Expert Guidance on Children's Interactive Media, Since 1993

Children's TECHNOLOGY REVIEW

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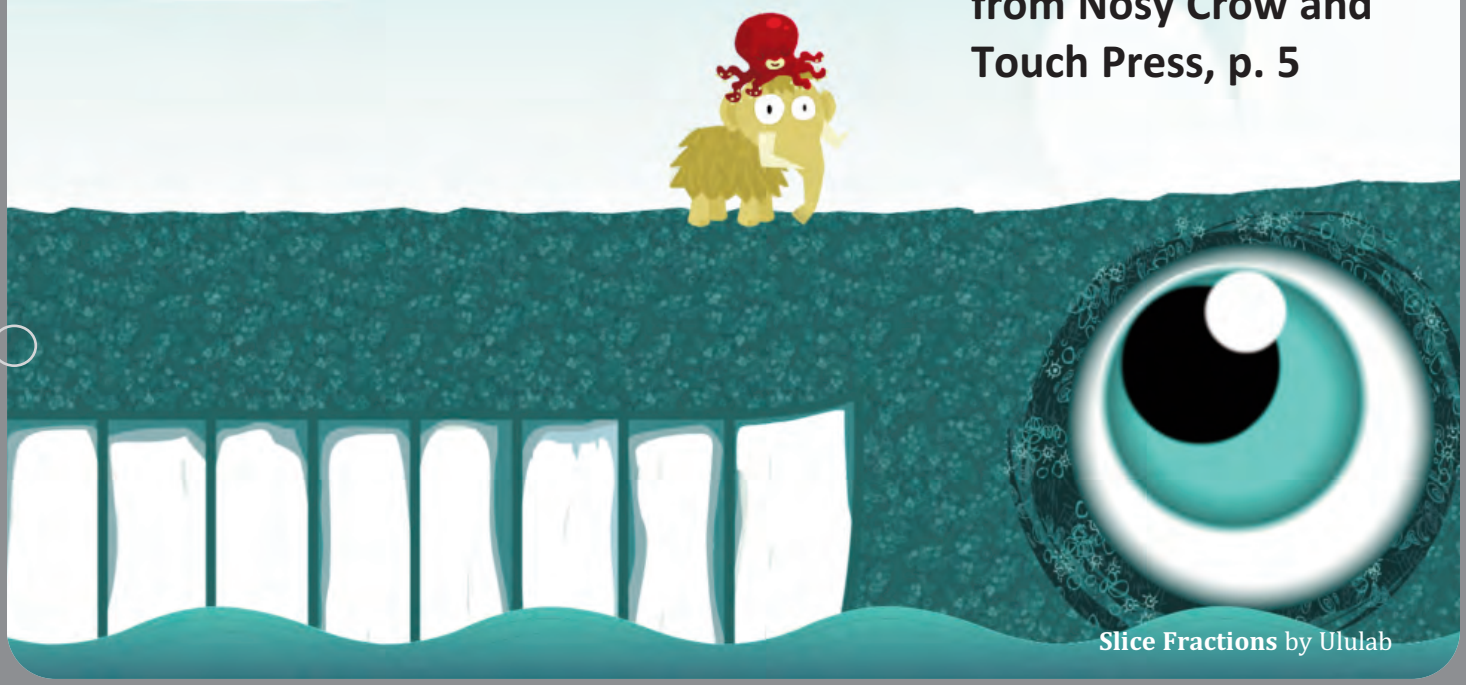

Slice Fractions by Ululab

Children's Technology Review
April 2014
Volume 22, No. 4, Issue 169

** Donotes "Editor's Choice."*

April 14 News and Trends in Children's Tech

Warren Buckleitner

Children's TECHNOLOGY REVIEW

April 2014

Volume 22, No. 4, Issue 169

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PRODUCT SUBMISSIONS. Send one product with release information to *Lisa DellaFave, Editorial Coordinator, 120 Main Street, Flemington, NJ 08822 (Phone: 908-284-0404).* Send app codes by email to lisa@childrenstech.com.

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Welcome to April 2014

Your April CTR will skim you through some noteworthy apps, including **Slice Fractions** (on the cover, and reviewed on page 14), an app that combines a "Cut the Rope" game mechanic with a side-scrolling venue that gets progressively harder. I loved how it gently introduces some deep mathematical ideas, like equivalency, part-whole partitioning, and numerator/denominator notation.

And on page 4, you'll find a summary from the first Dust or Magic Masterclass, given in Bologna, Italy. Don't miss the video of John Cromie's talk, at http://youtu.be/R82og144EG8.

Finally! Some Viable DAP Tablet-Based Programming Options

What do **Tynker**, **Hopscotch, Cato's Hike** and **ScratchJr** have in common? All are great training wheels for **Scratch 2.0**, and all can run on your iPad. **Tynker** is $free with in-app-sales for additional content, and **Hopscotch** (also $free) gives you more freedom. Both are are great training wheels for the **Scratch 2.0**, but unlike current versions of **Scratch**, they can run on the iPad. There's also **Cato's Hike** ($4.99 for iPad) which has improved significantly since it was released two years ago. Both iPad and Android versions of **ScratchJr** are planned later this year, according to Mitchell Resnick, who is working with the DevTech research group at Tufts (Marina Umaschi Bers) and the Playful Invention Company (Paula Bonta and Brian Silverman). Learn more at http://kck.st/1lae1oK

Further Divergence in the "Great Screen Debate"

Two things happened this month in the ongoing debate on children and technology that you should know about.

The biggest news comes from the American Academy of Pediatrics (AAP), which published an essay wondering if it is time to rethink famous ban on screens. In JAMA Pediatrics (March 10, 2014) Christakis admits that the tech committee rushed to judgement back in 2010, saying "the statement was drafted with no knowledge that such a device [like the iPad] would exist." Christakis now says that "judicious use of interactive media is acceptable for children younger than the age of 2 years." How much is judicious? Half an hour to an hour he says. In the article, Christakis compares the iPad to blocks, although he sadly doesn't mention any specific apps. In my mind, that's like trying to have a discussion about diet without mentioning any specific foods. Here's his reasoning; iPad play generates "I did it!" feelings, unlike TV watching. This is a big step, because Christakis is accurately acknowledging that the psychology of interactive media is very different than linear media. In his essay, Christakis slips in a touch of fear, however, stating that iPad use could "manifest itself on a neuronal level with the secretion of dopamine as part of the reward pathway ... think B. F. Skinner's famous rat experiments." So, on one hand, Christakis seems to say that some screens are no more dangerous than block play. However, it just could turn them into dopamine addicts.

