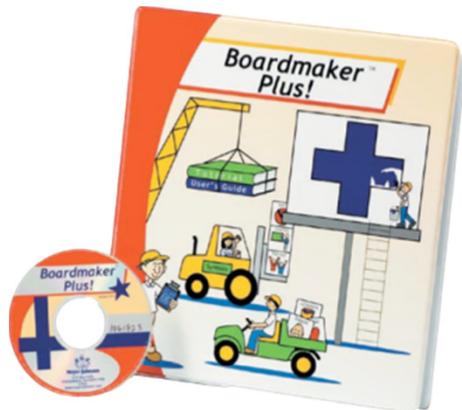
- Educational concepts, Social Skills and emotions
- Animated video modeling-based curriculum features characters to demonstrate and teach real world social skills
- Supported with over 800 lessons and six key learning domains
- Automatic data collection for easy reporting to save time.
- <http://web.teachtown.com>

Zac Browser



- Zac Browser was designed specifically for children who have ASD.
- Zac Browser is a walled garden of games, content, and websites that children can access and are appropriate for them.
- Best part... it's free!

Boardmaker & Online



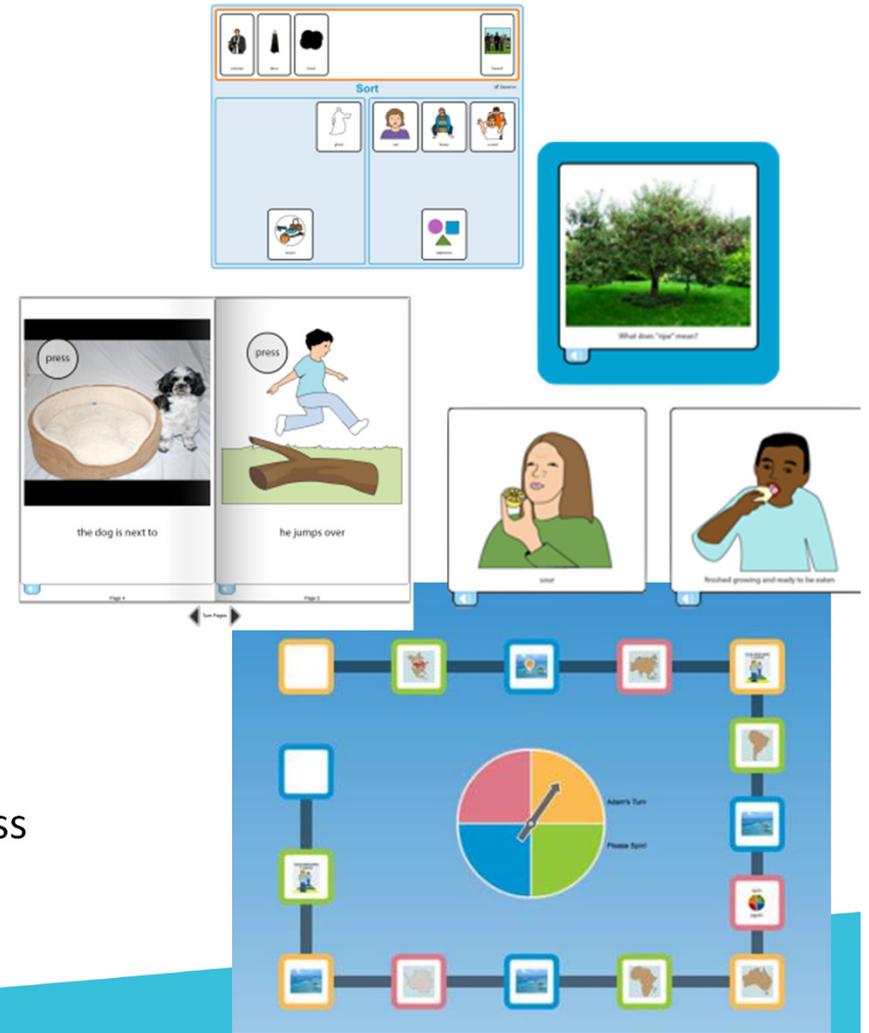
- Boardmaker is software made by Mayer Johnson which allows users to create visuals
- Huge library of visuals, hand-drawn images, and ability to add your own images
- Con: Boardmaker is expensive \$399, it requires the CD to be in the computer on each use
- If your CD breaks you have to pay to get a new one



