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December 15 News and Trends in Children's Tech

Wanen Buchletton

Dear CTR Subscribers --

I'm pleased to present to you with our biggest issue of the year. The fat page count reflects the amazing times in which we live. We'll look back on 2015 as a very significant year for children's digital media. This has been the year that the conservative AAP (American Acadamy of Pediatrics) admitted that "screen time" is just "time" (http://www.aappublications.org/content/36/10/54), a doll can have the power of Siri, and virtual reality has become a reality. Behind these chaotic shifts in the culture of publishing, we know that the way a young child develops hasn't changed. The best way to make sense of all these new apps, games, tablets and toys is through an old fashioned child development lens, even if it means squeezing into a fancy dress (page 4). Here are some of the highlights from this issue.

What might Montessori say about iPads? "Use them thoughtfully"

I've written about what various theorists might say about emerging technologies in the past. But last week, I took it a step further when I put on a wig and stepped in front of a microphone. Dr. Maria Montessori was in the house. It took guts, but I was assisted by three other good natured friends who joined me on stage as Skinner, Piaget and Vygotsky. Behind the silliness was a serious attempt to pull lessons from old theory for modern guidance on how to best tap into the power of technology for the benifit of children. Did we succeed? See page 4, or watch the video https://youtu.be/F6qMTy6fhIM

Presenting the Top 100 Apps of 2015

The central part of this issue is our list of 2015 Editor's Choice selections for children's apps, which conveniently comes out to 100. Each app is quickly described, and sorted by age on page 6.

Recommended Video Games, Toys and Tablets

You can thank Moore's Law. While the number of quality apps has increased, the price of the hardware that can run them has decreased. If you know what you're doing, you can get more bang for your buck than at any other time. See the list on page 16.

High Tech Holiday Lights

In this month's LittleClickers we look at the technology found in holiday light displays. The videos and links are on page 4.

On behalf of Matt, Sarah, Andrea and myself, we wish you a wonderful holiday. We want to remind you that our next issue will be January 15, 2016, and there will be no CTR Weekly on December 30. We'll be turning off our screens for a rest. In the meantime, see you next year!



Children's Technology Review December 2015

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It's the time of year to program your menorah and print out some 3D ornaments. Holidays have gone high tech. Here are some ways that people are bringing holiday decorations into the digital age. Note: you can

read this column online, at http://littleclickers.com/hightechholidays/

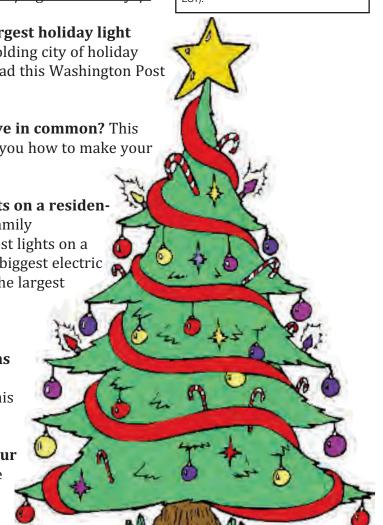
1. Which town set the record for the worlds largest holiday light **show?** Go down under and discover the record holding city of holiday lights that features over 1.2 million LED lights. Read this Washington Post article http://wapo.st/10mllNs.

2. What do computers and Christmas trees have in common? This Wikihow article http://bit.ly/1NxK28r will teach you how to make your light display dance to music or other sounds.

3. Which family holds the record for most lights on a residential property? Here's a story about a New York family http://bit.ly/1J4nlaR that holds the record for most lights on a residential property (and most likely, having the biggest electric bill). This family also holds a record for creating the largest image made of LED lights. Watch the video at http://bit.ly/1Iqbu3G.

4. How tall is the worlds tallest living Christmas **Tree?** The answer is 150 feet. It lives in Ferndale California, but you can learn more about it with this link http://bit.ly/1Rdr75P.

5. Do you have a 3D printer? Why not make your own ornaments? We found this Makezine article with some pictures and plans, at http://bit.ly/1LFEzbv



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Megan's Videos About High Tech Holiday Lights

Here's a set of hand picked videos from YouTube: https://www.youtube.com/playlist?list=PLcBVHzUUEKwnNr5OD-eAU99SEcSkrO-ni

What Would Montessori Say About an iPad?

Maria **Montessori**, Jean **Piaget**, and B.F. **Skinner**, walked into the speaker ready room before their panel at the NAEYC annual conference. **Montessori is angry**.

MONTESSORI "I typed my last name into iTunes and came up with 500 apps! Some are good, but others are merely low rate flash cards."

SKINNER "Really though, what's the harm with an occasional flash card, as long as it's used with a reward?" asks Skinner. Montessori's cheeks are flushed with emotion.

MONTESSORI "Some of these apps don't go deeper than lowest level ideas – shapes, colors, letters and numbers. Take 'Approach to Montessori - Numbers HD Free Lite' (Brain Counts, 2012) she says. It combines my name with noisy pedagogy and free offers, and uses my own words for marketing...'prepare for greatness'!!!"

PIAGET Piaget nods in the direction of Skinner –
"She has reason to be angry, B. F. Some of these apps imply the acceleration of development, even for infants. We should all be concerned with app quality."

VYGOTSKY Lev Vygotsky, who has been sitting quietly nearby, pipes up. "Isn't the quality you speak of in itself an artifact of culture?" Piaget takes a long, thoughtful puff of his pipe.

PIAGET "Yes, Lev, but we have other concerns. I've noticed that my own daughters now prefer their iPads to the observation of mollusks! But I've been observing them as they play and I'm pleased to report that my stage theory maps well to this digital medium."

MONTESSORI "The hands are the instruments of man's intelligence, Jean." reminds Montessori. A glass screen is abstract and symbolic, which must be considered when dealing with preschoolers..."

PIAGET Piaget waves a finger "...but that won't influence the developmental sequence. A child

born 100 years ago will develop in much the same way as a child born this year. What is different in 2013 are the experiences due to the technology. Candlelight can be provided by LEDs. But we still have the choice of real candles. Parents have genetic screening, antibiotics, and their babies can have bedtime stories read by grandparents who lives half a continent or half a world away."

VYGOTSKY Vygotsky quietly adds, "Mobile devices help ideas flow across geographic and economic chasms. Services like Google, Facebook, YouTube and Twitter can move ideas from Leningrad to San Francisco at the speed of light." He starts getting very excited. "The knowledge elite could dissolve. Every teacher could have a virtual mentor and unlimited professional development. That, my friends, is worth getting excited about."

PIAGET Piaget has been intently puffing on his pipe, which has creating a cloud around the group, and cleared the non-smoking room. "And these devices have cameras ... electronic eyes that can instantly bridge the concrete and the symbolic. But I must agree with Maria – and the recent NAEYC & Fred Rogers Center position statement on young children and technology (2012) – it can never replace the touch of a butterfly wing."

SKINNER Skinner chimes in over his game of Candy Crush, "...and mankind still manages to use incredibly powerful technology for extremely unpowerful activities; like this game. My first teaching machine was cobbled together with plywood and punch cards. These tablets let us deliver the most sophisticated programmed instruction at a low cost. Friends, we can now mass-produce the perfect curriculum, and deliver it to every child, and accurately measure the results! No child will be forgotten."

MONTESSORI Montessori's iPad is now on reserve power, but she's stumbled on an app called The Human Body (TinyBop, 2013). She's been watching a single blood cell move through maze of heart valves, as she speeds and slows the heart. Skinner takes a turn as the others watch, amazed. "I would've loved this app as a child." she says quietly. "I believe there are apps for each of us... we just have to know what we're looking for."

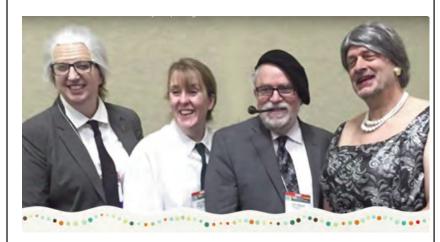
Take a deeper look

If you're the scholarly type, download the article that inspired this panel, from

http://childrenstech.com/blog/archives/16450. If you want a bit of entertainment, watch the recording of the panel:

https://youtu.be/F6qMTy6fhIM. The 75 minute session took place at NAEYC 2015 in Orlando, Florida, in Nov. 2015. It challenged four educators to role play as different theorists to explore how emerging technologies might influence child development. Chip Donohue played Jean Piaget, Warren Buckleitner was Maria Montessori, Kate Highfield learned a Russion accent to become Lev Vygotsky and Barbara Chamberlin was the lone behaviorist, as BF Skinner.





Ten Tech Trends for Early Childhood Educators in 2015 Warren Buckleitner

For the eighth year, the mighty 'B's swarmed once again at NAEYC, for an annual panel called "Emerging technologies for empowering children: Showcasing innovative tools and pedagogies that transform teaching, and inspire learning." The 'B's are Mark Bailey, Pacific University; Bonnie Blagojevic, Morningtown Consulting; Diane Bales, University of Georgia and myself (Warren Buckleitner). This year I did a "Top 10" list, which forms the core of this article. Here's the video https://youtu.be/cc.hn]5r-AE?t=35m31s

Screen time is even harder to define. What is a screen? The answer has become harder to answer in the past 12 months, the number of iOS screens has doubled from four to eight -- the current options range from little to big, from the tiny 38 mm watch to the apps running on Apple TV 4. "Screens" can now be immersive, projected, shown in 3D or VR — and they can work with or alongside books or toys.

The Apple Pencil and the iPad Pro. The iPad Pro makes you feel like you're driving a Lincoln Town Car... it's big, powerful, heavy, doesn't get the best mileage, and is expensive. But boy.... does it feel good. It makes apps look better and the fonts are bigger and seem easier read. There are shortcomings to note. It could be more easily damaged than the iPad if dropped, and it will be extremely easy to misplace the pencil, which also needs an occasional charge. The biggest advantage is the pencil, offering exact precision that makes former finger-driven iPad use feel clumsy. The bluetooth Apple Pencil does something else as well... it turns the iPad Pro into creative drawing experience unequaled by past finger driven experiences.

Apple TV 4. There have been many "nails in the coffin" for traditional TV. But Apple TV is one of the biggest nails. Why? Thousands of apps can now can "live" next to YouTube or Netflix on the big screen, in your living room or classroom. Wall sized touch screens have new affordances.

Better apps for child empowerment. This is a broad category of apps that enhances a child's feelings of "I can do it." There are many noteworthy titles, including My Very Hungry Caterpillar, all the Sago Mini apps, Thinkrolls 2, and general purpose apps with two player features, like Grandma's Preschool.

Non fiction apps. Now, more than any other time, we can teach a child to fish for their own answers, using tools like Google, Google image search, YouTube, and YouTube Kids. Noteworthy apps include the TouchPress titles (Solar System, Inventions, The Orchestra), and some of the Tinybop titles like The Earth and The Human Body.

Virtual manipulatives are getting more interesting. There is a growing category of apps that let children "think with their fingers." Maria Montessori might say these experiences offer "auto-didactic" feedback, and Piaget might say they fall between preoperational and concrete operational thinking. These include apps like Busy Shapes, Crazy Gears (right), and Dragonbox Numbers.

YouTube Kids is a single free app that can put a billion channel global TV in a child's pocket. It also gives you the ability to "change channels" with your voice. This app, combined with faster and more evolved Wi-Fi, brings new challenges and opportunities to early childhood education.

1AP (In App Purchase). 2015 has seen no shortage of shady business practice when it comes to making money from digital children's media. One area of concern is free apps. Why put cheap gas in a luxury car? A school should be viewed as a "luxury education system." But many parents and educators use free apps that can distract children and waste valuable learning time.

VR (Virtual Reality). This month, the New York Times distributed over one million Google card-board VR headsets to their subscribers. It is now possible to purchase your own panorama camera for \$300 (see the Ricoh Theta M15). More content from such cameras is becoming available at www.youtube.com/360. At Cinekid this year, children were making their own VR glasses, and building their own VR worlds. Both AR (augmented reality) and VR (virtual reality) products have greatly matured in 2015. By this time next year, the idea will be much more accepted. What does this mean for young children?

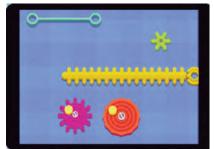
Real reality. We've all heard of VR (Virtual Reality). Thanks to the ideas of constructivism, we know that technology is often highly symbolic and abstract. That's why we need to make sure that we never forget about "Real Reality." It doesn't cost much. You can purchase a 76 piece homeowners tool kit for just \$19.97 at Home Depot that can be used to dissect old gadgets. That's less 27 cents per tool; a value that is hard to find in any type of digital technology.













100 Noteworthy Apps From 2015

Here are 100 Editor's Choice products from the past 12 months, sorted by age. Keep in mind that these are condensed reviews, and information changes quickly. For complete details please consult the CTREX database at www.ctrex.us.