The second more visible and bizarre essay was published by one of the most irrational members of the tech critic community: Cris Rowen, a.k.a. Cris Rowen OT, BScOT, BScBi. Rowen is a Canadian occupational therapist who once told me on a podcast interview that technology makes children sick (podcast, at

Continued on page 3

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http://bitly.com/1i5cr4E). I was shocked that any responsible professional, with so many letters after her name, would be so careless, so I decided to look into her background, and discovered a profit motive. She's selling an anti-tech curriculum called "zone'n" which makes her essay essay faux marketing. So, I wasn't surprised she would publish an essay calling for a ban on all technology for all children under age 12.

What was a surprise was that any media outlet, even one with known low editorial standards like the Huffington Post, would publish it, along with links to her catalog. The most bizarre part of the Rowen approach is that she advises giving tech-addicted children "chewy products" that she sells to relieve screen-induced stress. Here's where things get strange. Some of these items are made of vinyl that could contain biphenol, a carcinogen (so when a child chews the tubing, they could absorb some of this compound). In a warped form of self-fulfilling prophesy, Rowen has created a situation where technology could actually make you sick for a completely different reason. Fortunately, David Kleeman huffed back a with post. If you'd like to dive into this hairball of a conversation, here's the link to Kleeman's piece http://huff.to/1hNIWTB which links to the original Rowen article.

If the great screen debate makes you tense, slip one of these into your mouth and have a chew. It will release the pent up frustration, and possibly small doses of poison.

It's time to take the debate to the app level

Published technology critics like Linn, Rowen, Christakis & Levin raise valid points about the need for balance in a developing child's life. We agree more than we disagree, especially about the importance of making thoughtful choices about materials for children that can empower children, and promote active learning.

What's curious to me is that none of these critics name specific products when they mention screens, other than an occasional Angry Birds or sexting.

I'd like to suggest that it's time to move the debate beyond the screen, to the app. The same iPad can be a TV, a set of fingerpaints, a camera or a collaborative huddle game for four players. As we approach another Fred Forward event next month where this debate will undoubtedly continue, here are some specific research questions that get beyond the screen, to the app, and move the debate forward. Some would be solid doctoral dissertations, and have control/experimental designs.

1. Does time with multi-touch virtual manipulative experiences, such as those used in **Hungry Guppy**, **Shiny Party** or **10 Fingers +**, increase scores on mathematics-related kindergarten readiness instruments?
2. Both Christakis and Levin frequently mention the neurotransmitter called dopamine. Which creates more, **Angry Birds** or **Slice Fractions**? Similarly designed video games, such as **Super Mario Bros**. have been around for three decades. Have any long term affects of dopamine been documented in this population? If so, what are those effects?
3. Can early informal exposure to print-rich apps like **Jack and the Beanstalk**, **ABC Actions**, **Where's My Monster?** affect a child's reading ability, as measured on traditional instruments If so, what types of text scaffolding make the most difference?
4. What is the effect of apps like **Letter School** and **Cursive Writing Wizard - Trace Letters and Words** on the penmanship curriculum?
5. Do children with access to creative apps like **Toca Hair Salon Me**, **Easy Studio Animate With Shapes**, **Tynker** and **HopScotch** have a greater chance of becoming interested in some form of coding later on in life, say, with more powerful tools like **Scratch 2.0**, **HTML**, **PHP, C++** or the **Apple SDK**?
6. Does exposure to visual art experiences like **Petting Zoo** or **ColAR** transfer to an off screen interest in sketching? Will a control group of children with exposure to petting zoo draw differently than those who don't? Can we give them tools to make sequential and animated drawings; rather than static? At what age?
7. Is there a correlation toward a high score on **Dumb Ways to Die** and becoming a train fatality?

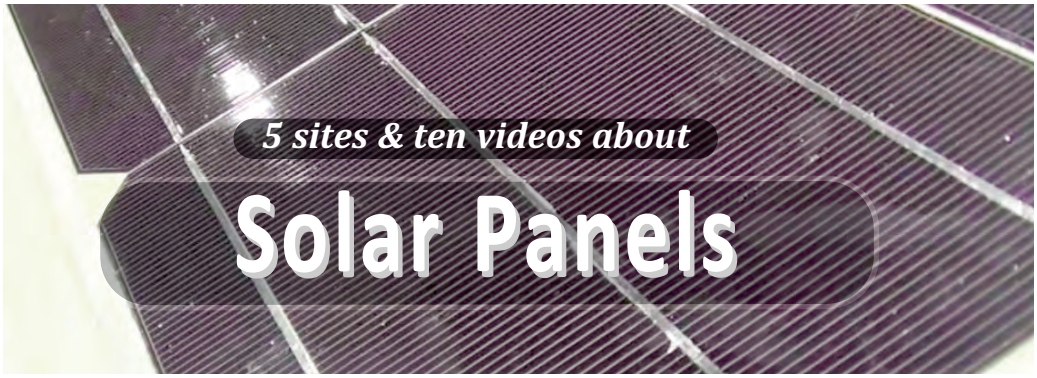
Children growing up today need parents and teachers with common sense who understand that they need to provide **access** to high quality experiences that are both analog and digital; these should be kept in **balance** with real world experiences, and accompanied by the **support** and guidance of smart, educated care givers who have a base knowledge of child development. This may not be as newsworthy as a ban, but it comes closer to better serving our children.

LittleClickers: Solar Energy

Like magic, solar panels can convert light into electricity. They can save you money, and our environment. When combined with computer-controlled motors and wind sensors, they can turn toward the sun, or hide from the wind. But how do they work? What's their lifespan? How much do they cost? Read on to learn all Solar Panels on page 3, or visit http://littleclickers.com/solar-energy.