- Create activities online and print them or assign to your students
- Student Center iPad app available in the app store
- Track the results of student work against IEP goals or educational standards. Track staff and student usage
- Board Maker Community to share you creations
- \$99 / year or \$9.99 / month

vizzle

- VizZle is an online subscription based software for teaching children with Autism.
- See Website for Pricing
- VizZle has multiple tools for teaching included through Stories, Games, Matching Exercises, sequencing, sorting and the ability to create visuals and schedules.
- VizZle has a lesson library of user created content.
- The ability to collect data on a student's progress to log against IEP Goals and objectives.



Editing Video Software

- In the Autism field we take a lot of videos, primarily to create video models. Software is needed to edit these videos and manipulate them.
- iPad: iMovie
- Mac Only: iMovie and Final Cut Pro
- Mac/PC: Adobe Premiere and Sony Vegas 13
- Recommend getting a good pair of headphones and a good microphone like a Blue SnowBall Microphone. This will allow you to neutralize any background noise and record voice overs.



Augmentative and Alternative Communication

- AAC comes in 2 forms unaided, sign language, and aided = devices
- With AAC devices symbols are heavily used
- Children with Autism are found to have strong visual processing skills, and low expressive communication. This makes them good candidates for AAC devices.



Dynavox

- Dynavox is probably the most widely known manufacturer of devices.
- Well developed
- Ability to backup, use custom images.
- Con: \$3000 - \$8500



3 Tablet Types



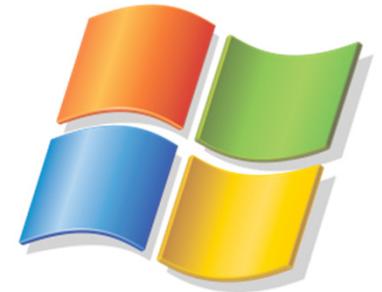
About Android

- Android is an operating system developed by Google.
- Android is free for companies and developers to use on their devices.
- There is not one Android / “Droid” tablet.
- They come in many form factors (screen size ranging from 7”-11”).
- Nexus tablets are made by google directly.
- Android tablets range in price between \$199 - \$899



Windows Surface

- Made by Microsoft.
- Surface Pro 3. Surface pro can run traditional 3rd party windows applications.
- Currently comes in a single form factor with a 10.6 inch screen.
- Although pictured and advertised with one the keyboard and stand do not come with the tablet .
- Has traditional USB ports to connect with traditional devices like hard drives and thumb drives.



Priced \$499-\$999

Apple iPad

- At Monarch Center we use approximately 120 iPads.
- The iPads are assigned to Teams and individuals such as SLPs and behaviorists.
- We use a mix of iPad 1's, 2's, 4's, Air's, and Minis
- iPads have been a great boon to our schools educational resources as it allows us to be more mobile with our teaching.
- They serve as a wide variety of uses such as educational apps for the student's, reinforcers, visuals such as schedules and token boards, data collection, a camera, and much more.



iPad Carts and Syncing

- Managing iPads has its own unique sets of challenges.
- We use 4x Bretford carts to charge & sync our iPads.
- Our most recent cart is equipped with Bretford's new PowerSync Technology which allows us to see when the whole cart is charged, and allows us to set notifications if iPads are removed from the cart during restricted hours.
- We use a dedicated computer to sync them all.
- For protection We primarily use Otterbox Defender cases.
- This is the case used at Monarch Center.
- Three layers of protection:
 - (1) Clear protective membrane on touch screen
 - (2) High-quality polycarbonate shell
 - (3) Durable silicone skin



\$49.99 - \$89.95

Otterbox Accessories



- Otterbox Utility Series Latch II
- Otterbox has begun to make a set of carriers and straps for their Otterbox case.
- Monarch Center is currently testing a few of these out.