PRESCHOOL (Birth-to 5-Years)

Axel Scheffler's Flip Flap Jungle, Nosy Crow, (\$0.99 on iPad), for ages 2-7. This third Axel Scheffler Flip Flap app follows the same design as the first two (farm and safari). Cross a monkey with a gorilla and a leopard and what do you get? A leopilla. This is another excellent bite-sized starter app that is also a good language enrichment experience. The fonts and text highlighting also make it a noteworthy reading experience. The art is by Axel Scheffler, illustrator of The Gruffalo. Need to know: There's not a lot of content, but what there is, you'll love. The quality illustrations make this app worth the download.

Billy's Coin Visits the Zoo, Spinlight Studio, (\$1.99 on iPad), for ages 3-8. Beautiful hand-crafted artwork made from fabrics and textures and a strong narrative structure make this storybook an excellent addition to any children's app library. The app uses an innovative navigation, where you guide the coin through the story -- "pushing" the narrative events. We also liked the quality of the narration, and the highlighted text. Need to know: There is no table of contents, and you can't skip the initial narration on each page, which can make a child feel trapped.

Bubl City Cars Adventures, Bubl www.bublbubl.com, (\$.99 on iPad), for ages 3-8. Explore a 4 x 4 block city from a bird's eye view, as cars, people and pets move below. Touching one of the vehicles brings up a set of roads to explore. Driving is no-fail -- just tap anywhere on the screen to move forward; the top part to move backwards. Need to know: The graphics are low res (the look is similar to Toca Nature).

Cat in the Hat - Read & Learn.

Oceanhouse Media, (\$4.99 on iPad, iPhone, iPod Touch) for ages 3-6. This app is the first from a new series called "Read and Learn" from Oceanhouse Media. There is no "Read to Me" or "Read it Myself" options. New animated features respond to a child, without interrupting the story. The rain in the window always follows the angle of the screen, for example; and a hidden star on each page can launch a short challenge related to the story. The 31 challenges are small and bite sized, and well synced to the story and reading

level. For an early reader, this is an excellent choice. Need to know: The only downside? The higher price; but for this level of quality, it's worth it.

Dexteria VMI, BinaryLabs, Inc., (\$3.99 on iPad), for ages 3-6. Featuring a clean, responsive, well designed interface, Dexteria VMI (stands for Visual Motor Integration) is set of activities

designed to "measure and practice visual tracking and visual-motor skill integration." There are two sets of puzzles: Make This (use your finger to drag objects together to make a target object) and Match This (tap on the object that matches the target object). Need to know: Teacher features include a timer and the ability to skip levels; plus tracking for multiple children. There's no narrative elements at all in this app -- this is all about clean sorting.

Dino Sight Words, Tipitap Apps, (\$1.99 on iPad, iPhone, Android), for ages 4-up. In search of some straightforward, gameified sight word recognition practice? This leveled "runner" style game lets you help a dinosaur finish a race by changing lanes, and collecting matching words. As you change lanes, you can tap to jump over obstacles as you try to run into prizes, stars, awards... and correct words. Need to know: Use the parent options to pick between all caps or lowercase.

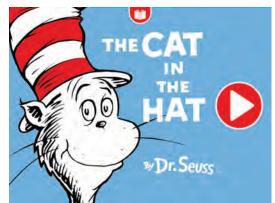
Dr. Panda's Carnival, TribePlay, (\$2.99 on iPad, iPhone, Android, Kindle), for ages 2-6. Looking for a great starter program with plenty to do, with a theme that nearly every child finds enjoyable? Keep reading. This playful, easy to use busy-box style app gives children plenty to touch and explore, in a carnival theme. Need to know: adjust the sound in the parent's control panel.

Dr. Panda's Firemen, TribePlay, (\$2.99 on iPad, iPhone, Android, Kindle) for ages 5-down. Extremely easy-to-use, responsive and playful, this Dr. Panda app that lets children play with a high interest topic: fire fighters. There are four areas to explore. You start in the fire station where you can wash the fire truck or just explore. If you ring the alarm, you must equip the firefighters

using 1-to-1 correspondence (three hats, three firefighters). The app presents some bigger ideas about the teamwork involved in fighting a fire. There are no time-limits, language requirements, ads or game objectives. Need to know: The oversized illustrations are busy (but easy to control), and the fire hose can be hard to aim.

Early Math City Skate with Gracie & Friends, WGBH, (\$free on iPad) for ages 2-6. One of four free (NSF Funded) games with bite-sized, focused games that are easy to manage. This app would

make a good addition for an early math activity for any early childhood program. There are 20 levels covering the numbers 1 to 5. The simple runner mechanic is easy to control. The curriculum supplement of Early Math with Gracie & Friends is based on the Next Generation Preschool Math research project funded by the National Science Foundation. Need to know: The format gets dry fast. There's not much narrative glue to this activity.



Elmo's World and You, Sesame Workshop, (\$5.99 plus IAP on iPad, iPhone), for ages 2-5. TV content normally doesn't care if you're in the room. Not in this case. Two interactive "appisodes" -each with about 10 minutes of carefully carved up Sesame Street episodes, let you freely scribble over Elmo with large crayons. Later, during a fish tank scene, any touch adds a bubble or a fish to the screen. As a result, young children -- even babies -- have something to do while they watch. All of the content is responsive and fail-safe. A contents tab lets you jump around in the show. Need to know: We didn't like how children are offered a third game that is faded out in the main menu. The "Games" choice costs \$2.99 and requires adult permission (a better app design would let parents remove this option, so children aren't teased). We also thought the choice of a holiday tune (Jingle Bells) was an unusual choice for the ending of the episode. That particular song choice was made more noticeable by the inclusion of a keyboard that plays off key. It looks good but the notes are sour.

Fiete Choice, Ahoiii Entertainment, (\$2.99 on iPad, Android), ages 4-up. This is a solid logic game is based on the classic classification task known as "odd one out." In the hand-drawn app, children accompany Fiete the sailor on his journey. The clean design and well-leveled challenge deserves a toast. Need to know: The sets include animals, cars, fruit, geometric shapes, nautical flags, marine animals, sailors, and some mugs that look a bit like beer with drinking straws.

Fishing With Grandpa!, FairLady Media, (\$2.99 on iPad), for ages 3-6. Nine fun, well leveled math and logic games greatly increase the chance that your child will catch some early math competence, all under the guise of helping Grandpa catch fish. Need to know: Be sure to explore the settings, where you can turn on or off specific activities to customize the app for your child.



Goldilocks and Little Bear, Nosy Crow, (\$4.99 on iPad), for ages 4-8. Nosy Crow's most recent interactive story app tells the same classic tale from two points of view. You can read the story as Goldilocks, or as the Little Bear. To switch points of view, you rotate the screen. Need to know: This is a rich early language/reading experience; combining good interactive design with first rate illustrations and narration. It's well worth the download.

Grandma's Preschool, FairLady Media, Inc., (\$2.99 on iPad), for ages 3-6. Can a classroom be fun to explore? This one is, especially when there's a zany Grandma as the teacher. A dozen no-fail school-themed activities and 13 videos are waiting in Grandma's

Preschool, where just about anything you touch does something school-related. Need to know: This is the fifth in the "Grandma" series of apps from Fairlady Media. All are well designed. See also Grandma's Garden, Grandpa's Workshop, Grandma's Kitchen, Grandma Loves Bugs and Grandpa In Space.

Happy Valentine's Day, Little Critter by Oceanhouse Media (\$1.99 on iPad, Android), for ages 2-5. A playful Valentines day theme meets the same touch-and-hear, tried-and-true interactive design treatment given nearly 100 previous Oceanhouse Media apps. Children can touch any illustration to see an instant word label; which is an excellent scaffolding technique. Need to know: As with other Oceanhouse Media apps, it is possible to record your own narration.

Kapu Bloom Tunes, Kapu Toys (\$0.99 on iPad for ages 0-3. Here's a no-fail musical finger painting activity that playfully introduces elements of symmetry and melody. Need to know: This is a great starter app.

Kapu Planet, Kapu Toys, (\$1.99 on iPad, Android), for ages 4-up. Eight easy to play, fail-safe games come with a geography twist. Using a nicely designed spinning globe menu, children touch an area of the world to play with one of the animals that lives each particular region. Need to know: There is limited content.

Labo Shape, Labo Lado Inc.(\$2.99 on iPad, iPhone, iPod Touch) for ages 2-5. Here are another six shape-related tracing and drawing activities from the small but prolific Chinese studio, Labo Lado, featuring a clean, slightly confusing interface and lots to do. This is a solid starter app. Need to know: The first menu is confusing. Each square of design is actually an activity -- a point that could be more obvious.

Labo Train, Labo Lado Inc. (\$2.99 on iPad), for ages 3-7. This well designed app combines creativity, bridge building, physics, shape matching and timing. While there are a few design quirks, the overall idea of letting children decorate a train, and then get to drive it over a road with bridges that requires repair without spilling a load of apples is solid, and it succeeds in giving them an authentic challenge. Need to know: Your train can't back up, and some of the shapes are hard to manipulate, which can frustrate children. If your train gets stuck you have to start over.

Loopimal, Lucas Zanotto, (\$2.99 on iPad), for ages 2-up. Like Garage Band for toddlers, this app turns your iPad into a looping musical toy -- in the key of C -- with six moving animals. You discover that you can "program" the animal motions by dragging and dropping sounds onto one of the eight spots on a sound stage. Because each sound icon results in a different effect, you're suddenly making inter-related loops. This app was made in Finland from the makers of Drawnimal. All of the tunes are in C-major, which makes it easy to use this app as a rhythm section, for playing along (the white keys on the piano). Need to know: One minor drawback: there is no pause or mute and you can't control the playback speed.

LumiKids Backyard, Lumosity (\$free on iPad, Android), for ages 3-6. This is the third well-designed app in the early childhood product line from Lumocity (see also LumiKids Park and LumiKids Beach). All are free for the download, and run on both iOS and Android. Each also contain five activities -- in this case, dealing with the fear of the dark, bed time routines, quantities and weight, spatial relations and logical reasoning. Many use multi-touch so collaborative play is possible. Need to know: The registration is getting sticky but only on the initial launch. You have to jump

through some hoops, while your device is online, to avoid giving the publisher your child's age and your email information. But it's possible.

LumiKids Beach, Lumosity, (\$free on iPad, Android), for ages 3-6. This is the second app in the LumiKids series, and it's another winner. The design is clean and the leveled activities gently pose unique problem solving challenges that gradually get harder. As you explore a beach, you meet characters who have lost their toys. It takes matching patterns to help them. A coloring activity introduces fine-motor coordination and planning skills to color increasingly complex scenes of fish and water creatures and a sand castle game makes you practice "response inhibition" (you have to wait to avoid water balloons). Need to know: So what's the catch? You are required to create an account to use the app, which gives Lumosity your email information.

Mario's Alphabet, 1tucan, (\$2.99 on iPad, Android, Kindle) for ages 4-7. Use your finger to move Mario (no relation to the Nintendo Mario) through a maze to collect letters. Sometimes a letter will block your path, which means you'll need to tap it or drag it to make a bridge. Each tap results in the letter sound, making this a good phonemic awareness activity. Need to know: Despite a clumsy feel at the start (we wish Mario was more responsive to your touch), and music that loops and can't be controlled, the play mechanic pulls you in, and the challenge gradually increases. Just make sure you show children how the "undo" button works.

Mini-U: OverColor, PopApp Factory, (\$2.99 on iPad), for ages 2-6. If you liked OverColor (CTR Feb. 2014) here's some good news, in the form of 60 additional more leveled puzzles. This time, each puzzle is based on an animal theme and the easier levels seem easier. Need to know: Success requires two or three patterns, but for the hardest level you need four. When your composition matches the challenge, you are allowed to move to the next level. There are no in-app purchases, high scores or time limits.

Metamorphabet, Vectorpark, Inc., (\$3.99 on iPad) for ages 2-up. We've now seen hundreds of interactive ABC book apps. Does the world need another? In this case, A is for Absolutely. Clever, animated, letter themed routines morph their way from A to Z, with the child driving every interaction. E makes an Egg, eats the egg, and then morphs into an Elephant who rides on a Globe, for G... and so on.

Need to know: The app comes from illustrator Patrick Smith, the creator of the website Vectorpark.com, through which he has released popular games such as Feed The Head and Windosill.

Miximal, Lucas Zanotto, (\$1.99 on iPad), for ages 2-6. iPad adaptations of "Flip" books are nothing new. Take Nosy Crow's Axel Scheffler's Flip Flap Farm and In My Dream by e-Toiles editions. But the swipe-and-experiment formula pulls kids in, especially when the results are silly, like a "Fla-ga-dile" (the head of a flamingo, the body of a penguin and the tail of a crocodile). The genius of this app, like other Lucas Zanotto apps, is the simplicity. Need to know: The publisher states "we think our kids should play with quality toys." We agree. Note that this is a multi-touch app that promotes sharing.