So, there you have it... another busy month. Enjoy the issue, and have a wonderful April

W. Buckleitner, Editor *CTR*



5 sites & ten videos about

Solar Panels

Like magic, solar panels can convert light into electricity. They can save you money, and our environment. When combined with computer-controlled motors and wind sensors, they can turn toward the sun, or hide from the wind. But how do they work? What's their lifespan? How much do they cost? Read on to learn all about Solar Panels.

1. How does a solar panel work? At Highlights for Children http://bit.ly/1d3s535 you can learn that solar panels use silicon crystals to create a photo-chemical reaction. It's a special type of black, slippery glass that makes electrons move, creating electrical energy. Wikipedia http://bitly.com/1eZE1Bz gives more information on the underlying science of a solar panel.

7. Can a solar panel power a traffic light? Yes. At http://bit.ly/OAjV7s you learn that solar energy can also heat water for swimming pools, power garden lights and run the international space station.

2. How long do solar panels last? At http://bit.ly/1phYEKM you learn that a solar panel can last 30 to 40 years, or more.

3. How long have people been using solar energy? According to http://bit.ly/PTq6o5, glass was used in 7 B.C. to concentrate the rays of the sun to start fires. At Who Invented, http://bitly.com/1rKluPo we learn that solar panel research started in the 1800's by French physicist Antoine Cesar Becquerel. Russell Ohl was the first to create a silicon solar cell in 1941.

4. Do solar panels work better on hot days than cold days? At http://bit.ly/1ij6eE1 you can learn that solar panels care about just one thing: light, not temperature. They even work from the light of the moon. But not when covered by snow.

5. What state is the best for solar panels? At http://bit.ly/1j7i4Vl, not only does sunlight matter, but government incentives matter too. Click here to see how your state rates http://1.usa.gov/1lSAlDc. At http://exm.nr/1qZgHJf you can find out if your solar panels can make enough money to pay for themselves.

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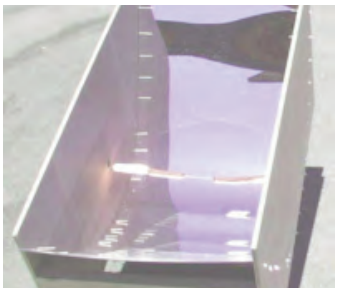
Application

1. Got an old pizza box? Turn it into a solar oven at http://bit.ly/1ij6wus

2. Stuck on a desert island? Make your own water purifier using solar energy http://bit.ly/1ij6z9K.

3. Hungry? Let's cook some hotdogs! You'll learn about geometry (parabola) and cooking at the same time. We found some excellent instructions at sci-toys.com. http://bitly.com/QqpNRP



YouTube Megan's Solar Panel Videos

Want to see a factory where they make solar panels?
http://www.youtube.com/playlist?list=PLcBVHzUUEKwkFsrgplrkrFQz97doeJscy

Interact with this page online, at http://www.LittleClickers.com/solar-panels

Lessons in App-Craft

One night, a prosperous publisher was dreaming up an exciting new app ...

So began the talk by John Cromie of Touch Press that you can watch at http://youtu.be/R82og144EG8.

John's story, called "the publisher, the app, and his budget" describes how a grand app idea can end with a sadly if it is approached with traditional thinking. His talk was one of two, behind-the-scenes presentations on what Cromie calls "app-craft" given at the first ever Dust or Magic Bologna Masterclass, held the day before the Bologna Children's Book Fair. A second presentation approached the topic from a fiction angle, given by Kate Wilson of Nosy Crow. Wilson also provided a generous look into the Nosy Crow creative process. Note that the notes in this article are loosely transcribed from the talks, and should not be taken as direct quotes from either speaker without their permission.

Non-Fiction Case Study: Touch Press

JOHN CROMIE is the co-founder and chief technology officer at Touch Press. He's been making CD-ROMs for many years which has prepared him well to lead the team of engineers at Touch Press. Some main points:

- If you have a craft, you must also have a medium (a potter has clay, for example). App-crafters have a new and mostly unexplored medium that has really come into being in the last 12 months, thanks to instantly responsive multi-touch screens with no lag; high speed solid state drives and always on connectivity, not to mention all sorts of sensors and a compact form. What we do with these devices isn't television, books or the web. It's something that is new and unique.
- Go native. While there are a lot of app development environments, like Unity, that you can choose, the Touch Press solution is to use the native SDK so that nothing stands between your creative team and what is possible on that platform. Anything that gets between the ideas and the possibilities presents a new set of constraints.
- The biggest enemy to an app-crafter is an attitude of "it's good enough, lets get it out the door."

- As the technology improves, we, as a larger culture, are also evolving in our expectations of what apps can do, which explains why the notion of skeuomorphism (making screen objects resemble real objects) is starting to fade for the first time. We need to start thinking about an "app" as a much broader thing.
- Understand your medium. A carpenter understands wood and a set of tools, and the limits of what wood can do. The same is true for app makers.
- Interactions between people and apps can be intimate experiences, and this type of special interaction must be understood in the design process.
- Every app is an original work even though it may be based on existing content.
- App-craft requires a creative team with multiple levels of expertise, and each team member must work in sync with the others. This includes knowing each person's limits, and understanding when to back away from a task that someone else might be better qualified to handle. The best attribute for a team member is a passion for both the content and the audience. In other words, a bird lover is likely to make a better app about birds.
- Passionate engineers are those that try their best to come up with a viable answer to the question "what if;" for example, "what if we added another language" or "what if we could put every Disney film on a single screen." It's also someone who never admits "it's good enough."
- Creative teams work incredibly hard, under inspirational leadership and they hate the word "impossible."
- Sweat the detail. (Cromie showed a globe with hand painted tiles, where you could see the brush strokes, as an example).
- Make apps for "all ages." A two year old child can enjoy spinning a responsive globe, or watching text sparkle.
- Save some room for polish, and tidy up the loose ends. Polish is what you do when you've done everything you plan to do, and you have some time left. This is time that needs to be built into the budget.