Wall Mount

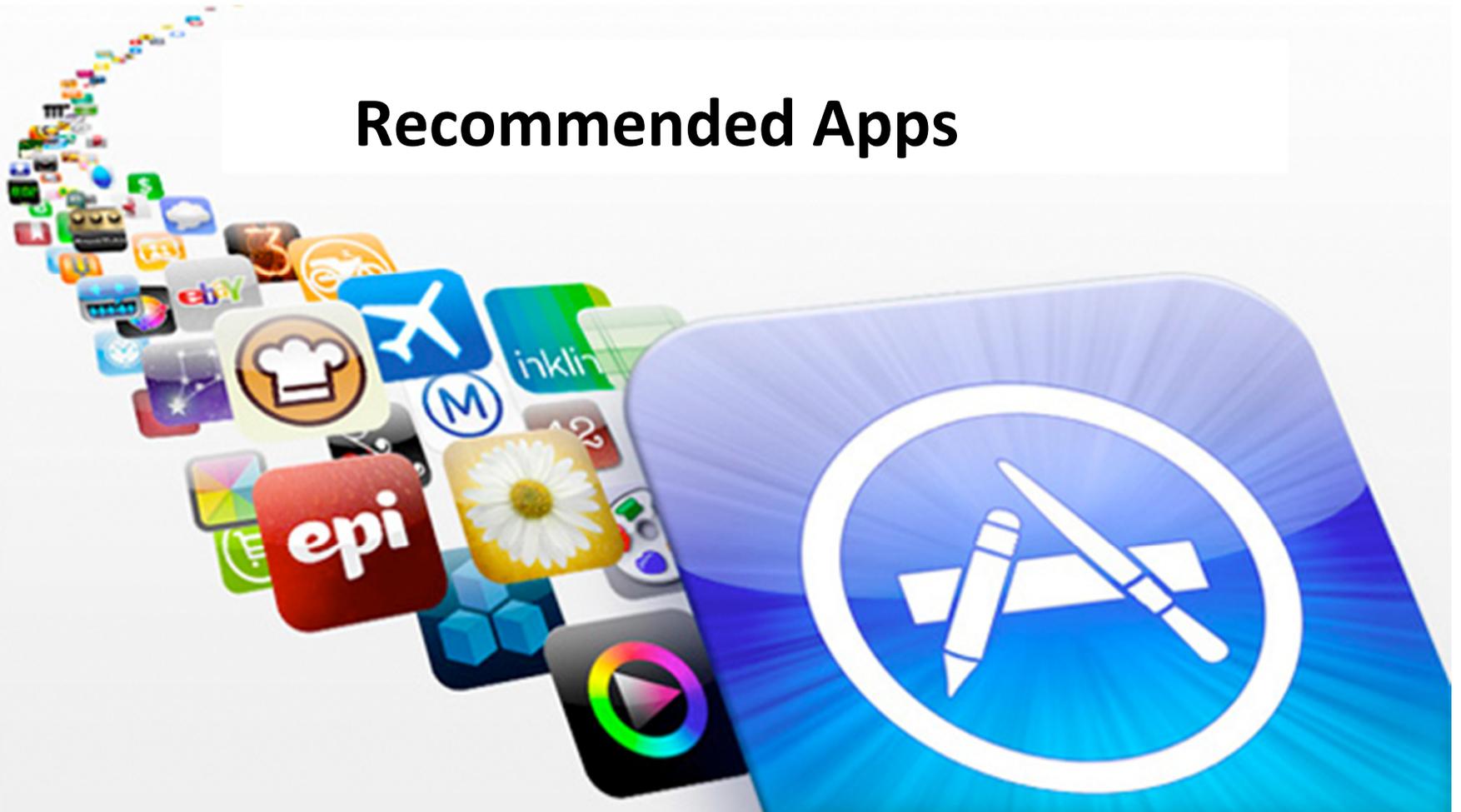
Dock

Power Dock



- Otterbox Agility
- A case system which allows you to magnetically mount iPads to a wall.
- We use these with our Gross Motor room where we have stations set up for the students to work from.
- Our iPads have video models on how to do each task at each station.