Monster Mingle, Cowly Owl, (\$2.99 on iPad, Android), for ages 3-6. Explore a monster sandbox, with colorful, zany plants and creatures, where 40 monster parts can be mixed and matched, as they automatically snap into place. It's like a flying, swimming Mr. Potato Head, with a playful monster theme. You learn such essen-



tial life skills as fins help you swim, wings help you fly. Other than that, there's just random exploration in a responsive, funny setting. Need to know: the exploration area is limited in size, but it is presented as if it is not.

Montessori Letter Sounds, Edoki Studio (\$4.99 on iPad), for ages 3-5. This is a responsive, dual-language early English reading skills app that delivers a whole-lot-of early reading skills curriculum bite for the money. Children earn marbles as they complete four types of phonetic exercises, or they can freely experiment using five open ended letter exploration modes. Need to know: As with any phonics flashcard-style activity, children (and some adults) will be confused by some of the items used to illustrate words. They may call the "Narwhal" a "Fish" for example.

Name Play, Seven Academy (\$1.99 on iPad, Android), for ages 3-up. Any master preschool or Kindergarten teacher knows that one of the best words to unlock the power of reading is first his or her first name. Because it is comprised of letters, syllables and phonemes it makes sense to use it as part of an informal early reading curriculum. Need to know: Explore the parent options to add friends names, and turn on/off the background music.

Nighty Night Circus, Fox and Sheep (\$3 plus IAP on iPad, Android, Kindle) for ages 3-6. This sequel to one of our favorite bedtime apps (Nighty Night! 2011) follows the same script, but introduces fewer interactive opportunities than the first app. In addition, there is now an in-app purchase feature (you can buy more animals to help you fall asleep), adding an additional monkey, fish and pig for \$1.99). The concept of gradually tucking each animal into bed, one at a time, works, and the illustrations and narration is outstanding. Need to know: We noted in the iTune comments, that some parents are upset by the general notion of a circus and animal rights.

Ocean Forests, Bright World eBooks, (\$2.99 on iPad), for ages 6-8. Featuring clear realistic graphics and nice text scaffolding, this non-fiction app lets you expand your knowledge of something very interesting -- the ecology of an ocean kelp forest. You can use this app either as on open-ended scene (touch to look left or right, pinch and pull for a closer look), or as a classic eBook, with a page-by-page presentation, clear narration and excellent text scaffolding features. Need to know: If you're a teacher with a big screen, and you'd like to turn the wall of your classroom into an underwater scene, this is your app.

Pacca Alpaca Travel Playtime, Anamil Tech (\$1.99 on iPad) for ages 2-6. This second app in the Pacca Alpaca series features 50 fail-safe activities inspired from 23 countries activities. Need to know: The objective is to introduce children to cultural and historical settings from around the world.

Pepi Bath 2, Pepiplay (\$2.99 on iPad), for ages 3-7. This is the playful sequel to Pepi Bath with four new characters who participate in seven bedtime cleaning routines. You can wash your hands in the sink, take a bath, fold the clothes, use the toilet and so on. Need to know: There are some features that US children might find to be a bit odd -- like the use of a cord to flush the toilet and the way the characters say "thank you."

Quick Math Jr., Shiny Things, (\$2.99 on iPad), for ages 3-6. Responsive, playful and adaptive, this early math experience contains developmentally appropriate early math problem solving opportunities that make it an excellent addition to any school or home iPad. Need to know: This app presents formal math concepts in a playful setting.

Sago Mini Babies, Sago Sago (\$2.99 on iPad), for ages 2-5. Warning -- this app contains mild pooping and burping. But it also turns your iPad into a baby-themed playground, where any tap, slap or swipe makes something happen. Developmentally, this child-driven design technique works, because toddlers start to associate their actions with the screen events. This, in turn, builds feelings of control. Need to know: There are some minor quirks. The music box loop can be overbearing, and the green arrow to get back to the main menu could be a better target, or perhaps there could be an option to control how much navigation control you want your child to have. But these are minor points. All in all,



this is a safe download with meaningful themes.

Sago Mini Boats!, Sago Sago, (\$2.99 on iPad) for ages 2-5. With a design exactly like Sago Road Trip this app lets you pack and then set sail in 10 boats, each with a different destinations. Need to know: This is another no-fail starter app that promotes active exploration.

Sago Mini Superhero, Sago Sago, (\$2.99 on iPad), for ages 2-4. Even a very young child can fly this carrot-eating super rabbit (cape and all) around the screen, to explore a city scene full of site gags and burping bad guys. This is the 16th Sago Mini app, and it follows the same familiar script. You start by touching a house, and this wakes up the rabbit. The app is extremely easy to use, and failure is not an option. Need to know: It would be nice if there were some random routines.

Sago Mini Toolbox, Sago Sago (\$2.99 on iPad) for ages 2-4. Help friendly animals by fixing things, using eight tools. Each is operated by swipes or taps that use melodies and motions to make a child feel in control. Need to know: Drawbacks include an inability to jump back to the main menu, or choose your favorite tool.

Shape Gurus, (\$1.99 on iPad) for ages 2-up. The basic geometric shapes come to life in this connected series of 18 puzzles that ask you to build each scene by dragging and dropping shapes into place, in order to move to the next scene. Need to know: Sadly there are no multi-touch features, so this is a one child app. The narration is a bit sugary for our taste, but it can be skipped.

Star Gurus, Colto (\$free on iPad) for ages 2-up. Simple and well designed, this dot-to-dot counting experience makes it fun to count to 20 in just about any language, including your own. The app is easy to customize to a child, and you can make the puzzles more challenging in the parent menu. Need to know: hints are provided when the stars start to pulse, to indicate where the next number is.

Starfall ABCs, Starfall Education (\$free on iPad, Android) for ages 3-6. If you can overlook some clunky interactive features, this general purpose phonics app contains some useful content, and a great, no-gimmick price (\$free). Need to know: The animation is choppy and not very responsive. But the content quality is high, and the app is carefully designed making this a very classroom friendly choice. As long as children touch the things that sparkle on this app, they'll be able to figure out how it works.

Talking Faces by Bubl: Learn Professions and Emotions, Bubl, (\$2.99 on iPad) for ages 3-7. Zany, funny, and easy to use, this unusual app could be called an "emotion reflector." Need to know: There is no print or spoken language in the app, and because children record their own voice, this app can work anywhere. This is a great, no-fail starter app.

Tiggly Submarine, Tiggly, (\$2.99 on iPad), for ages 4-8. This is one of our favorite of the three \$2.99 Tiggly apps that can work either with your finger, or specialized capacitive rubber letters (called "toy vowels"). The five lower case letters (a, e, i, o and u) are rubbery and are fun to pick up and placed on an iPad screen. The tangible element successfully adds something interesting to the word recognition process. Need to know: There's not a lot of content but we liked how you can freely create "letter fish" by touching the screen with any letter.

Toca Life: City!, Toca Boca, (\$2.99 on iPad, Android) 3-up. If Richard Scarry (as in the famous Busy Town books) were illustrating children's books today, he'd probably be making apps like this one. Need to know: to reset your town, push the round "reset" button in the upper corner of the main menu.

Toca Life: School, Toca Boca (\$2.99 on iPad), for ages 3-up. The third app in the Toca Life series takes children into a school with five locations where they can play with 32 students, staff, and pets. Need to know: Some of the items are hard to pick up (if you put a child in the wheelchair).

We are the Chuggineers, StoryToys (\$4.99 on iPad and Android) for ages 3-6. Four fun logic games are expertly woven with video and text, to create an excellent second Chuggington app. Need to know: the story comes straight out of the animated train series for preschoolers. See also Chuggington Chug Patrol Ready to Rescue.

EARLY ELEMENTARY (Ages 5-to 8-Years)

Auto Repair, 5baam (\$0.99 on iPad), for ages 4-7. Twenty one "problems" wait to be fixed, in four zany cars designed with typical boy and girl themes. There's a lot of sorting, connecting wires of the same color, connecting circuits, patching leaks, and so on. Each time you solve a problem, you earn a badge. This is a fast, fun, irreverent app with some hidden surprises that encourage frequent visits. Need to know: When all the activities are complete, you start over.



Biber and the Red Boots, Y Factory (\$1.99 on iPad, Android, Kindle), for ages 4-8. This beautifully illustrated storybook features a family of stuffed animals that you can control, with a lever and a gear. The content is limited but the stop motion is excellent, and you can easily control the animated sequences. Need to know: The English narration is excessively sugary and the looping music is bothersome (but can be turned off).

Blox 3D World Creator, Appy Monkeys (\$2.99 on iPad), for ages 5-up. The name of this app says it all in this easy to use, powerful-feeling block building app. Just keep in mind that the "worlds" are limited to one screen that is about 60 (or so) by 60 squares long, wide and high. You start with an empty screen surrounded with 16 types of blocks, a simple color palette and 10 moving items. Need to know: It is easy to zoom in or out, or rotate the stage to view your creation from any angle but we noticed that larger projects result in sluggish navigation.

Book Creator, Red Jumper (\$4.99 on iPad, Android), for ages 5-up. This simple but powerful app lets you create a lot more than books. You can mix together video, audio, and sketches -- and save work in a variety of open source formats, including ePub, iBooks and PDF. Think of this as your digital Swiss Army Knife for publishing. Need to know: Not all the features directly translate to iBooks or Google Books format; but you can export as an ePub, PDF or video. Thanks to a demo by Gail Lovely at Dust or Magic, we have a new favorite app for making books.

Cars Tooned Up Tales, Disney Publishing Worldwide (\$free with IAP on iPad), for ages 5-up. Video meets interactive games, in this enticing mashup of high quality non-interactive video content, and various types of interactive play. The five minute or so video is an animated short called Mater's Tall Tales. There are nine additional shorts available as in-app purchases. Need to know: The bottom line? This app series could become an expensive habit, as children start wanting additional shows, and the games are nothing unique, but the Pixar animation is stunning on an iPad screen.

DragonBox Numbers,

WeWantToKnow, (\$7.99 on iPad, iPhone, Android), for ages 4-9. Early math teachers have been dreaming of an app like this for decades. Imagine a magical set of living color-coded unit blocks (like Cuisenaire Rods) that you can slice into parts (for subtraction) or feed to one another (for addition). Mix in a familiar Angry Birds style leveling system, a "Cut the Rope" game mechanic for subtracting, a bit of finger painting for numeral recognition, and then use money (with place value application) to unlock the puzzles, and you have the year's all time best early math pedagogy experiences. The app



comes from Norway and is well worth the \$8 download. Need to know: You can't turn off the background music, and you're limited to just four player profiles.

Endless Spanish, Originator, (\$4.99 on iPad), for ages 3-12. Originator's fifth "endless" app breaks new ground in foreign language instruction by connecting a learners fingertip to the sounds of language. This type of virtual manipulative has already worked with short English words and vowel sounds, and touch and hear technique is effective and powerful; in part because it makes the learning social (multi-touch allows for collaborative word building). Need to know: The free version gives you 6 words free. Word puzzles reinforce spelling using lower-case letters, and the sentence puzzles introduce definition, usage, and sight recognition.

Hotel Transylvania 2, Cupcake Digital, Inc. (\$2.99 on iPad)for ages 6-9. Looking for a playful, spooky language enrichment app? With pictures and narration are straight out of the Sony movie, this classic 23 screen/page storybook app comes directly from the animated film Hotel Transylvania 2. Need to know: There are no animated features, which could be viewed as both a strength and a weaknesses.

Inside Out Storybook Deluxe, Disney Publishing Worldwide (\$6.99 on iPad) for ages 6-12. Amazing Disney quality production meets a good story in this innovative app featuring the characters and voices from the Disney Pixar movie Inside Out. Teachers and parents will want to know that this work breaks new ground for helping children (and adults) better understand social and emotional development (with a dash of cognitive science). Need to know: Weaknesses include a one time, two minute wait on the first load, and clumsy navigation that requires reading. Testers noted that you can't easily load the cart in "dream productions" and that you can't use your live camera in "memory spheres."

Jeremy Goes to the Fair, Apptastic Software Inc., (\$2.99 on iPad), for ages 4-10. Nine games are set in a fair, featuring Jeremy Jaguar and his other animal friends. Children can choose their own challenge level. This is a quirky app built on solid games, with plenty of challenges. It's well worth the download. Need to know: This is a quirky app; with great underlying pattens.

Labo Halloween Car, Labo Lado Inc. (\$1.99 on iPad, Android, Kindle) for ages 5-up. Playful and powerful, this Halloween-themed driving app lets you build your own vehicle, decorate it with a variety of spooky art or open ended drawing tools, and then drive it on 14 different tracks. We've seen this formula in

many apps in the past, but this is the first with haunted effects. Need to know: show children how to jump, reverse, and start over if their car gets stuck.

Moonbeeps: Gizmo, Moonbot Studios, (\$1.99 on iPad), for ages 6-8. This interesting app turns your iPad or iPhone into a prop for pretend play; in this case the dashboard for a rocket ship; of the variety you might make out of a large cardboard box, or an overturned chair and a blanket. Need to know: There are no instructions, reading or language.