Fiction Case Study: Nosy Crow

KATE WILSON, Managing Director of Nosy Crow, is a passionate champion for reading, and the role that reading can play to empower a child. Her enthusiasm was baked into every aspect of her talk; and she started by reminding the group "there are no experts, only explorers." Nosy Crow is a 15 person company that has published 100 print books and 12 apps that have inspired the field of children's appmakers with their uncompromising quality. Some main points:

- Fairy tales are extraordinarily robust, which is why we like to turn them into apps. You can bend them and you can twist them, whether it's in a book, film or app -- and they don't break. There's a good reason they've been going for 100's of years.
- Today's children come to an iPad with an expectation about screens, and reading must not be the most boring option for them. We're trying to create new kinds of reading experiences that present different types of reading opportunities in a non-linear way.
- Making our apps is not like a relay race, where one person hands off a job to another. The process is fluid and dynamic, and requires a lot of give-take and revision.
- When I design, I try to empower the child. How scary should we make it? That type of decision affects the level of complexity and the interaction, and it must be just right for the intended audience.
- Nosy Crow apps start with original source material. Little Red Riding Hood began with a close look at ways the story has been told and retold over the years. The idea of giving the girl a choice in the path she takes to get to Grandma's house came from came from one of the classic early versions of the story. Finding these things takes research.

- Nosy Crow infuses fiction with real elements. The clouds in Jack and the Beanstalk come from photographs of real clouds; and a well where Jack finds a key is made from stones that were photographed at a castle in North Wales.
- An iPad screen is roughly the size of one page of a board book. That's not very big, and can feel very limiting to a publisher who is used to a large format printed page. That's why Nosy Crow has implemented several page expanding features, such as the ability to scroll or zoom. We also use motion driven 3D effects to help to make a child feel welcome.
- We have two levels of writing. One has the main story, with a beginning, middle and an end. On top of that, we float non-linear writing which consists of conversations between the characters that, if we're doing it right, increase your understanding of the characters, but won't interfere with the story.

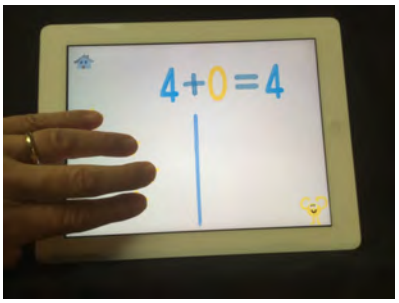
- Imaginative engagement already exists in a book. Our app design invites them further into the experience.
- Like Touch Press, we prefer to use native tools to increase our control over the medium. It's harder, but we've been able to create a box of code with each app that gets better and better.
- It is so important to test with children. We keep lists of the bugs to fix on a collaborative list. We've learned that left and right handed children touch the screen differently, and we've had to adjust such things as which direction characters enter a scene.
- Making an app is a collaborative and collective process, rather than based on a single individual's talents (Wilson frequently seconded Cromie's message about the need for creative teams working together). The work is anonymous in a lot of ways, and that's quite an interesting concept.

Feature Reviews and New Releases

APRIL 2014

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.

10 Fingers +



Ease of Use	10
Educational	10
Entertaining	6
Design Features	9
Good Value	9

88%

Counting with your fingers comes naturally for most children (and adults), and it certainly gives the general concept of "base ten" a nice grounding. That's why this app is so exciting, at least from a pedagogical point of view.

The capacitive multi-touch screen that is now standard on just about any device, gives your tablet the ability to instantly and accurately "see" how many fingertips are contacting the glass, at any given point. This information can be used to freely explore quantities, match quantities, or build your own math equation. In all the activities, you can go no higher than ten.

According to the support materials, the app was inspired by Montessori pedagogy by promoting the acquisition of abstract concepts using concrete manipulation. Made in France, the app is designed to work with a set of wooden numerals (each with a capacitive footing that registers on the iPad screen). But the numeral set, sold in France for €35, is optional. The app works perfectly well with just your fingers.

Need to know. While pedagogically exciting, there's no reason to count, other than to see the numerals or match the sets. That makes this app more meaningful teachers who want to give meaning to numerals. See also Little Digits (CTR August 2012).

Details: Marbotic, www.marbotic.fr/en. Price: $1.99. Ages: 3-6. Platform: iPad. Teaches/Purpose: math, counting, addition; language. Rating (1 to 5 stars): 4.4 stars. Entry date: 2/27/2014. [WB]

Coloring Book: Cars and Trucks for Kids!

Ease of Use	2
Educational	2
Entertaining	2
Design Features	1
Good Value	2

18%

Free and poorly designed, this coloring book app offers three free black line images of cars, and teases children with locked images of others.

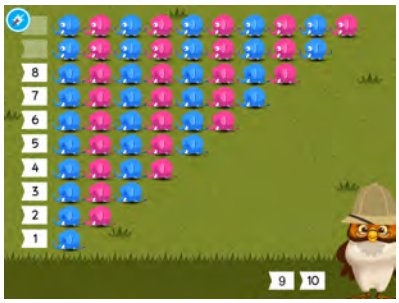
The age gate isn't effective, or honest. The warning message (which requires reading) says "Parents only: press and hold to unlock all the images." Just touching for three seconds is all that's required to get this message -- that's what a child will do anyway and then you have them in an IAP situation where there's a 50% chance they'll buy a single image for $.99. The app offers $16 worth of in app purchase content. Is one image worth $.99?

Accidental purchases are encouraged because the locks aren't big enough on the main screen, so it's not obvious which images are locked and which aren't creating a tease situation.

More seriously, there's a buffer issue when you try to touch quickly when in fill mode.

Details: Apps Kids Love - LLC, http://appskidslove.com/. Price: $free. Ages: 3-6. Platform: iPad. Teaches/Purpose: creativity, coloring. Rating (1 to 5 stars): .9 stars. Entry date: 3/12/2014. [WB]

Count up to Ten: Learn Numbers With Montessori



This collection of leveled activities gives you plenty of content for your 3 bucks. There's counting, 1 to 1 correspondence, a numeral tracing activity and an augmented reality activity, with a cloud-based reward system designed to record progress and sync with other Seven Academy apps.