Recommended Apps



Scene Speak

- By Good Karma Applications, Inc
- Scene Speak provides a framework on the iPad to create interactive visual scene displays and social stories.
- Add custom Images
- Record your own voice
- Can create social stories
- Text can be animated by recording voice in-sync to the color change of text (text changes from black to red and back to black).
- Ability to lock pages.
- Backup to iCloud or computer and share scenes created
- Password protect settings.



Price: \$9.99

iPad Only

PuddingStone

- Interactive scene based learning
- 3 Sections
- Action Factory - Teaches who, what and where language concepts.
- See and Do Theatre - Teaches chores, play skills, self-care routines. Each video utilizes research-based symbols developed by Boston Children's Hospital!
- Storytorium - Teaches reading comprehension and literacy skills. Character-based video models to teach difficult concepts

OTHER FEATURES:

- Three interactive games in one platform
- Sign language (ASL) captioning videos available for all of our stories in the Storytorium



Price: \$19.99
+ Universal

AAC Genie

- By Hump Software
- AAC Evaluation Genie is an assessment app to assist Speech Pathologists in the selection of a particular device or software to assist an individual.
- There are 14 subtests that can be administered with screening options available for each subtest.
- Visual Identification, Visual Discrimination, Noun Vocabulary, Function Vocabulary, Verb Vocabulary, Category Recognition, Word Association, Category Inclusion, Category Exclusion, Pixon Core Vocabulary, Unity Core Vocabulary, Unity Icon Patterns, Picture Description, Word Prediction



Price: \$11.99

iPad

Proloquo2go

- ◆ By AssistiveWare - AAC App
- ◆ Use camera on device to quickly add image to the users language.
- ◆ Tap an image and it speaks, build sentences with images.
- ◆ Text to speech engine with Male, female, and children voices.
- ◆ Easy to backup to iTunes, can transfer Student's Library to other devices.
- ◆ Has a default vocabulary of over 7000 items.
- ◆ Very intuitive, easy to use, & customizable



Price: \$189.99
+ Universal

TouchChat

- By Silver KiteAAC App
- Uses Symbolstix image library of 10,000 images.
- Buttons and pages are fully customizable.
- You can have space blanked out for buttons you will introduce later.
- Interface allows for button colors, allowing a student to associate the colors with areas of content.
- Separate purchases for iPad and iPod Touch version.
- NOTE \$10.99 version does not have a voice built into it nor will it allow you to record sounds.



Price: \$149.99

Multiple Versions Available

LAMP Words for Life

- By Prentke Romich Company
- High quality Ivona text-to-speech voices
- Pre-stored core and fringe words
- Vocabulary Builder: Allows chosen words to be visible while the remaining vocabulary is hidden
- Ability to store customized vocabulary and edit individual buttons
- 90-days free iShare access
- Capability to migrate vocabulary sets to PRC devices
- Ability to backup to iTunes



Price: \$299

iPad Only

AutisMate & AutisMate 365

- A scene cue based AAC app
- Create Scenes from the stock library or take your own pictures. You can create hotspots with quizzes to help describe the scene or things going on in the scene.
- The student can then use the built in AAC app to communicate about items in the scene.
- GPS functional to activate scenes based on location.
- Also create visual schedules to go with the scene.
- Great content sharing abilities via email or through iTunes.
- Ability to backup changes.



Price: \$149.99

iPad only

OverDrive

- Borrow eBooks, audiobooks, and streaming video from your library
- Available 24/7, now the library comes to you.
- No more late fees. Titles are automatically returned.
- Place holds, create wish lists, and return titles easily.
- Sync libraries, bookmarks, and recent positions across mobile devices.
- A valid account with a participating library, school, or other institution is required.