More or Less, Marbotic, (\$2.99 on iPad, Android), for ages 5-8. Attention all early elementary math teachers... you'll want to know about this addition/subtraction sandbox, where math equations are represented by sets of small beads, and numerals are read outloud in your choice of 11 European dialects. We also liked that there are both iOS and Android versions of this app (we tested the iOS version). This is Marbotics's third well designed app, and every detail has been covered. Need to know: While being exciting conceptually, children may be less than thrilled to solve the problems. This app doesn't provide much of a reason to do the math... it's more of a very cool way to do it.

Quiver (formerly ColAR Mix), Puteko Limited (\$free, and \$2.99 on iPad, Android) for ages 3-up. Coloring pages have been around for decades and augmented reality (AR) for years, but it took an app and some black-line PDFs that can you download from www.colarapp.com to bring them together. First released last year in New Zealand by Puteko Limited, a division of HIT Lab NZ, this app bring black line coloring pages to life. The images animate themselves. You can watch your images from any angle, play or pause your animation, and zoom in for closer look. Need to know: This app doesn't work on older iOS devices. Additional sheets are as IAP.

Roald Dahl's Twit or Miss, Penguin Books (\$free on iPad) for ages 6-up. Free, fun and addicting, this is a leveled tossing/swiping game designed around two popular Roald Dahl characters. Need to know: There are no formal learning objectives here -- but children will be exposed to lots of fine motor practice, and Roald Dahl's sense of humor.

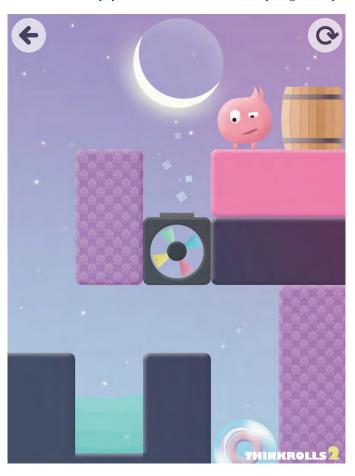
Scribble - Creative Book Maker, Fingerprint Digital (\$free with IAP on iPhone, iPad, Android) for ages 5-12. Scribble - Creative Book Maker is a new app that continues the tradition of being easy to use and powerful, but it uses a "freemium" model. The free version gives you a taste, with three story templates and the basic story creation tools. The premium version costs \$5.99 and is lurking beneath many locked feature icons. New Teacher features include the ability to have multiple user profiles on each device. Need to know: Don't bother with the free version because it will just frustrate you. The full version of this app is very much worth \$6.

Snow White, Nosy Crow (\$4.99 on iPad) for ages 3-8. The masters of digital storytelling at Nosy Crow have cleverly ushered another classic fairy tale into the tablet age, with well-crafted child narration, classical music, and characters by artist Ed Bryan. Nobody can make a story flow like Nosy Crow, which qualifies this app as a top choice as an early language enrichment experience that is well worth the download. Need to know: There are some design quirks, but nothing fatal. Fairy tale purists will note the editorial sanding. The original gender-biased, envy-driven murderous plot is more mainstream.

Steam Train, Dream Train, Oceanhouse Media (\$3.99 on iPad) ages 4-8. Another delightful story gets the Oceanhouse Media treatment, with authentic illustration and original text serving as a base for touch and hear vocabulary development.

Mystery Word Town, Artgig Studio (\$2.99 on iPad, iPhone, Android), for ages 6-12. Here's an app solution to an age-old challenge: making spelling practice fun. As you explore the different buildings in a western town, you find lost letters that you use to spell words, that unlock doors. The format is similar to another Artgig app: Mystery Math Museum; but this time the Western theme is more devleoped, and you find gold nuggets. Need to know: You can toggle music on/off but that also turns off the background sounds. It would be nice if they were separated.

Thinkrolls 2, Avokiddo www.avokiddo.com, (\$2.99 on iPad, Android, Kindle) for ages 3-9. Swipe your way through a series of increasingly more challenging mazes, in this second edition of Thinkrolls, the well-named series that gently introduces properties of matter and physics. Need to know: Each chapter gradually



introduces a new scientific concept.

Toca Nature, Toca Boca (\$2.99 on iPad, Android), for ages 5-9. Little kids can play with big ideas, like ecosystems as they finger paint with trees, lakes and mountains. The graphics are not high resolution, but our testers didn't mind. Need to know: Biomajors, don't get too stressed by the lack of scientific detail or content in this app. Complex relationships are presented very generally.

Twelve a Dozen, Bossa Studios (\$3.99 on iPad) for ages 6-up. Math equations never looked or sounded so good, in this nicely illustrated, nicely narrated maze adventure. Need to know: The

only thing that we might question is the mismatch between the logic skills needed to make it past level 12, and the "math knowledge" required, which is much more basic.

Understanding Math Addition and Subtraction, ApppMedia (\$1.99 on iPad), for ages 6-12. This an excellent set of classroom friendly math exercises that pairs record keeping with playful activities. Because the numerals change in real time, children can start making association between objects and symbols. A duel mode lets two children compete at once for three of the activities. Need to know: If you're looking for bells and whistles, you won't find it with this app.

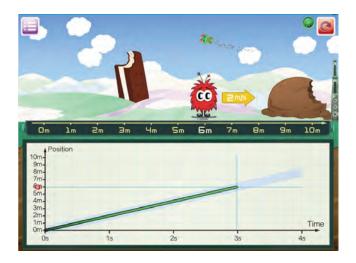
Transformers: Robots in Disguise, Hasbro, Inc. (\$free with ads on iPad, Android) ages 6-up. Loud and playful, this toy/app combo works hand-in-hand with the foldup transformer toys known as the Autobots and Decepticons. You don't need the toys to play the game, but things are more fun if you have them. Need to know: More kills equals more points and power (we'll leave the moral judgement to you). Need to know: When all the activities are complete, you simply start over.

Water Bears, Schell Games (\$2.99 on iPad) for ages 4-up. Here's a well designed 3D pipe puzzle that takes advantage the iPad's slippery screen to serve up 50 puzzles, arranged from easy to hard. Need to know: We would like a more obvious hint system on some of the levels and a better undo, but these are minor gripes -- in all this game is easy to learn and the interface can be used by younger children.

Very Hungry Caterpillar and Friends First Words, StoryToys, (\$2.99 on iPad), for ages 3-7. Thirteen 3D popup pages unfold on the screen, letting you freely explore 80 common words in English, French, German, and Spanish. The touch and hear pedagogy works, helping to make the connection with new words while reinforcing those you already know. Need to know: If you've seen the other "First Words" apps from StoryToys, you know exactly what this app does.

UPPER ELEMENTARY (Ages 8-12 years)

Action Graphing, The Universe and More, Inc. (\$4.99 on iPad, Android), for ages 8-up. This well named app pulls you into the concepts behind the math equations, so they snap into your brain. There are two major concepts: that the slope of a position-time graph represents the object's velocity, and that the y-intercept of the line represents the object's initial position. There are 75 lev-



els. Created by a New Jersey physics teacher Matt Blackman. Need to know: Show children how to get to the main menu, so they can practice on easier levels.

Attributes by Math Doodles, Carstens Studios (\$2.99 on iPad), for ages 6-up. Seven hand-illustrated, mind-bending math activities bring the essence of math problem solving to your multi-touch screen. This app represents some of the best work yet from math advocate Daren Carstens. Each activity can be customized in a variety of ways dynamically, either by a nearby adult or by the learner him/herself. So there's always a challenge, and children feel in control of the experience. Need to know: The if/else activity is especially useful for beginning programming settings.

Auxy: Beat Studio, Auxy, (\$free on iPad), for ages 8-up. Turn your iPad into a music machine with this easy to use music editor. New features (to Version 1.2.1) include paid add-ons, like the ability to export your work as a MIDI file. But don't be fooled by the \$free price. This app lets you do a lot, and the in app purchases are not imposing. Note that it is possible to set the velocity for individual notes, or draw draw triplets or 1/32 notes. Need to know: Despite the simple interface, there's a lot of depth to this app. Use guided discover to help children discover hidden features.

Billy's Booger: A Memoir, Moonbot Studios, (\$2.99 on iPad) for ages 8-up. This clever 32 screen animated memoir tells the story of how a young boy named William Joyce wrote his very first book when he was in fourth grade. Note that there is also a printed book with the same title, for those who prefer paper. Need to know: If you're looking for rich interactive features, this isn't your book. Use this story to demonstrate innovation in storytelling, as well as different ways an author can put him/herself into the narrative.

Curious Letters, Curious, (\$.99 on iPad), for ages 8-up. Untangle a pile of letters -- a visual challenge that starts easy (with just two letters) and gets progressively harder. These puzzles require intense concentration. Need to know: Our testers loved the challenge but found the intitial menus to be confusing.

Daisy Chain, Protein One, (\$2.99 on iPad), for ages 4-up. The sequel to the Australian book/story/app "Dandelion" (2013), this 19 screen story app is beautifully illustrated, and narrated by Kate Winslet. You help a girl pick daisies to make chains in order to overcome a gang of angry bullies. The message is that love can help you move through the dark world. Need to know: The text is presented in paragraphs of all-caps letters, with no scaffolding or support. Parent options let you jump to any page in the story.

David Wiesner's Spot, Houghton Mifflin Harcourt (\$call on iPad), for ages 5-up. Zoom in (or out) of five, interwoven, microscopic fictional worlds from the mind of USA children's illustrator David Wiesner (see also Flotsam). It all happens inside the spot on a ladybug's shell. This app uses a "powers of ten" navigation technique, meaning that you pinch and zoom in (or out) of a scene in order go get around. There are five fictional words, each embedded in each another. Need to know: Sadly, you discover after only about 20 minutes of exploring that the worlds start to repeat and you say "I've seen this before."

The Earth, Tinybop, Inc. (\$2.99 on iPad), for ages 8-up. Our planet is always changing, right under our feet. But how do you make these big, abstract concepts meaningful to a curious young child? Here's the perfect app. The fifth in Tinybop's "Explorer's Library" series is also one of the best (we also highly recommend The

Human Body). You start with a translucent model of the earth that spins with a swipe. You can cut it in half with a cross section tool, and there's a geological time line, so you can see how the Earth looked when it was first forming. As with the other Tinybop apps, your finger drives the concepts (not the other way around). Need to know: Teachers -- don't overlook the PDF handbook designed to support learning.

The Everything Machine, Tinybop, Inc., (\$2.99 on iPad), for ages 6-up. Turn the power of your iPad inside out, with this second in Tinybop's Digital Toys series of open-ended building apps. The idea is a good one -- to give children pretty much unvarnished control over the technology inside an iPad or iPhone. That means the microphone, cameras, accelerometers and bluetooth connections. Need to know. There are some minor kinks. Getting the items to "stick" using the elastic bands take some getting used to, some of the navigation icons feel cryptic. But after you make your first timer or light bulb dimmer, you learn that it is possible to combine many different functions; giving you a lot of power. You can attaching transmitters and receivers to link to other devices... including the Apple Watch.

Hook, Rainbow Train, (\$.99 on iPad, Android, Windows, Mac OSX), for ages 6-up. This is a leveled logic puzzle that starts very easy and gets very challenging. You start with a tangle of interlocking lines, that you untangle, one line at a time. You quickly learn that some of the lines are notched (or hooked), which means they must be taken out in the correct order. If not, you start the level over. Created by Maciej Targoni for Rainbow Train in Miedzylesie, Poland. Need to know: The experience is an excellent logical, geometric challenge, but it is a one trick pony. There are approximately 50 levels.

The Land of Venn: Numeric Storm, iMagine Machine (\$4.99 on iPad), for ages 6-9. Build addition math equations as fast as you can, or Tomato dies. That's the idea behind this fast-paced math game -- the second in "the Land of Venn" (TLOV) series from iMagine Machine. The format, which is just like the first TLOV, involves drawing rubber-band like lines between numerals to build math equations (like 2+2+1=5), to kill invading numbers to protect your tomato. It's a tower defense play pattern that is fast paced and involves planning. Need to know: The animated format has some clunky spots but the format pulls you in, and gets involved quickly in building the equations.

Leonardo's Cat, Storytoys, (\$2.99 on iPad), for ages 6-up. Sixty logic puzzles start easy (with a good tutorial) and get hard, fast. Each involves dragging and dropping nine Leonardo da Vincinspired devices to help his cat make it to the end of a series of

levels. These include parachutes, spring ramps, cannons, catapults and ornithopters (wings), which must be adjusted in order to work. Success requires plenty of testing and debugging, and the later levels can get tricky. Need to know: Da Vinci's voice is done by Patrick Stewart (Star Trek, X-Men), and the characters were created by by Michael Frith (The Muppets, Fraggle Rock), with script writing and scientific writing by Bob Tedeschi (New York Times, Bobo Explores Light).

Masterpiece for Osmo, Tangible Play, (\$free on iPad), for ages 6-up. If you already have the \$80 Osmo system (consisting of a special mirror and a stand) and an iPad Air or newer, this free app offers a new way to trace, and serves up an amazing fine motor challenge. A search feature (powered by Bing) pulls up common items from online searches as long as you are online. The feature can be turned off in the parent's menu, but is on by default. After you put the Osmo stand and mirror in place, you find a piece of paper and a dark thin-point pen. The app takes over from there. Note that you can also use a whiteboard to save paper.