Despite the confusing array of options and frequent encounters with an adult age-gate, the app is ideal for helping a child with activities that will develop "number sense."

There are four collections of activities, each based around a different animal theme. A group of penguins introduces the numbers, a mole traces each numeral into the ground, a manta ray plays with the concept of quantities, and a team of elephants hold each other by the tail to form Montessori bars. There is also an Augmented Reality game where parents cut a page with printed labels (either downloaded from the Seven Academy website or emailed from the app).

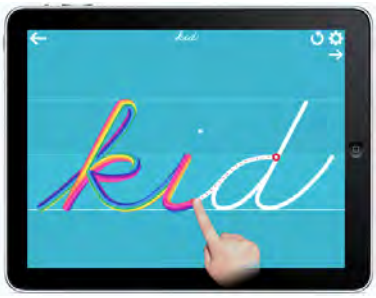
Rewards can be used in Seven Academy's Montessori Garden, a virtual vegetable garden located on the company's website (https://www.sevenacademy.com/en/), that is designed to motivate and educate children, while they learn about the benefits of gardening. The app is available in 12 languages including: French, English, Spanish, Portuguese, Italian, German, Dutch, Russian, Turkish, Korean, Japanese, and Simplified Chinese. The pedagogy comes from mathematician, Aurélien Alvarez.

Details: Seven Academy, http://sevenacademy.com. Price: $2.99. Ages: 3-7. Platform: iPad, iPhone, iPod Touch (iOS 6.1 or later). Teaches/Purpose: math, counting, fine motor skills, tracing, numerals (1 to 10), French. Rating (1 to 5 stars): 4.4 stars. Entry date: 2/25/2014. [WB]

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

88%

Cursive Writing Wizard - Trace Letters and Words



Teachers take note -- your conception of how a child learns to write cursive letters just might change. We've reviewed plenty of tablet-based letter tracing apps, but this one turns your iPad into a highly customizable cursive writing tutorial that takes up where Writing Wizard (CTR, Sept 13) leaves off. The best part about this app? The way you can customize it to just about any child or school curriculum.

A suite of parent/teacher options lets you tailor the app to an individual child. You can adjust such details as the font (D'nealian cursive, Zaner Bloser cursive or two French fonts), tracing speed, turn on/off the various (zany) reinforcements, adjust the background music and set a timer. For example, you can turn on/off the star mode, in case a child wants to freely play. Content includes: 26 animated stickers and sound effects; 4 games that animate letters; the ability to create your own word lists (and record audio for each word); ability to customize the app to the child's education level (e.g. letter size, difficulty, show/hide model, allow to stop between key points, etc.); upper and lower case letters; numbers (and word lists; customizable letter sounds; and unlimited users. Detailed progress tracking lets you see exactly what a child has done.

This type of app might lower the floor for writing instruction, because of the well designed help features that build on accomplishment.

Details: L'Escapadou, http://lescapadou.com. Price: $3.99. Ages: 5-12. Platform: iPad, iPhone, iPod Touch (iOS 5.1 or later). Teaches/Purpose: fine motor skills, writing, cursive, letters, spelling, French cursive, French Cursive 2, D'nealian cursive and Zaner Bloser Cursive. Rating (1 to 5 stars): 4.8 stars. Entry date: 3/19/2014. [WB]

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

96%

Dr. Panda's Restaurant 2

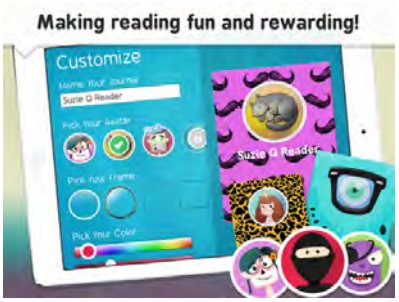
Ease of Use	8
Educational	7
Entertaining	9
Design Features	8
Good Value	8

80%

Fun, playful, but missing opportunities for richer play, this cooking simulation follows last year's Dr. Panda's Restaurant. You become the cook in this island restaurant, trying to feed an endless flow of new animal customers, two at a time. The app introduces the concept of following recipes, cooking, and even doing dishes. If you're familiar with any of the Dr. Panda series of apps, you'll find this one to be very familiar, with large faces and over-simplied steps. At times they're over simplified. Like cooking on automatic transmission. You touch the pineapple and it automatically changes form. Content includes 20 ingredients that can be chopped (fruit ninja style), grated, blended and fried. There are no time limits or scoring, despite the fact that you earn money. It would be nice if you could see how much you earn. There is a vegetarian mode included; no ads or licensed characters. There is no language in the activities themselves; and the instructions are in English, Chinese, Danish, Dutch, Finnish, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Thai, Turkish.

Details: TribePlay, www.tribeplay.com. Price: $2.99. Ages: 3-6. Platform: iPad, iPhone, iPod Touch (iOS 6.0 or later). Teaches/Purpose: logic, counting, fine motor skills, cooking. Rating (1 to 5 stars): 4 stars. Entry date: 2/19/2014. [WB]

Epic! - Books for Kids



This is an "all-you-can-read eBook service" for elementary age children designed for kids 12 and under. The library consists of thousands of curated eBooks from well-known publishers, available as a subscription based service. You can try it for free for 30 days, then purchase for $9.99/month or $79.99/year. The subscription is through iTunes and can be used on additional iPads you own. Subscriptions will auto-renew and identify the cost of renewal unless you cancel auto-renewal at least 24 hours before the end of the current period. You can also turn off auto-renewal at any time from your iTunes account settings. Kids can read, share and rate books, or create collections of their favorites. They can also earn badges and rewards for reading achievements.

Details: Epic Creations!, www.GetEpic.com. Price: $10/mo. - $80/yr.. Ages: 4-up. Platform: iPad. Teaches/Purpose: reading. Entry date: 3/26/2014.