Price: Free

+ Universal

vizzle

- From Monarch Teaching Technologies.
- The player for an award winning suite of visual lessons.
- VizZle includes Build-a-Book, Matching Board, Sorting Board, Game, Scheduler, and Phonics Plus Beta
- The player allows you to play back VizZle lessons.



Price:
Subscription
+ iPad Only

Visual Planner

- By Good Karma Applications
- Able to create daily, weekly, and monthly schedules.
- Able to set items with multiple occurrences.
- Ability to create “Activity Schedules”, these work like micro schedules. Checklists are built into the Activity Schedules.
- Can use videos in schedule, but cannot use video and activity schedule at the same time.
- The ability to back up your schedules to your computer.
- The ability to restrict editing, clock, libraries, notes, and activity schedules.



Price: \$6.99

iPad only

Choiceworks

- Great app for helping manage a person's daily routine
- Three boards: Schedule, Waiting, and Feelings
- Preloaded with over 180 images and audio
- Highly customizable
- Ability to share boards and print boards.



Price: \$6.99

+ Universal

Keynote

- By: Apple Keynote is Apple's version of Power Point.
- Create keynote presentations on your mac and upload them to your iPad.
- One would not think of it as an educational tool, but it has many potential uses.
- Create Social Stories
- Create Schedules



Price: Free

+ Universal

FTVS HD - First Then Visual Schedule HD

- By Good Karma Applications, Inc
- The sequel to First then Visual Schedule
- Now with :
 - First Then boards
 - Visual schedules
 - Task analyses
 - Social stories
 - Choice boards
 - Video models
- You can now also export your content via email and share it with others.



Price: \$19.99
+ Universal

Story Creator

- Create custom stories for a student that they can store on their device and take with them throughout their day!
- Add your own photos and videos to the storybook
- You can lock stories, to prevent students from modifying them.
- Ability to share stories over Facebook.
- Stories can auto play on their own.



Price: Free

+ Universal

Video Model 1



Video Model 2



Volume Sanity

- Using the built in iOS settings you can only limit the output volume in the music app using headphones
- Volume Sanity will reduce the volume of all apps to a desired percentage.
- You can password protect the volume limit.
- Some important limitations to note are:
- The App must stay open in the background to work
- When your device goes into low power or dies, you may have to 'wake up' the app



Price: \$3.99
+ Universal

iDress for the Weather

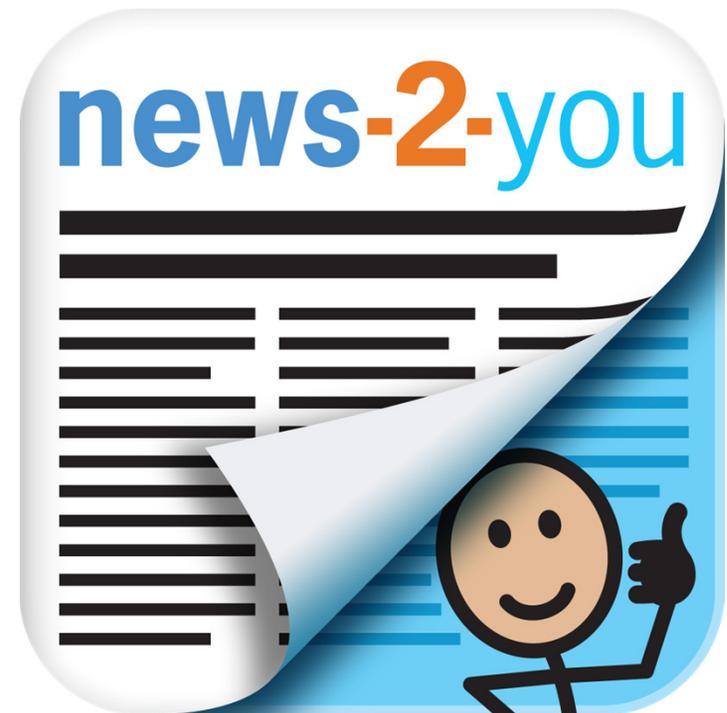
- Using GPS technology or a zip code entered it iDress checks the weather and suggests types of close to wear based on the temperature.
- Stores up to 10 locations.
- You can set the weather thresh-hold
- Also you can customize the clothes to be worn by taking pictures of the actual clothes.
- Requires an internet connection.