Minecraft: Story Mode, Telltale Games (\$4.99 plus IAP on Xbox 360, Xbox One, PlayStation 3, PlayStation 4, Windows, Mac OSX, iPad, Android, Kindle) for ages 8-15. Fun but expensive, Minecraft: Story Mode nicely mixes a story with a block play theme. It makes sense that part of the evolution (and cash collection potential) of Minecraft involves stories narrated by famous actors. Unlike the original Minecraft, you won't be able to just start digging... you follow the branching plotline and interact with the story with a set of fail-safe interaction techniques. To make this series, Microsoft/Mojang hired Telltale Games -- a studio also known for some pretty racy but respected M rated games like Game of Thrones, The Walking Dead, Monkey Island, and Tales From the Borderlands. Need to know: We noticed some mild but unnecessary swearing in the dialog (e.g., "hell no!"). Each episode is available via download, for additional purchase.

StikBot, Zing, (\$free or \$4.99 for iPad and Android) for ages 6-up. This is one of the app/toy combos, where the app is free, and the toy costs money. The good news is the free stop motion app is well designed, runs on iOS or Android. Need to know: There's absolutely no reason for you to buy the Stikbots. However, you might want to, because StikBots are easy-to-pose figurines with suction cups for feet and hands.

WonderBox, Duck Duck Moose Inc., (\$free on iPad), for ages 8-up. Wonderbox does an excellent job presenting curated content from YouTube. It also help that it comes from Duck Duck Moose, a bay area, venture-backed company run by parents who have kids that are the same age as those this app targets. And finely, this "free" (another plus) app is richly infused with maker-inspired content. You don't just watch an amazing video of a treehouse. You're given a sketch pad for making one. It's as if there's a creative teacher living inside this app. The bottom line? If you have an iPad, good Wi-Fi, and your child is connected to others who are also willing to jump through a few hoops, WonderBox can work. And the quality of the currated content is definately a plus. But you have to invest a bit of energy in the process.

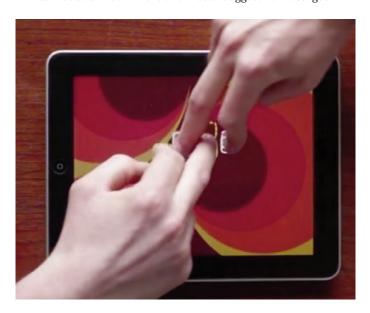


YouTube Kids, Google, Inc. www.google.com (\$free on iPhone, iPad and Android), for ages 3-12. Satisfy your appetite for puppy videos with this free, filtered app from Google -- the owners of YouTube. The best news? The searching is Googlefast and 99% worry free. So searches doesn't feel diluted. There are two ways to search... by typing or talking. Both are excellent language experiences. We tried searches on common but random topics like rabbits, French fries, and trumpets, and found enough results to earn a

strong recommendation. Need to know: The default filtering takes a very conservative view on the obvious words like "boob" and "sex." What's missing? The comments, social media links, videos of suicide bombings and adult-oriented advertising. What's not missing are the ads, which can sometimes be very subtle, and inserted inside a video. Ads are how YouTube pays for this free app. Need to know: Ask your child "why is this app \$free?" to help them understand how advertising works.

Middle and High School (Ages 12-and-up)

Fingle, Adriaan de Jongh,(\$1.99 on iPad, iPhone), for ages 7-up. Like Twister for your fingers, Fingle uses the multi-touch screen "to get you awkwardly close" by giving you 130 finger flexing puzzles that start easy and get very hard. Two players drag up to five buttons of one color onto their matching targets; their movement makes it impossible to avoid contact, creating intertwined hands. Need to know: There are a lot of suggestive messages.



Middle School Confidential 3: What's Up With My Family?

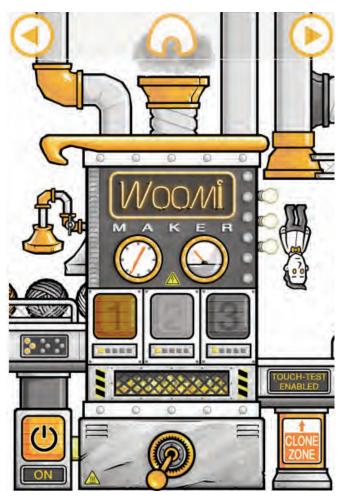
Electric Eggplant (\$2.99 on iPad, Android, Kindle), for ages 8-14. Third in a series, this 38-page (screen) graphic novel once again mixes a meaningful middle school theme with an innovative touch-screen presentation. The story is based on Book 3 of Annie Fox's Middle School Confidential series, in which Jack, Jen, Chris, Abby, Mateo, and Michelle (from books 1 and 2) deal with the fact that no family member is "perfect." Need to know. Content consists of eight chapters, each with a related multiple choice quiz; an easy-reading graphic novel format; an auto-save feature that remembers your place in the story; and an info page that allows you to jump to the beginning of any of the eight chapters.

NYT VR, New York Times, (\$free on iPhone, Android) ages 5-up. Created for the New York Times by IM360 (www.immersivemedia.com), this app is a 360 video delivery system that works in concert with Google Cardboard VR viewers. Need to know: Explore the "Frequently Asked Question" part of the app and follow the links to some of the other VR-related videos. Also make sure your Wi-Fi is operational.

Steve Reich's Clapping Music, Touch Press (\$free on iPad) ages 6-up. This is a rhythm-copying game that tests your ability to duplicate a model rhythm by tapping on the screen. You can

either use the app to tap in time with the constantly shifting pattern, and progress through all of the variation. Need to know: This is a "one trick pony" app. There is no actual game.

Woomi Wins, WooWork (\$1.99 on iPad, iPhone, Android, Kindle) for ages 10-up. Well designed, original illustrations make up this unusually creative 14 screen adventure. To make it to the end of the story, where you launch an invasion of clones on the Earth, you must unlock each page by manipulating levers, buttons and switches. Need to know: We liked how you can skip between pages, once they are unlocked. While the narrative lacks cohesion, the illustrations are unique and nicely done.



The World of Lexica, Amplify (\$12/student/year on iPad 3 or later or Android tablet) for ages 10 to 15. Lexica is a big, beautiful 3D world (6 GB total) that consists of a 19 apps for iPads and select Android tablets. There are both English and Spanish versions. We tested the first levels of the iPad version and found it to be easy to play, and full of appropriate reading challenges, including a wide variety of excerpts from classics. Need to know: Obviously there's a business model at work here that is designed to lock a school system into a multi-year contract. Does it work, and is it worth the investment? That's up the the researchers to discover. But we can vouch for the quality of the first levels.

Video Games, Hardware and Toys



Looking for a good value in a video game system this year? Consider a Wii U bundle with Mario Maker (\$300 at Walmart). Here are some other good deals.

Video Games

Animal Crossing: amiibo Festival by Nintendo of America (\$30 on Wii U), for ages 10-up. Designed for 1 to 4 players, this game works with Nintendo's amiibo chararacters. Each character unlocks different areas of the game. Your goal is to make your village happy. The associated amiibo characters include Isabelle and Tom Nook and it is possible to earn "Happy Points" that are saved to your amiibo in case you want to take your game to a friend's house.

Disney Infinity 3.0: Star Wars Rise Against The Empire Play Set, Disney Interactive, Inc. (\$35 on PlayStation 3, PlayStation 4, Wii U, Xbox 360, Xbox One), for ages 5-up. This is one of the many excellent Disney Infinity theme packs released this fall. This special edition comes with Luke Skywalker and Princess Leia Organa figures. Han Solo, Chewbacca and Darth Vader figures are sold separately for \$14 each.

FIFA Soccer 16, EA Sports - Electronic Arts Canada, (\$35 on Xbox One, Xbox 360, PlayStation 4, PlayStation 3, Windows), for ages 8-up. For the first time in the EA Sports Soccer history, women professional players are featured in the game.

Guitar Hero Live, Activision, Inc., (\$100 on iPad, iPhone, Wii U, PlayStation 4, PlayStation 3, Xbox 360), for ages 9-up. This year's Guitar Hero introduces a new easy to learn guitar controller with six buttons. Two new modes include GH Live (a first-person point of view where you play in front of a crowd that reacts to how you perform) and GHTV (a playable music video network).

Kirby and the Rainbow Curse, Nintendo of America, (\$40 on Wii U), for ages 7-up. Draw lines on the touch screen of the Wii U GamePad controller to create rainbow colored clay ropes, or tap Kirby to attack enemies and blast through obstacles. In underwater levels, Kirby wears a swim mask.

LEGO Jurassic World, Warner Brothers Interactive Entertainment (\$40 on Xbox One, Xbox 360, PlayStation 4, PlayStation 3, Vita, Wii U, Nintendo 3DS, Windows), for ages 10-up. Here's another solid LEGO game by TT Games. In terms of design, features and game play there aren't many surprises. The content comes from all four Jurassic Park films; and the music is excellent. This is a great game for two players (in co-op play). There's also an iPad version without the two player option.

Mario Tennis: Ultra Smash, Nintendo of America, (\$50 on Wii U), for ages 7-up. This multiplayer game lets you play against friends and family in multiplayer matches, in both singles and doubles matches as your favorite Mushroom Kingdom character.

Minecraft: Story Mode, Telltale Games (\$4.99 plus IAP on Xbox 360, Xbox One, PlayStation 3, PlayStation 4, Windows, Mac OSX, iPad, Android, Kindle) for ages 8-15. Fun but potentially expensive, Minecraft: Story Mode nicely mixes a story with a block play

theme. It makes sense that part of the evolution (and cash collection potential) of Minecraft involves stories narrated by famous actors. You drive how the story flows by choosing what you say to people, and what you choose to do. We noticed some mild but unnecessary swearing in the dialog (e.g., "hell no!"). Too bad.



Super Mario Maker, Nintendo of America, Inc. (\$60 on Wii U), for ages 9-up. This is one of the most exciting video games of the year. You've probably played Super Mario Bros. Now you can make and share your own Super Mario Bros. levels, with this well designed creativity experience designed only for Wii U. Using the Wii U GamePad controller, you touch the screen to drag and drop parts into place. You can then blend enemies, traps and items into unexpected twists, like Piranha Plant-shooting cannons, and power-up-tossing Lakitus. This is an outstanding way to let children create their own platformer game.

Super Smash Bros. on Wii U, Nintendo of America, (\$60 on Wii U), for ages 7-up. This edition of Super Smash Bros. features HD graphics, more moves, fast action (based on our preview at E3), and works with traditional GameCube controllers, providing you have a special adapter (Nintendo has announced a converter that will enable the use of the older controllers for the Wii U version).

Tearaway Unfolded, Media Molecule Ltd., (\$40 on PlayStation 4), for ages 8-up. Why we like it: From the creators of LittleBigPlanet, this single player game is a journey through a world built from paper that unfolds and comes alive. You will travel along with a plucky messenger who has a unique message to deliver as you rely on each other's strengths to overcome challenges.

Yoshi's Woolly World, Nintendo of America www.nintendo.com, (\$50 on Wii U), for ages 7-up. Why we like it: This clever two player co-op game lets you explore fabric-inspired stages, to find collectibles. The game integrates knitting yarn, patchwork, and other materials to create a crafty backdrop. There is also a knit Amiibo to accompany the game.

Tablets and Game Systems

Apple TV 4th Generation, (\$150 and up), for ages 3-up. We knew Apple TV 4th Generation (\$150-up) was coming, but we didn't realize how child friendly it was. Case in point, the quantity and quality of children's apps in the new Apple TV app store (accessible only from within Apple TV). These include apps that blur the line between app and video, like PBS Kids Video, StoryBots and YouTube. You can also get Star Walk Kids, Monkey Preschool, as well as apps from Sago Sago, Edoki, Curious Hat, and Storytoys.

Nintendo 3DS XL, Nintendo of America (\$160), for ages 6-up. This "new" 3DS XL is now a year old, but it has a lower price, and great features. These include Face-tracking 3D, improved controls and amiibo support. This system is backward compatible with all Nintendo DS cartridges (including the Nintendo DS and DSi), but some future titles will be exclusively playable on the New Nintendo 3DS XL. Shop around because you can find some nice software/hardware bundles.

iPad Mini 2, (\$270 and up for the 16 GB version), for ages 2-up. The 16 GB model price has been lowered to \$270 for the 16 GB version for 2015, making this a great way to access thousands of children's apps, books and videos. The older iPad Air is now \$400. Both are excellent options for a child's tablet.

Samsung Gear VR (for select Samsung devices), Samsung, (\$100 on Android (Samsung Galaxy Note or Edge phones, required), for ages 13-up. If you own a recent Samsung phone (Galaxy Note5, Galaxy S6 edge+, Galaxy S6 or the Galaxy S6 edge) keep reading. Otherwise see the Mattel View-Master or Google Cardboard. The late 2015 edition of the Samsung Gear VR headset can turn such a device into one of the best VR experiences we've seen. Powered by Oculus technology, this particular headset is light and powerful. Need to know: make sure you calibrate it carefully and follow all the warnings.