ETY-Kids 5 Safe-Listening Earphones

ETY-Kids Safe-Listening Earphones ($40, Etymotic) "seals the ear canal allowing for higher fidelity at lower levels," limiting maximum sound output delivered to the eardrum. Fisher-Price came out with a similar set of volume controlled headphones (see Kid-Tough Headphones) with electronic sound limiting, but it also limited sound quality.

By controlling the earphones themselves, it is not necessary to restrict the volume setting on the player. The earphones are also designed to fill the ear canal and block background noise, too (they act like ear plugs). More information at www.etymotic.com.

Details: In Tune Partners / Etymotic Research, www.etymotic.com. Price: $40. Ages: 4-up. Platform: A peripheral for mobile devices. Teaches/Purpose: ear buds for kids. Entry date: 1/15/2014.

Furby Furblings

About the size of a baseball, Furby Furblings are smaller, lower-tech Furbys that can interact with your Furby Boom (sold separately). When you put the two of them together, the Furblings creature talks and your Furby Boom creature answers. They can also sing together together. Furblings also unlock content in the free Furby Boom app, including playroom decor and a matching Furbling egg. Furblings are available in six pattern combinations.

Note: The Furby app is optional and works with iPad, iPod touch and iPhone with iOS 5.0 or later. The app is not compatible with prior Furby generations.

Details: Hasbro, Inc., www.hasbro.com. Price: $20. Ages: 6-up. Platform: Smart Toy. Teaches/Purpose: communication. Entry date: 3/24/2014.

Incredible Numbers

This interactive book mixes clearly written middle and high school level reading with 71 interactive, embedded and finger-driven math demonstrations. As a result, this is a math book that you touch as well as read. The text comes from 23 articles written by Ian Stewart, a math professor.

Those seeking a challenge can try to solve the 15 puzzles (with illustrated answers). The main menu presents eight large dots; each representing a color-coded chapter as follows: Primes, Secret Codes, Polygons, Infinity, pi, Factorials, Music and Nature.

If you're expecting visually rich illustrations typical of Touch Press apps like Disney Animated, you may be disappointed by this app's clean, clear, text-driven design. On the other had, the app is a surprisingly quick download, of just 93 MB. Middle and high school math teachers, take note of this app, which is a collaborative effort of Profile Books and Touch Press.

Details: Touch Press, www.touchpress.com. Price: $4.99. Ages: 10-up. Platform: iPad (93.7 MB). Teaches/Purpose: mathematics, math, numbers, algebra, codes, logic, art, music. Entry date: 3/29/2014.

Meerkat Puzzles

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

82%

Fifteen self-correcting, rainy day puzzles await in a single app, offering both variety and some tried-and-true problem solving opportunities.

You catch and count bats, drag to highlight words in a word search, search for missing items, move through a maze, decode a secret message using a special symbol key and complete a very typical drag-and-drop jigsaw puzzle. Many of the activities have direct links to any school's curriculum, making this a solid enrichment app.

We would have liked a better hint system, but this is compensated for by a clear menu design that makes it easy for a child to jump back to the main menu. All in all, this is a solid app. See also the Pretty Fabulous Fashion Activity for a very similar type of app, with a fashion theme.

Details: Arcturus Digital Limited, http://www.arc-apps.com. Price: $1.99. Ages: 6 -10. Platform: iPad. Teaches/Purpose: classification, patterns, attributes, logic. Rating (1 to 5 stars): 4.1 stars. Entry date: 3/24/2014. [WB]

Meet Science: Magnetism and Electricity

Best described as a science textbook on a tablet, Meet Science: Magnetism and Electricity (aka Meet Science 1) is the first of a series from NCSoft's iActionBook series, designed specifically for upper elementary age children.

The main menu offers three options: Learn (seven animated lectures on topics like electrons, with quizzes); Mini Games (three games, including a bejeweled experience that is less related to science); and Experiments (clear video demonstrations of 20 experiments, with step by step instructions.) This app could be a nice supplemental or enrichment science activity.

The content is solid, and there's a nice base of core content, accessible by way of a searchable glossary. Available in English and Korean. There are minor translation issues and the default background music loops, but can be turned off in the parent's menu. The main menu is distracting, with "cute" animated characters that don't have much to do with the content.

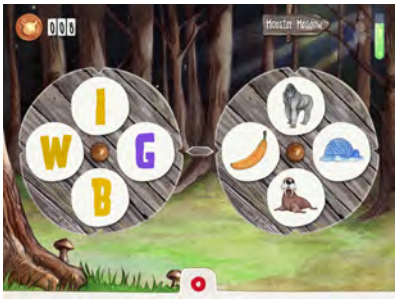
See also Meet the Insects: Forest Edition, Meet the Insects: Village Edition and Meet the Insects: Water & Grass.

Details: NCsoft, http://us.ncsoft.com/en/. Price: $6.99. Ages: 9-11. Platform: iPad. Teaches/Purpose: science, electromagnetic energy, magnetism and electricity. Rating (1 to 5 stars): 4 stars. Entry date: 3/10/2014. [WB]

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

80%

Monster ABC - Learn With The Little Monsters



This is a phonics drill app that asks you to match pictures to initial sounds. Successful answers are rewarded with interesting monsters -- the more words you unlock, the more monsters you earn.

An initial sound is the first sound of a word and is represented by a letter or a letter combination (like “mm” in the word “mouse” and “sh” in the word “sheep”). Children learn how to make out the initial sound of a word and match it to a letter.

Words and letters are spoken when tapped, and there are two language options: English and German.

Need to know: The first menu is cluttered, offering locked options. The monster theme is fun and nicely implemented.

Details: wonderkind interaktionsmedien GmbH, http://wonderkind.de. Price: $2.99. Ages: 3-6. Platform: iPad, iPhone, iPod Touch (iOS 5.1 or later). Teaches/Purpose: phonics, reading, initial sounds. Rating (1 to 5 stars): 3.9 stars. Entry date: 3/3/2014. [WB]

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

78%

Music Superheroes - Learn Music While Having Fun

Music teachers take note (pun intended). These five, carefully leveled, music-related games help younger children (preschool and early elementary) discover tempo, rhythm, notation, instruments and reading music. The progress tracking features are easy to use, for one child.