Price: \$2.99
+ Universal

News-2-You

- By AssistiveWare
- The award winning newspaper for children with Special needs.
- This app give you the ability to download and view a newspaper of events presented in both text and supported with visual images for the language.
- Built in puzzles and quizzes to engage students.
- Apps is free but can buy monthly or weekly papers.
- Supports news to you subscriptions.



Price: Free

+ Universal

Nearpod

- Nearpod allows a teacher to share from their iPad or Mac a presentation or document to a student's iPad. The student can then follow along and respond when questions are presented.
- This can be used with a whole group of students at the same time.
- Nearpod users can start with a free Silver account, which allows them to upload their presentations, and also create new ones.



Price: Free

+ Universal

Dexteria

- By BinaryLabs
- Dexteria is a set of therapeutic hand exercises that improve fine motor skills and handwriting readiness.
- Dexteria's unique hand and finger activities take full advantage of the multi-touch interface to help build strength, control, and dexterity.
- Automatic tracking and reporting features.
- You can email the progress reports right from the app.



Price: \$4.99
+ Universal



Emerging Technologies

Wearables & Autism

- Wearable technology is a booming trend.
- For children with Autism they stand heavily benefit from this technology, as it can help them adapt to their everyday life.
- From a research structure wearables allow us to track and gain more information about the relationship between environmental factors and the student's reaction to them.



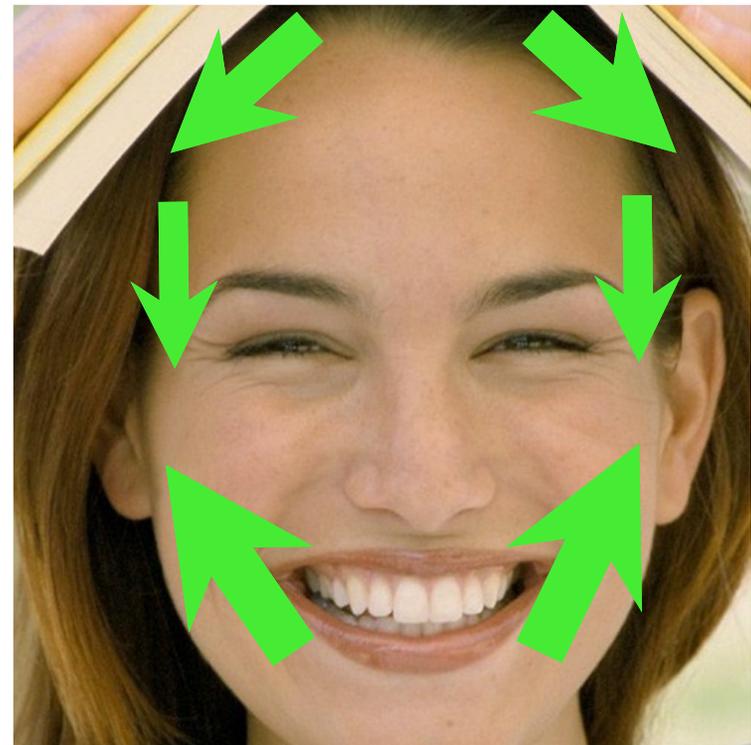
Making Sense of Symbols

- Wearables could help provide information about one's surroundings.
- Deciphering complex symbols like street signs.
- If the individual is unable to read a device might be able to alert the user by speaking the message, providing a visual sign they understand and more.