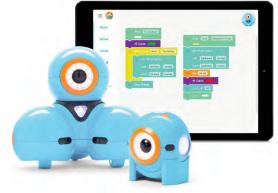
Wii U, Nintendo, (\$250 and up) for ages 3-up. The Wii U game system is now three years old, but it remains the best all purpose children's video game console when considering game availablity and general durability. Shop around for software bundles.

Smart Toys

Dash & Dot Wonder Pack, Wonder Workshop, (\$280) for ages 3-12. Providing you have an iPad or Android tablet to use as a controller, this pair of robotic toys introduces programming. It is both responsive and programmable. After you download the free app and sync it via Bluetooth, you can write programs and snap LEGO blocks onto the outside of the robot.

Sky Viper HD Stunt (\$50) and Video (\$90) Drone, Skyrocket Toys LLC. for ages 12-up. Every child needs to learn how to fly a drone these days. Measuring 13" from blade to blade, the Video Drone Quadcopter can record video and pictures in full 720p using an onboard camera as it flies. Both drones can reach speeds of 14 MPH. In order to view the video, you need to transfer the file to your computer. This is one of three new quadcopters from Skyrocket Toys. For an all purpose drone that is easy to fly without video, try the Sky Viper Stunt Drone (about \$50).









Feature Reviews and New Releases

DECEMBER 2015

Here's an alphabetical listing of both the feature reviews (with ratings) and the new and future releases. "Entry Date" refers to the date we first learned of the product.

A Pickle In The Sky?

This is an interactive storybook for kids based on Twinkle Twinkle Little Star. Each page lets you explore a different landscape with interactive sounds, animations, and humor

Details: Beans In My Ears, www.beansinmyears.com. Price: \$2.99. Ages: 2-5. Platform: iPad, iPhone, Android. Teaches/Purpose: reading. Entry date: 11/12/2015.



Animal Crossing: amiibo Festival

Designed for 1 to 4 players, this edition of the classic game Animal Crossing uses Nintendo's amiibo characters. Each character unlocks different areas of a board game style world. Your goal is to make your village happy. New amiibo characters include Isabelle and Tom Nook. The game contains four seasons and seasonal events. Your goal is to earn "Happy Points" that are saved to your amiibo in case you want to take your game to a friend's house. The game contains minigames that work with Animal Crossing amiibo cards.

Details: Nintendo of America, www.nintendo.com. Price: \$30. Ages: 10-up. Platform: Wii U. Teaches/Purpose: logic. Entry date: 7/20/2015.



Animal Crossing: Happy Home Designer

This game lets you design homes for all of your favorite Animal Crossing villagers. As a new member of Nook's Homes, you can design the interior and exterior of homes for more than 300 animal villagers. You will talk to the villagers to take on designee requests, and decorate using items from your in-game catalog or items the villagers bring with them. You can also create your own custom designs, which can be saved and shared on Miiverse and other social networks with the Nintendo 3DS Image Share service, or turn your designs into a QR Code pattern. The game comes with an amiibo card. Other features include: collect and share amiibo cards of your favorite villagers, tap amiibo cards to invite up to four characters into a room to hang out; tap the amiibo cards of special characters to call in animals that would otherwise not appear in your game with requests. Amiibo card packs are also available, they include five regular villager cards and one special character card for \$5.99 each.

Details: Nintendo of America, www.nintendo.com. Price: \$40. Ages: 7-up. Platform: Nintendo 3DS. Teaches/Purpose: . Entry date: 9/17/2015.



Carmen Sandiego Returns

Here's a bit of irony. This 30-year-old social studies series about a fictional thief comes very close to being an actual thief. Instead taking pretend treasures, it steals your child's time, and your money. The real kind. Following the common "paymium" model, where you buy the first three levels but must pay more to unlock the rest, the game lures you in with an easy first level, but then becomes impossibly hard -- that is unless you spend even more for "express travel" coins to save time. The in-game currency is sold for up to \$20 per transaction. While this practice is becoming more common, it's sad to see it used in an educational game, mixed with menus that trap you by leading you to a store that has no obvious exit. This app version is "a nostalgic remake of the 80s and 90s game now optimized for mobile." Features include use of the accelerometer so you can look around 360 degree views of each location, for the clues. The game is designed for either quick or long term play and progress is saved using leaderboards on Apple's GameCenter. There are three missions, four mini-game challenges, and additional crimes, sold as IAP (in app purchases). Additional adventures cost \$1.99 each. The challenge is the basically the same -- to use real geography knowledge to figure out where Carmen is hiding, and try to return the historical treasure she has taken. Our testers found the process of finding the clues to be frustrating and sometimes pointless.

Details: Houghton Mifflin Harcourt, www.hmhbooks.com. Price: \$1.99 with IAP. Ages: 9-11. Platform: iPad, iPhone. Teaches/Purpose: geography. Rating (1 to 5 stars): 3.2 stars. Entry date: 11/20/2015. [WB]

Gass 14 round

Ease of Use 8
Educational 7
Entertaining 7

Design Features 9

Good Value 1

of Use 8 64% tional 7 aining 7 atures 9

Chibi-Robo! Zip Lash

Alien invaders are stealing all the Earth's resources, including our snacks. Players use Chibi-Robo's plug and cord to whip, swing, and grapple through trap-ridden corridors. By tapping the Chibi-Robo amiibo figure during gameplay, you can power up Chibi-Robo and turn him into Super Chibi-Robo, a more powerful version of your robot. The game features multiple levels and comes bundled with the amiibo figure for \$40, or alone for \$30.

Details: Nintendo of America, www.nintendo.com. Price: \$40. Ages: 6-up. Platform: Nintendo 3DS. Teaches/Purpose: . Entry date: 9/30/2015.



Disney Infinity 3.0: Star Wars Rise Against The Empire

This special edition play set takes place during the original Star Wars trilogy, letting you relive and replay key moments from Episodes IV-VI. The set comes with the Play Set Piece, Luke Skywalker and Princess Leia Organa figures. Han Solo, Chewbacca and Darth Vader figures are sold separately for \$14 each. The goal is to defeat Darth Vader and overthrow the evil Galactic Empire. You can explore world planets like Tatooine on foot or on a Bantha, fight against AT-AT walkers on snowspeeders, out-maneuver stormtroopers on speeder bikes on Endor, and partake in epic space battles in an X-wing in attempt to destroy the Death Star. In addition to the characters playable in Rise Against the Empire Play Set, you can unlock and play with other Disney Infinity 3.0 Edition Star Wars characters from the other Star Wars Play Sets. Developed by Studio Gobo, in partnership with Avalanche Software.

Details: Disney Interactive, Inc., www.disney.com. Price: \$35. Ages: 5-up. Platform: PlayStation 3, PlayStation 4, Wii U, Xbox 360, Xbox One. Teaches/Purpose: logic, timing, Star Wars. Entry date: 9/29/2015.



Dr. Panda's Firemen

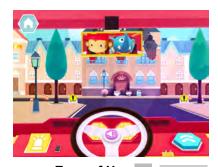
Extremely easy-to-use, responsive and playful, this Dr. Panda app lets children play with a high interest topic: fire fighters. There are four areas to explore. You start in the fire station where you can wash the fire truck or just explore. If you ring the alarm, you must equip the firefighters using 1-to-1 correspondence (three hats, three firefighters). Next you drive to the fire using a driver's eye view of the road. Finally, you fight the fire by spraying the hose in the right direction, and passing out tools to the team. There's also a lot of opportunities for spatial learning. As you make your way to the fire, you can choose what direction you want to go, steer the wheel and watch the animals react to how you drive. Use the right tools to clear the way and extinguish the fire. Weaknesses are minor. The oversized illustrations are busy (but easy to control), and the fire hose can be hard to aim. In addition, the fires are hard to put out. The app presents some bigger ideas about the teamwork involved in fighting a fire. There are no time-limits, language requirements, ads or game objectives. making this a good starter app.

Details: TribePlay, www.tribeplay.com. Price: \$2.99. Ages: 5-down. Platform: iPad, iPhone, Android, Kindle. Teaches/Purpose: logic, one to one correspondence, driving, spatial relations. Rating (1 to 5 stars): 4.7 stars. Entry date: 11/20/2015. [WB]

DragonBox Numbers

Early math teachers have been dreaming of an app like this for decades. Imagine a magical set of living color coded unit blocks (like Cuisenaire Rods) that you can slice into parts (for subtraction) or feed to one another (for addition). Mix in a familiar Angry Birds style leveling system, a "Cut the Rope" game mechanic for subtracting, a bit of finger painting for numeral recognition, and then use money (with place value application) to unlock the puzzles, and you have the year's all time best early math pedagogy experience. There are a few limits. You can't turn off the background music, and you're limited to just four player profiles. These aren't deal breakers, however. A child's progress is saved automatically, and this app makes no attempt to sell or harvest information -- making it a viable classroom or library choice. At the core of this app are the ten animated blocks, called Nooms. Each comes with set of eyes and is color coded and sized according to the numeral. They can be freely stacked, sliced, tossed, combined, sorted and compared. As you play, you start discovering the relationship between number, numeral and length; all while a clear narrator describes the relationships. There are three modes: Sandbox for free exploration; Puzzle with 250 challenges that are unlocked with money; and Ladder where you are challenged to build larger numbers. The active/discovery pedagogy is the same that is employed in the other DragonBox apps. There are no quizzes, for example, and children always drive the activity. The app comes from a Norway-based studio, from the creators of DragonBox Algebra, and it's well worth the \$8 download for home or classroom use.

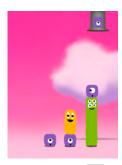
Details: WeWantToKnow AS, http://wewanttoknow.com/. Price: \$7.99. Ages: 4-9. Platform: iPad, iPhone, Android. Teaches/Purpose: comparing quantities, addition, subtraction, measuring, interpreting data, counting, Mathematics. Rating (1 to 5 stars): 4.8 stars. Entry date: 11/10/2015. [WB]



Educational 9
Entertaining 10
Design Features 9

Good Value 10

20 X 14



Ease of Use 9
Educational 10
Entertaining 10
Design Features 10
Good Value 9



Goldilocks and Little Bear

Further stretching the definition of fairy tale, Nosy Crow's most recent interactive story app tells the same classic story from two points of view. You can read the story as Goldilocks, or as Little Bear. To switch points of view, you rotate the screen. Besides offering a new "twist" on the well known story, early readers are helped by text highlighting, an interesting topic, quality illustrations and the same wonderful child narration that has set the standard for this genre of app. There are two modes of play: Read by Myself or Read to Me. The story can be presented in your choice of UK English or US English, and as in other Nosy Crow apps, you can determine how long the printed text appears on the screen (short, medium or long). Reading teachers love these types of features, for good reason. In the 17 scenes, Goldilocks gets lost and visits the Bear's home, eating their porridge, sitting in their chairs, and sleeping in their beds; while Little Bear is in Goldilocks's family's home - eating their pancakes, wearing their clothes, and reading their books. Nice touches include the ability to rock a rocking chair by rocking the tablet, and the ability to see yourself inside the mirrors in the app through your front facing camera. The bottom line? This is a rich early language/reading experience; combining good interactive design with first rate illustrations and narration. It's well worth the download.

Details: Nosy Crow, www.nosycrow.com. Price: \$4.99. Ages: 4-8. Platform: iPad, iPhone. Teaches/Purpose: reading, language, fairy tales. Rating (1 to 5 stars): 5 stars. Entry date: 11/20/2015. [WB]

Goldlicks's parents were very happy to have found her.

Ease of Use 10
Educational 10
Entertaining 10
Design Features 10
Good Value 10



Guitar Hero Live

Guitar Hero Live introduces a new guitar controller with six buttons, including two rows of three buttons designed to make things easier. Activision says it will "make it easier for beginners to play and harder for veterans to master." Two new modes include GH Live (a first-person point of view where you play in front of a crowd that reacts to how you perform) and GHTV (a playable music video network). A mobile version is available as a bundle with a guitar controller that works across Apple devices. Additionally, players can sing along in the game with lyrics on screen, adding another way to play together in the same living room. Additional features include GHTV: a live, real time network that lets you play along with others. If you plug in a USB mic, you can sing with the lyrics on the screen.

Details: Activision, Inc., www.activision.com. Price: \$100. Ages: . Platform: iPad, iPhone, Wii U, PlayStation 4, PlayStation 3, Xbox 360. Teaches/Purpose: . Entry date: 10/26/2015.



Inside Out Thought Bubbles

Fun, addicting, well designed and very adept at getting money from your credit card, this bubble shooting/matching game is inspired from locations from the film: Family Island, Dream Productions, Boy Band Island, and Imagination Land. Disney is good at reminding you that this app includes advertising, as follows "you may choose to control targeted advertising within our applications by using your mobile device settings. Please note that there are in-app purchases as well as push notifications to update you on updates like new content. Some of the advertising for third parties include the option to watch ads for rewards."