The best part about this app is how it pulls children into music skills, by way of real-time, leveled activities. Feedback is provided by Mathy and Matteo; rather annoying characters that are not particularly well developed. But that doesn't matter. When was the last time you heard about a piano lesson for $2.99? See also Bedtime Stories Collection and Math Superheroes.

Details: Lisbon Labs, http://apps.lisbonlabs.com/. Price: $2.99. Ages: 3-8. Platform: iPad, iPhone. Teaches/Purpose: music. Rating (1 to 5 stars): 4.5 stars. Entry date: 3/20/2014. [WB]

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

90%

Nut Job, The (The Official App for the Movie)

The Nut Job movie comes to an app, with four playful activities and a narrated page-by-page storybook that makes a nice addition to the movie.

In the story, you join Surly the squirrel as he helps the squirrels get ready for winter. Four zany, typical games vary in quality: Whack-a-Rat (lets you collect nuts by touching rats that jump out of holes, while avoiding the good guys); Squirrel Bounce (protect the nuts from falling into the gutter); Action Scramble (sling nuts into different-sized pipe targets); and Gone Nuts (a bejeweled type of game, using (you guessed it) nuts. All of the games keep high scores on a leaderboard. The text is highlighted as it is read aloud, by way of good quality narration, making this a good language experience activity.

There are options for sound/voice and music volume, and no external links or sponsored content.

All in all, this is a fun app for all ages, even if you don't like squirrels. Developed in partnership with Toonbox Entertainment and Open Road Films.

Details: Cupcake Digital, Inc., www.cupcakedigital.com. Price: $0.99. Ages: 4-up. Platform: iPad, iPhone, iPod Touch (iOS 4.3 or later) 64 MB. Teaches/Purpose: reading, logic, timing. Rating (1 to 5 stars): 4.3 stars. Entry date: 1/7/2014. [WB]

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

86%

Padholdr Fit series for iPad

Designed for securely holding an iPad 1, 2, 3, 4, iPad Air, iPad Mini or Galaxy Tab to a car, desk or suspended on a stand, Padholdr iFit series are VESA compatible mounting brackets. A VESA mounting pattern is a standardized way of mounting monitors produced by NEC in 1988. VESA mounting patterns are seen on the back of any television set. The primary patterns seen on most smaller tv sets are a 75mm by 75mm or a 100mm by 100mm. When designing the holder, Padholdr went with the two most popular VESA sizes, for use with schools, hospitals and cash registers.

The Fit series consists of 3 universal tablet holders fitting a broad range of tablet sizes. The iFit series holders are specifically designed for the Apple iPad only. Their are three holders in the iFit series that cover all the currently available iPads.

Details: Padholdr, http://padholdr.com. Price: $120. Ages: 3-up. Platform: iPad, Android, Nook, Kindle. Teaches/Purpose: An adjustable tablet holder. Entry date: 3/10/2014.

Pretty Fabulous Fashion Activity

Sixteen coloring and problem solving activities provide a nice variety of fashion-themed activities, despite being a bit clumsy at points. For example, it's not always easy to rotate stickers, and the maze game feels a bit sluggish. But the menu makes it easy to jump to another activity, and there's a lot of tried and true rainy-day types of problem solving, making this a good app for a long trip. See also Meerkat Puzzles for a similarly designed app.

Details: Arcturus Digital Limited, http://www.arc-apps.com. Price: $1.99. Ages: 8 -12. Platform: iPad. Teaches/Purpose: fashion, creativity, coloring, memory. Rating (1 to 5 stars): 3.8 stars. Entry date: 3/24/2014. [WB]

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

76%

Rolling Pea

Beautifully illustrated, with an unusual fairy-tale story (complete with some violence and gender bias), this ambitious 29 screen animated storybook tells the story of a boy with an unusual name (Rolling Pea) who must try to rescue his brothers and sisters from an evil dragon.

In terms of interactive features, there's nothing beyond touch-and-hear, with some motion activated elements and some simple games. But the ambient sound effects are subtle and the music richly orchestrated, and there's a lot of content to explore, with 500 hidden interactive elements and a few mindless games.There are both Read to Me or Read by Myself modes. Need to know: The font is very small on an iPad mini.

Details: KievSeaPirates LLC , http://kievseapirates.com. Price: $4.99. Ages: 8-up. Platform: iPad. Teaches/Purpose: reading. Rating (1 to 5 stars): 4.1 stars. Entry date: 2/21/2014. [WB]

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

82%

ScratchJr.

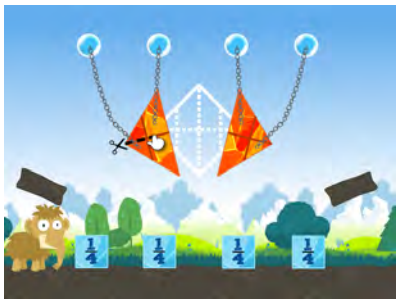
Coming "sometime this summer" with an Android version "later this year" (per Mitchell Resnick), ScratchJr. is a tablet based, introductory programming language designed to let young children (ages 5-7) create interactive stories and games. It follows in the lineage tradition of LOGO, and Scratch.

According to the promotional video, ScratchJr will let children "snap together graphical programming blocks in a single line, from left to right, to make characters move, jump, dance, and sing. The characters can be modified with a paint editor that lets them add their own voices and sounds, even insert photos of themselves."

ScratchJr is a collaboration between the DevTech research group at the Eliot-Pearson Department of Child Development at Tufts University (led by Prof. Marina Umaschi Bers), the Lifelong Kindergarten research group at the MIT Media Lab (led by Prof. Mitchel Resnick), and the Playful Invention Company (led by Paula Bonta and Brian Silverman). The graphics and illustrations for ScratchJr are created by HvingtQuatre Company and Sarah Thomson. The initial development of ScratchJr has been funded by the National Science Foundation, the Code-to-Learn Foundation, the LEGO Foundation, and British Telecommunications.

Details: MIT Media Lab, www.media.mit.edu. Price: $free. Ages: 5-7. Platform: iPad. Teaches/Purpose: programming. Entry date: 3/17/2014.