Detecting Emotions

- Wearables have the potential to assist those with ASD by letting them know emotions of people around them.
- When a person is experiencing feelings they are often conveyed through facial expressions and body language.
- Using the built in camera and facial recognition a person could have the device tell them the emotions the person is most likely feeling.



Oculus Rift

- The technology has great potential though as it promises to immerse an individual in a world where a user could have full control of the environment
- In 2014 Facebook paid \$2 Billion for a company by the name of Oculus VR
- A developer version of the software has been available since 2012
- Oculus created a Kickstarter 2012 in which they released a set number of test units.
- At their May 2015 Press event they announced a partnership with Microsoft and a consumer version of the product is expected to go on sale in Q1 2016.
- The Rift uses an OLED panel for each eye, each having a resolution of 1080x1200 and refresh rate of 90 Hz.



[Oculus - https://www.youtube.com/v/kGOa9HRelkk](https://www.youtube.com/v/kGOa9HRelkk)

Oculus Video



Microsoft HoloLens

- HoloLens is a set of smart glasses, that allows the user to see “Holographic” interfaces in their surroundings
- An example of this would be that you could walk up to your fridge, and see an interface projected onto the fridge that acts as an order form for an online grocery store
- This is similar to Google Glass
- HoloLens was demoed at the Windows 10 announcement, and was said to be released in the lifespan of Windows 10



Apple Watch – Autism

- The watch has the ability to connect with your iPhone and share data from apps
- Apple has announced native apps coming this fall with watchOS 2
- Using features such as Tap or Messages you could prompt a student in a more socially appropriate way
- There is the potential for multiple prompt types physical (through vibration), visual (through images or messages), verbal /audio (from built in speakers)
- The Apple Watch has built in sensors to monitor things such as heart rate. These sensors could allow for additional data to be tracked on a Student with ASD
- They could also be beneficial in helping an individual know when they are upset



Robotics - NAO

- Recent studies using robots to assist in the educating of individuals with Autism has shown positive results.
- Children with ASD have been found to respond better to robots due to the predictability and simplicity of the machines.
- NAO is a robot created by Aldebaran that has been designed to interact with children with ASD.
- NAO has many sensors to detect such things as when someone is touching it, and even when someone is looking at it.
- The robot can autonomously move on its own, and even dance.



NAO Video



Monarch Center for Autism

A Division of Bellefaire JCB



Services

- ❑ **Preschool & Day School**
- ❑ **Transitional Education Program**
- ❑ **Boarding Academy**
- ❑ **Adult Autism Program & Residence**
- ❑ **Extended School Year**
- ❑ **Summer Social Language Program**
- ❑ **Family Training, Support & Social Activities**
- ❑ **On-Site Consultation & Therapy**
- ❑ **Online Resource Center**

- ✦ **Web:** www.monarchcenterforautism.org
- ✦ **Telephone:** 216.320.8945 or 1-800-879-2522
- ✦ **Address:** 22001 Fairmount Boulevard,
Shaker Heights, Ohio 44118
- ✦ **Facebook:**
www.facebook.com/monarchcenterforautism
- ✦ **Twitter:** www.twitter.com/monarchohio

Questions ?





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- Free CE certificates for attending and viewing webinars
- Access to a resource library with webinar recordings, free resources, and quizzes to receive a free CE certificate for all past webinars.
- Online discussion forums where you can connect and collaborate with

Web 2.0 Tools

- Autism Blog
- Discussion Forums
- Resource Library
- Shared Calendar
- Chat Room
- Polls & Quizzes
- Wiki
- Bloglinks
- Weblinks

Members | Administrators

 Thuji . Educationist Ability Bhutan Society	 Joann Abal Media Coordinator Ashley High School	 I ❤️ CHEER Deanna Acosta librarian topock elem
 Ms. Teri Acosta Special Education Teacher - Impact at UVMS Arlington Central	 Karen A Privatepractice	 Susan Abatemarco LDTC Monroe Twp School District

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