Details: Disney Mobile Games, . Price: \$free with IAP. Ages: 4-up. Platform: iPad, iPhone, Android. Teaches/Purpose: emotions, reading. Entry date: 6/22/2015.



iPad Pro

Is the jumbo-sized iPad Pro right for your child, children's library or classroom? Perhaps, but you should know about it's particular strengths and weaknesses. We've been testing a 128 GB iPad Pro provided on loan from Apple, along with the keyboard, cover and Apple Pencil. Here's an overview. The most striking feature, obviously, is the 12.9-inch screen. Compared to a traditional iPad, this seems huge. But it's nearly identical in size to a 13 inch laptop screen -- imagine unhinging the screen from a typical Chromebook or MacBook, and you get the idea of the size. The screen is slippery, sensitive, bright, and incredibly clear (aka "retina display").

Most of the regular apps we've tested work just fine because everything increases proportionally in size. This means larger illustrations, menus and fonts touch points and fonts. It also helps you see the screen from across the room or during circle time. The cameras, speakers and processors have been upgraded when compared to the iPad. When you turn the volume up all the way, you can fill a room with music, no extra speakers needed. A NEW FAMILY OF SPECIALIZED APPS. We'll start to see iPad Pro enhanced apps with screens that have more detail, or that work specifically with the sensitive, very high resolution Apple Pencil. Our favorite drawing app is Procreate. While it's not designed for children, it offers the most bang for the buck. DRAWBACKS. The iPad Pro costs a lot, can be heavy and harder for younger children to physically hold. We have yet to see a specialized children's case. The Apple Pencil stylus is great, but it can be paired to only one device. In addition, it's easy to misplace. There is no easy storage or tethering solution. The screen is big and seems to need cleaning more frequently.

Besides the pencil, other Peripherals include a full size keyboard (sold extra for \$150) that snaps to the edge of the iPad using strong magnets like the Microsoft Surface. Big screens need big batteries; we noticed the iPad Pro takes longer to charge using standard-sized iPad chargers.

So far, there are no real surprises, other than the added heft... that is, until you try this iPad with the slippery white stylus, called Apple Pencil (\$100, sold extra). The Apple Pencil is sensitive to both tilt and pressure. It has a lithium ion battery that charges quickly from the iPad's battery. Unlike many other capacitive stylus options currently available, this one uses bluetooth to communicate with the iPad. It also has a fine, hard plastic point that is very reponsive. This stylus is the first we've seen that can come close to a fine point in pen, making it a dream for serious or semi-serious artists. Prices start at \$800 for the 32 GB model; \$950 for the 128 GB.

Details: Apple, www.apple.com. Price: \$800 and up. Ages: 2-up. Platform: iPad. Teaches/Purpose: a multi-touch iOS tablet. Rating (1 to 5 stars): 4.8 stars. Entry date: 10/27/2015. [WB]

Kalley's Machine Plus Cats

This is a cleverly illustrated story about magical machine that is especially good for teasing cats. The ideas in this app come from a 4 year old girl, with the help of her programmer father. You can play with the machine, using controls such as cranks, sliders, dials, levers, switches and buttons. With the machine, you can smash, inflate, shrink, burn, paint, grab, drop, and mold.

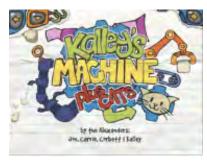
And since it is based on a 4 year old girl's drawing, it includes cats that you can harass by teasing them. There are two ways to read the story: Read-to-Me, narrated by Kalley and her dad with highlighted words; and Touch-to-Read, where words are spoken when they are touched.

Details: RocketWagon, www.rocketwagon.com. Price: \$4.99. Ages: 5-10. Platform: iPad, iPhone, Apple TV. Teaches/Purpose: reading, language . Rating (1 to 5 stars): 4.6 stars. Entry date: 9/15/2014. [SOM]



Ease of Use 9
Educational 10
Entertaining 10
Design Features 9
Good Value 10





Ease of Use 9
Educational 9
Entertaining 10
Design Features 9
Good Value 9



Kid Lid Protect Board

Designed to keep young children from exploring your laptop keyboard, this creates a smooth protective outer surface that prevents access to the keyboard by "even the most rambunctious child."

The Protect board is dishwasher safe and universally fits all 13" or 15" Mac or PC laptops. It comes with a removable elastic strap.

Details: Mogolo, LLC, www.kidlid.com. Price: \$27. Ages: 0-2. Platform: Windows, Mac OSX, Chrome. Teaches/Purpose: a parent utility. Entry date: 11/6/2015.



Kids Preschool Puzzles

18 drag and drop puzzles cover shapes, numerals, fruits, and vegetables. You can toggle on or off the verbal labels. The puzzles are easy to use and responsive, but the design is limited, and rewards consist of smile faces. The background music loops and is poorly designed but can be toggled off in the parent's menu.

Details: Milen Kirkov, . Price: \$1.99. Ages: Up to 5. Platform: iPad, iPhone. Teaches/Purpose: logic, shapes, numerals, colors. Rating (1 to 5 stars): 3.8 stars. Entry date: 11/13/2015. [WB]



Ease of Use 9
Educational 8
Entertaining 7
Design Features 7
Good Value 7

LBX: Little Battlers eXperience

In this 1-6 player game, you play as Van Yamno, a young boy who comes upon a unique LBX - a customizable, palm-sized robot. You use it as you team up with characters from the TV series to take down the evil corporation known as the New Dawn Raisers. Features include: collect and build your own palm-sized robot from more than 400 parts to create a one-of-a-kind LBX; customize your LBX to create one of more than 30,000 possible designs from over 130 sets; tailor both externals parts and internal parts to enhance your LBX's capabilities; battle as your LBX against friends and enemies in third-person view with local wireless multiplayer mode; battle other LBX models in 20 different arenas with unique environmental characteristics; and online distributions that add more models and quests.

Details: Nintendo of America, Inc., www.nintendo.com. Price: \$40. Ages: 8-up. Platform: Nintendo 3DS. Teaches/Purpose: . Entry date: 8/19/2015.



Leonardo's Cat

Did you know that Leonardo da Vinci loved cats? That's just one of the many actual facts you learn as you play through 60 well crafted logic puzzles that start easy, thanks to a tutorial, and get very hard. Each involves dragging and dropping one of nine Leonardo da Vinci-inspired devices into place on a path so that his cat can pick up a reward without getting bonked, dunked or fried. There's no explicitly graphic or worrisome content other than classic cartoon violence, and this cat has an unlimited number of lives. Commentary -- with a slight British accent -- is provided by Leonardo himself, depicted as a white-bearded old inventor with the voice of actor Patrick Stewart. In the story, Leonardo's latest invention, the Automaton, has been stolen by Michelangelo. You send Scungilli, Leonardo's cat, into an ancient city to find the parts. Each level contains an animated movie that illustrates some of the actual products made by Da Vinci. The game takes place in Amboise, an animated version of da Vinci's studio. The more levels you play, the more robot parts you collect that are used to reassemble da Vinci's Automaton.

The inventions include parachutes, spring ramps, cannons, catapults, and ornithopters (wings); and each must be adjusted to work. Testers wanted more control, so they could fine tune the different inventions. Success requires repeated testing and debugging, and the later levels can get tricky. For example, there may be different paths in the same maze, and the water or fire pits that take up many cat lives. The 60 levels provide lots of challenges. Testers wanted to be able to pinch and pull into Da Vinci's actual work (especially the Mona Lisa), and we noted that there is a "win or lose" element to the puzzles, when a "you lose!" banner appears if the cat dies. A simple "try again" would suffice. It would be nice to get some specific feedback from da Vinci when struggling. Other suggestions from the Mediatech testers: make it easier to reset a level and include a sandbox mode. None of these are deal breakers, but they are important to note.

Da Vinci's voice is done by Patrick Stewart (Star Trek, X-Men), and the characters were created by Michael Frith (The Muppets, Fraggle Rock), with script writing and scientific writing by Bob Tedeschi (New York Times, Bobo Explores Light). The bottom line? This is a fun, challenging app with no gimmicks or in app purchases. And it even contains an underlying sniff of scientific authenticity that is rare these days.

Details: Storytoys, www.storytoys.com. Price: \$2.99. Ages: 6-up. Platform: iPad. Teaches/Purpose: logic, problem solving. Rating (1 to 5 stars): 4.7 stars. Entry date: 10/26/2015. [WB]

Little Fox Animal Doctor

Beautifully illustrated but shallow in content, this is a pet doctor simulation where you play the doctor. There have been no shortage of pet or animal doctor titles over the years, but none have looked this good. You start with five sick animals in the waiting room, each suffering from one of 15 possible ailments. Your challenge is to nurse them back to health by following an recipe-like set of visual instructions. Your bat might have a torn wing; your rabbit might have a cold, a scrape or an infestation of fleas. You are shown the problem in a way that requires no language skills. While this app looks good, there's not that much to do -- after a few cycles you start to encounter the same health issues. You also notice that while animals vary in breed, they have similar faces. We didn't like inclusion of icons that lead to the company app store on the main menu (although there is an age-gate). There are five animals (a fox, bat, rabbit, mole, and owl) with 15 injuries. This app was illustrated by Heidi Wittlinger, the same artist that did Little Fox Animal Doctor and Nighty Night Circus.

Details: Fox and Sheep GmbH, www.foxandsheep.com. Price: \$2.99. Ages: 4-8. Platform: iPad, iPhone. Teaches/Purpose: health, art. Rating (1 to 5 stars): 4.1 stars. Entry date: 11/25/2015. [WB]



Educational 9
Entertaining 9
Design Features 9
Good Value 10



82%



Ease of Use 9
Educational 8
Entertaining 8
Design Features 7
Good Value 9

Magic Moves RainbowJam

Touch a color with with this RainbowJam to hear a musical note; or touch multiple colors to compose music. You can sing along to nine songs. The wand-like toy can recognize up to nine color families (red, orange, yellow, green, blue, purple, pink, white, black) and can be used with the included book or on real objects. For example, if you can press the toy on a red apple, it can sense the color red and respond with a specific note. You can use crayons that match the pure color families to create a visual composition and then play it musically. There are two modes: Instrument and Song. A 16-Page musical activity book can be used with download-able song sheets and coloring sheets. Requires 3 AAA batteries (included).

Details: Educational Insights, www.edin.com. Price: \$22. Ages: 3-up. Platform: Smart Toy. Teaches/Purpose: colors, classification. Entry date: 7/17/2015.



Mario's Alphabet

Use your finger to move Mario (no relation to the Nintendo Mario) through a maze to collect letters. Sometimes a letter will block your path, which means you'll need to tap it or drag it to make a bridge. Each tap results in the letter sound, making this a good phonemic awareness activity. The design is cross between Thinkrolls and Endless Alphabet. Despite a clumsy feel at the start (we wish Mario was more responsive to your touch) and music that loops and can't be controlled, the play mechanic pulls you in, and the challenge gradually increases. Just make sure you show children how the "undo" button works. Content includes 160 levels that can be unlocked and progress is saved automatically. At the end of each level, you meet an egg that hatches into a new character. Higher levels combine letters from earlier levels.

Details: 1tucan, www.1tucan.com. Price: \$2.99. Ages: 4-7. Platform: iPad, Android, Kindle. Teaches/Purpose: phonics. letter sounds, spatial relations. Rating (1 to 5 stars): 4.5 stars. Entry date: 11/17/2015. [WB]



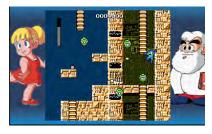
Ease of Use 8
Educational 9
Entertaining 10
Design Features 9
Good Value 9



Mega Man Legacy Collection

The game features reproductions of the original six Mega Man games (Mega Man 1-6) in either Museum Mode or Challenge Mode. Challenge Mode remixes gameplay segments with various challenges for experienced players. Museum Mode contains a collection of production art and original concept sketches. Released in August 2015, Mega Man Legacy Collection is available for Xbox One, PlayStation 4 and Windows PC. A Nintendo 3DS version is planned for February 2016. This version will include 11 remix challenges that can be unlocked with a Mega Man amiibo.

Details: Capcom Entertainment, Inc., www.capcom.com. Price: 14.99. Ages: 10-up. Platform: Xbox One, PlayStation 4, Windows. Teaches/Purpose: video game history, logic. Entry date: 11/18/2015.



Minecraft: Story Mode

Fun but expensive, Minecraft: Story Mode nicely mixes a story with a block play theme. It makes sense that part of the evolution (and cash collection potential) of Minecraft involves stories narrated by famous actors. Designed for game consoles and PCs, the five episodes (sold for roughly \$5 each) take you to the Nether, the Farlands, the End, and beyond. You drive how the story flows by choosing what to you say to people, and what you choose to do. In the story, you play as Jesse who travels with Warrior, Redstone Engineer, Griefer, and Architect; each with different skills. Unlike the original Minecraft, you won't be able to just start digging... you follow the branching plotline and interact with the story with a set of fail-safe interaction techniques.