Slice Fractions



Looking for a fabulous early elementary math learning app? Combine "Cut the Rope" style problem solving with a side scrolling venue that gets progressively harder, and you get the idea of Slice Fractions -- an app that gently introduces some deep mathematical ideas, like equivalency, part-whole partitioning and numerator/denominator notation.

There's a lot more to this app than fractions. Solving each level requires some higher order 2 and 3 step logical problem solving. You might need to figure out how to lower a ramp first, before cutting a rope that will swing just the right amount of ice into place. You learn that you can "shave" off parts of ice, to approximate a quantity of flaming lava.

You do this using a gaming mechanic that asks you to correctly slice blocks of ice and bubbles to clear a path for a cute baby mammoth. Part of the charm of this app is the mammoth, who seems very pleased when you help him. This subtle, simple reinforcement is part of the magic of this app.

There are 60 levels, each with realistic physics, and a clear goal. The better you do, the more badges you earn, in the form of silly hats. If you don't succeed, you can do a level over, with a hint in the form of a line that shows where you need to cut. The app does a good job at providing help, and progress is saved from session to session.

The designers worked with educators at UQAM University (Université du Québec à Montréal) to design the math curriculum.

Details: Ululab Inc., http://ululab.com. Price: $2.99. Ages: 6-15. Platform: Android, iPad, iPhone, iPod Touch (iOS 4.3 or later). Teaches/Purpose: problem solving, math, fractions, logic. Rating (1 to 5 stars): 4.9 stars. Entry date: 2/20/2014. [WB]

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

98%

Sneak a Snack HD

This app was one of the nice discoveries of the BolognaRagazzi Digital Judging. Sneak a Snack, an English/French title designed in Canada, made the top 20 list for good reason. The story is brought to life with unique motion-sensitive graphics, and old fashioned excellent narration; on par with a Nosy Crow app.

In the story a young boy must rule out three suspects to find out who has stolen his pizza. Offering a choice of tilt or swipe navigation, the 3-D illustrations mix with touch-triggered events, to pull you into the story. There's a nicely designed table of contents, but no text scaffolding features. We didn't like the prompt to "rate us 5 stars" on the last page. Designed by Unity; available in French or English.

Details: U.n.I Interactive, www.uni-interactive.ca. Price: $2.99. Ages: 3-6. Platform: iPad. Teaches/Purpose: English or French. Rating (1 to 5 stars): 4.6 stars. Entry date: 11/11/2013. [WB]

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

92%

Tynker

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

92%

Looking for some training wheels for Scratch? Inspired from MIT's famous programming language (currently Scratch 2.0), Tynker is a well-designed set of self-paced challenges and tutorials designed to introduce the basic visual programming functions on touch screen tablet.

There are three levels in the free app; one unlocked, the other two for sale for $1.99 each. We tested the free level, called Puppy Adventure, in which you try to help a puppy get to the end of a path by choosing the right combination of jumps and steps. As you progress from challenge to challenge, you learn that you can speed things up with repeat and loop functions.

There are 20 free puzzles in the first level; the rest are shown but require payment. Note that the buttons are small and hard to find on the iPad mini.

The other two levels (available as in-app purchase for $1.99 each) are Lost in Space, which deals with geometric pen up and pen down commands, and Sketch Racer, which contains an additional 48 puzzles featuring snap the turtle. The complete bundle is available as an in-app purchase for $2.99.

According to the PR materials, Tynker was inspired by visual programming languages, such as Scratch from MIT, Alice from CMU, and other programming languages, like Logo, SmallTalk, and Squeak.

It was designed by Krishna Vedati. The computer version is browser-based written using Open Web standards such as Javascript, HTML5, CSS3. It does not use Flash.

Details: Tynker, www.tynker.com. Price: $free with in-app purchases. Ages: 7-up. Platform: iPad, iPhone. Teaches/Purpose: programming. Rating (1 to 5 stars): 4.6 stars. Entry date: 3/14/2014. [WB]

Very Hungry Caterpillar & Friends, The: Play & Explore

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

84%

If there was an award for the world's most beautiful early math workbook, it might very well go to this app. This is the first time the art of Eric Carle has been used in an app that you won't regret buying. The bad news is that a few of the activities are shallow, and in some, an over cheerful, overly chatty narrator might stand in the way of a curious child. This isn't a deal breaker -- you can skip around in the app, and some of the activities -- especially the jigsaw puzzle, are responsive and exceptional. Also a big plus -- content is housed in StoryToy's 3D pages, with the added benefit of changing between five languages (English, French, German, Spanish and Japanese).

A badge system lets you save progress for up to eight activities. While this is a nice feature, it isn't clear how to check or reset progress. For gaining number sense, there are definitely better counting apps activities, but none this pretty.

Details: Storytoys, www.storytoys.com. Price: $3. Ages: 3-6. Platform: iPad. Teaches/Purpose: counting, English, French, German, Spanish and Japanese. Rating (1 to 5 stars): 4.2 stars. Entry date: 3/11/2014. [WB]

Where's My Monster?

Ideal for young children as a language enrichment activity, Where's My Monster is the second release from Martin Hughes (see also Monster's Socks, CTR Editor's Choice, July 2012). The narrative is drawn from a very simple idea. You help a parent find a lost child.

This second title also uses a unique 3D horizontal scrolling navigation scheme, which makes the need for pages obsolete. As you explore, you search and find the 13 monsters, each hiding behind an object that is gradually revealed through red pull tabs.

You can touch a "read" icon to hear the text read out loud. Text is highlighted. Journey through this interactive book and read along or push the words to hear the narration. Pull to open the door, drawers, closet and many more hiding places before finding Mother's Monster. The only drawback? There are a limited number of monsters to find (just 13).

All in all, this is an excellent app for smaller children, and a nice language enrichment app as well.

Details: Martin Hughes, www.monsterssocks.com. Price: $2.99. Ages: 3-up. Platform: iPad, iPhone, iPod Touch. Teaches/Purpose: reading, cause and effect, language, fine motor skills. Rating (1 to 5 stars): 4.7 stars. Entry date: 3/10/2014. [WB]

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

94%