To make this series, Microsoft/Mojang hired Telltale Games -- a studio also known for some pretty racy but respected M rated games like Game of Thrones, The Walking Dead, Monkey Island, and Tales From the Borderlands. These are obviously not children's titles, but we have no reason to believe that there will be content any more worrisome than a typical LEGO title. We did notice some mild but unnecessary swearing in the dialog (e.g., "hell no!"). Too bad.

Each episode is available via download, for additional purchase. Requires reading. The font size is small on an iPad, it will be harder to read on an iPad mini; it is not recommended for iPhones or iPods (4s or older).

Details: Telltale Games, www.telltalegames.com. Price: \$4.99 plus IAP. Ages: 8-15. Platform: Xbox 360, Xbox One, PlayStation 3, PlayStation 4, Windows, Mac OSX, iPad, Android, Kindle. Teaches/Purpose: reading, logic, problem solving. Rating (1 to 5 stars): 4.4 stars. Entry date: 10/6/2015. [WB]



Ease of Use 8
Educational 8
Entertaining 10
Design Features 9

Good Value 9



70%

National Geographic Puzzle Explorer

Geography facts meet maze construction tutorials, in this interesting and clumsy collection of free and paid content. The apps are inspired from five regions of the world. One region is unlocked; the other four cost about \$1.50 each. Each location contains instructions for building a maze out of the different blocks and moving maze elements. As you move through the maze, you can collect photographs as a reward. There's little or no connection between the geography facts and the mazes, however. The real education value of this app comes from programming the mazes, by choosing where to place blocks. This is a well intentioned app with some clumsy navigation issues; with some beautiful photography tossed into the mix. If you work for it and don't mind spending as much \$6 extra dollars, you could make this app work. This app is part of the Fingerprint network of apps, which includes an built-in app store.

Details: Fingerprint Digital, www.fingerprintplay.com. Price: \$free with IAP. Ages: 4-up. Platform: iPad, iPhone, Android. Teaches/Purpose: mazes, geography facts, spatial relations, Antarctica, Yucatán Peninsula, and the Himalayas. Rating (1 to 5 stars): 3.5 stars. Entry date: 11/11/2015. []



Ease of Use 6
Educational 8
Entertaining 7
Design Features 7
Good Value 7

NYT VR

This is the app that made history on Sunday, Nov 8, 2015 with the help of the New York Times Sunday newspaper (disclaimer, CTR is an occasional paid content provider to the New York Times). The app was created for the New York Times by IM360 (www.immersivemedia.com) and it is specifically designed for small screen iOS or Android devices, of the variety that can fit inside one of the Google Cardboard VR viewers that was distributed by the New York Times on Sunday. The app is small and easy to download, because it is merely a video player. The actual videos can be viewed without a viewer; an option you make before you start the download. Because the videos can be large, you want to make sure you're using Wi-Fi at that start of the process. This particular version contails a video called "The Displaced" which looks at the lives of three refugee children. Other videos include "The Food Drop" and "Walking New York" (the latter about a large-scale sidewalk mural project. Mark Schlichting commented on Facebook that the app is good and the audio great. He wrote "I don't think we have a name for this kind of interactivity yet, it's more like steering a car around town than playing tennis. I guess this where "Interactive TV" has been heading for years, and now it's here." Make sure you explore the "Frequently Asked Question" part of the app and follow the links to some of the other VR-related videos. One of these is YouTube 360 with videos that can be explored with either a mouse or a viewer. See https://www.voutube. com/channel/UCzuqhhs6NWbgTzMuM09WKDQ

Details: New York Times, . Price: \$free. Ages: 5-up. Platform: iPhone, Android. Teaches/Purpose: current events, news, spatial relations. Rating (1 to 5 stars): 4.6 stars. Entry date: 11/10/2015. [WB]



Ease of Use 9
Educational 10
Entertaining N
Design Features 8
Good Value 10



Ocean Forests

Featuring clear realistic graphics and nice text scaffolding, this non-fiction app lets you expand your knowledge of something very interesting -- the ecology of an ocean kelp forest.

You can use this app either as on open-ended scene (touch to look left or right, pinch and pull for a closer look), or as a classic eBook, with a page-by-page presentation, clear narration and excellent text scaffolding features. These include touch-and-hear individual words, text highlighting, and the ability to record your own narration. Weak points include a poorly designed multiple choice quiz game that is easy to skip. The app includes online worksheets with story starters and games of BINGO, adding to it's value as a reading/science experience. The bottom line? If you're a teacher with a big screen, and you'd like to turn the wall of your classroom into an underwater scene, this is your app.

Details: Bright World eBooks, http://3dlearninggroup.com/. Price: \$2.99. Ages: 6-8. Platform: iPad. Teaches/Purpose: science, oceanography, kelp, sea life, reading. Rating (1 to 5 stars): 4.4 stars. Entry date: 11/5/2015. [WB]



Ease of Use 8
Educational 9
Entertaining 8
Design Features 9
Good Value 10



Runbow

Super Smash Brothers meets MarioKart in this fast-paced, action party game for up to nine players. The ideas is that you all run against each other while obstacles appear and disappear, and the background color changes. If you can't see something, it doesn't exist. Play with up to 9 friends locally or online.

Details: 13AM Games, http://www.13amgames.com/. Price: \$14.99. Ages: 7-up. Platform: Wii U. Teaches/Purpose: logic, fine motor control. Entry date: 11/13/2015.



Sago Mini Superhero

Even a very young child can fly this carrot-eating super rabbit (cape and all) around the screen, to explore a city scene full of site gags and burping bad guys.

This is the 16th Sago Mini app, and it follows the same familiar script. You start by touching a house, and this wakes up the rabbit. The app is extremely easy to use, and failure is not an option. We were happy to discover that. Weaknesses include some looping background noise that could be more subtle (the rabbit laughs too much). In addition it would be nice if there were some random routines. Taking a page from Disney and Sesame Workshop, Sago Sago has created a family of 6 inch plush toys that come in their own home. The "Sago Mini Plush Gift Pack" is \$40, and it includes a cardboard house and four plush characters. You can buy it on Amazon.com http://www.amazon.com/dp/B017OFTNWE. The bad guys burp and pull up trees; and the rabbit eat carrots. Heroic acts include saving kittens.

Details: Sago Sago, www.sagosago.com. Price: \$2.99. Ages: 2-4. Platform: iPad. Teaches/Purpose: logic, spatial relations, cause and effect. Rating (1 to 5 stars): 4.5 stars. Entry date: 11/20/2015. [WB]



Ease of Use 10
Educational 9
Entertaining 8
Design Features 8
Good Value 10



Samsung Gear VR (for select Samsung devices)

If you own a recent Samsung phone (Galaxy Note5, Galaxy S6 edge+, Galaxy S6 or the Galaxy S6 edge) keep reading. Otherwise see the Mattel View-Master or Google Cardboard.

The late 2015 edition of the Samsung Gear VR headset can turn such a device into one of the best VR experiences we've seen. Powered by Oculus technology, this particular headset is light and powerful. If you calibrate it correctly, it can provide the best power/price ratio we've seen.

Current software options include the Oculus Video Plus ("with 1 million short films and videos from Vimeo") and the Netflix VR app. Note that the Gear VR comes with a warning. It produces "a distracting, immersive virtual reality experience that blocks your view of your actual surroundings." The Headset should be calibrated before each use and "is not for use by children under 13. A virtual reality experience may trigger health reactions. See a doctor before use if you have a history of seizures. Stop use if you experience a health reaction." Always be aware of your surroundings when using the Gear VR. Remain seated or stationary at all times. Take special care to ensure that you are not near other people, objects, stairs, balconies, windows, furniture, or other items that you can bump into or knock down when using — or immediately after using — the Gear VR headset. Do not handle sharp or otherwise dangerous objects while using the Gear VR. Never wear the Gear VR in situations that require attention, such as walking, bicycling, or driving. Some apps and services such as Netflix require payment or subscriptions to use.

Details: Samsung, www.samsung.com. Price: \$100. Ages: 13-up. Platform: Android (Samsung Galaxy Note or Edge phones). Teaches/Purpose: A virtual reality headset for Galaxy Note and Edge devices. Entry date: 12/1/2015.



Scribble - Creative Book Maker

Scribble - Creative Book Maker is a new app, not to be confused with two older Scribble apps, which are both being discontinued. These were Scribble - My Story (2013) and Scribble Press (2012).

This new edition, for both iOS and Android, continues the tradition of being easy to use and powerful, but it uses a "freemium" model. The free version gives you a taste, with three story templates and the basic story creation tools. The premium version costs \$5.99 and is lurking beneath many locked feature icons. You get 27 additional story templates, many more backgrounds and stickers, plus the ability to export and share creations in PDF or video format. You can also import or export photos and record audio. New Teacher features include the ability to have multiple user profiles on each device. Our suggestion -- don't bother with the free version because it will just frustrate you. The full version of this app is very much worth \$6.

Details: Fingerprint Digital, www.fingerprintplay.com. Price: \$free with IAP. Ages: 5-12. Platform: iPhone, iPad, Android. Teaches/Purpose: creativity, writing, language, drawing. Rating (1 to 5 stars): 4.6 stars. Entry date: 6/21/2015. [WB]



Educational 10
Entertaining 9
Design Features 9
Good Value 9

22 **Y** 14

92%

Sesame Street Alphabet Kitchen

Here's a fun way to play with words, using either your finger or Tiggly's rubber words (the physical set, sold for \$30) to create three letter words. In order to use the words, you'll need to have all five vowels near the iPad screen.

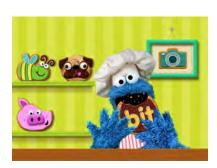
But if you don't, no worries. You can put the app into finger mode, and drag drop the letters into the mixing bowl. The play pattern is simple and effective, because children want to see what word they are making. It's also fun to stir the dough. This helps compensate for a bit too much chatter from Cookie monster.

You 'bake' 3- and 4-letter CVC (consonant, vowel, consonate) words into cookies that can then be decorated. The game gets harder or levels down if you keep making nonsense words like heg or han. The idea is to let you experiment without failure. 150 words in total: 90 of them are meaningful words and the rest are non-sense (like vist, clup, etc).

This app works with Tiggly Words Smart Toys (the rubber stamps), or with fingers. The Tiggly toys can be used cookie cutters – stamping them on the screen and making word cookies with Cookie Monster. The app is optimized to work with Tiggly toys but also offers a learning experience without the toys. This app comes free with the purchase of the Tiggly Words Learning System (\$29.95).

Need to know that this app works just fine without the letters. The option to use the letters is nice for ECE settings.

Details: Tiggly, http://tiggly.com/. Price: \$2.99. Ages: 4-8. Platform: iPad, iPhone. Teaches/Purpose: early reading, letter recognition, phonics, CVC words. Rating (1 to 5 stars): 4.4 stars. Entry date: 11/17/2015. [WB]



Ease of Use 9
Educational 9
Entertaining 8
Design Features 9
Good Value 9



Thomas & Friends: Express Delivery Train

A fun idea meets limited play options, a confusing set of tasks and a lot of teasing, in this Thomas-themed app. In the story, it's Sir Topham Hatt's birthday, and the engines have decided to throw him a party. You must collect and deliver the people and supplies, choosing which items to pick up and deliver to. While you can determine the speed, you can't choose which tracks Thomas goes on. In addition, decisions about the train cars or direction are pre-determined. Other than the ability to control the speed (fast, slow, or reverse), there's little choice in this app. Given the high interest content (Thomas and trains) and the weak firewall (enter three numerals), this app is a prime candidate for accidental downloads. Budge says "this app is free to play, but additional content may be available via in-app purchases. It also may contain advertising from Budge Studios Inc. regarding other apps we publish and from partners, and social media links that are only accessible behind a parental gate."

Details: Budge Studios, www.budgestudios.ca. Price: \$free with IAP. Ages: 4-5. Platform: iPad. Teaches/Purpose: spatial relations. Rating (1 to 5 stars): 3.1 stars. Entry date: 11/16/2015. [WB]



Ease of Use 7
Educational 8
Entertaining 8
Design Features 7
Good Value 1



Zooper ABC Animals

This playfully illustrated alphabet book combines animated gags with letter tracing (both upper/lower case), clear narration, and letter matching. Children can either choose a letter from the main menu, or flip through the 26 letters, one at a time, using the page turn icons

Features include "I can read" and "read to me" modes, plus the ability to turn off the background sounds. Don't miss the silly "zooper" gag videos, which show the letter characters doing something unconventional. So why not a higher rating? Because many of the screens contain interesting touchable items that don't do anything when touched. We noticed no rules, scores or time limits.

Details: Zooper Dooper, . Price: \$2.99. Ages: 2-4. Platform: iPad. Teaches/Purpose: letter recognition (upper or lower case), phonics. Rating (1 to 5 stars): 3.9 stars. Entry date: 11/15/2015. [WB]



Ease of Use 8
Educational 8
Entertaining 8
Design Features 7
Good Value 8

78%