

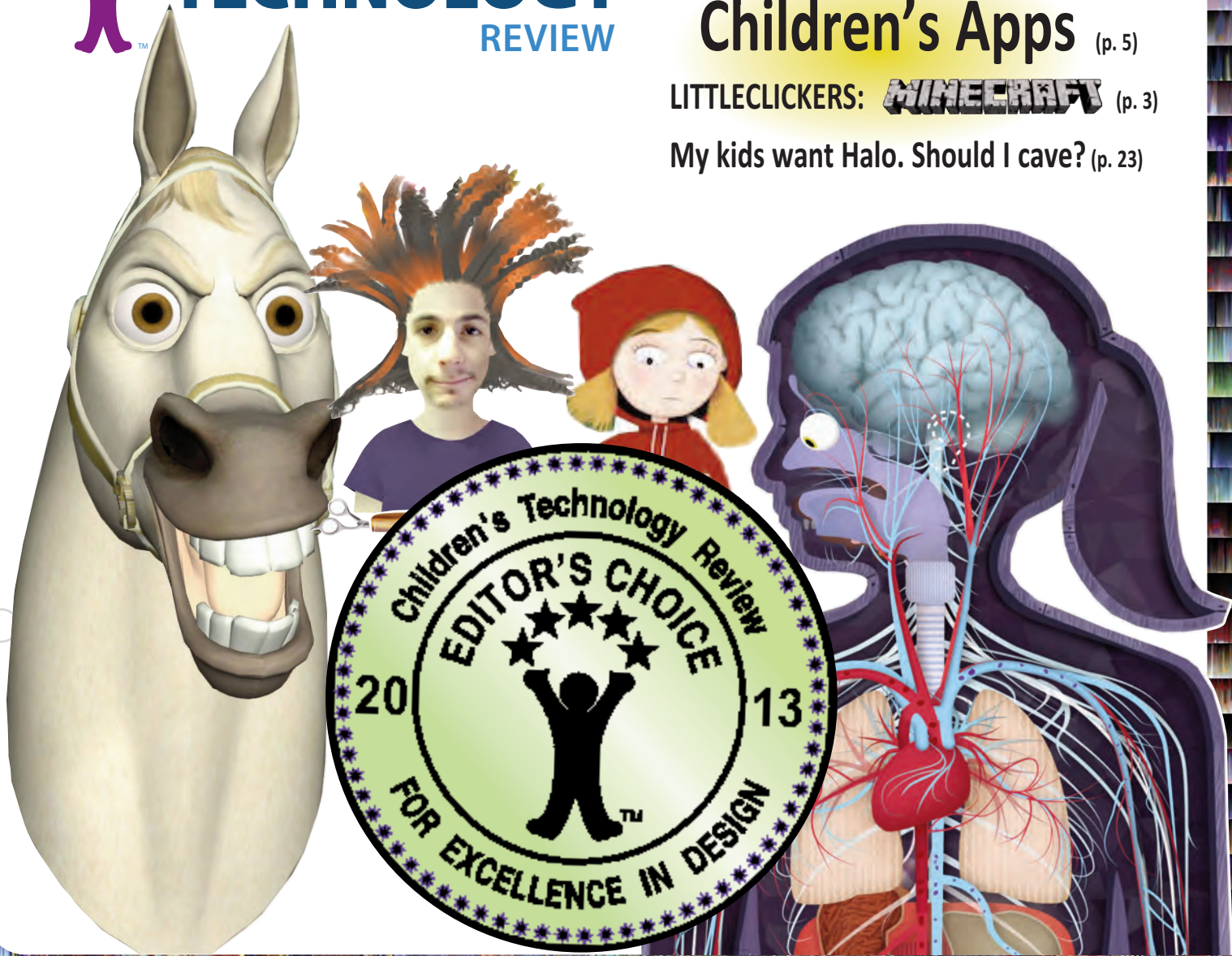


# Children's TECHNOLOGY REVIEW

## 2013 in Review: Top 107 Children's Apps (p. 5)

LITTLECLICKERS: **MINECRAFT** (p. 3)

My kids want Halo. Should I cave? (p. 23)



On the cover: Examples of digital excellence from 2013:

### **CTR, January 2014** **Vol. 22, No 1, Issue 166**

Annie's Picking Apples 2:  
Learning Games, p. 24  
Ben 10 Omniverse 2, 29  
Build a Truck, 24  
DiscoRobo, 29  
Disney Infinity Rapunzel, 29  
Frozen: Storybook Deluxe\*, 25

Kre-O: CityVille Invasion  
Skyscraper Mayhem, 29  
Legend of Zelda: The Wind  
Waker HD, The, 29  
Motion Math: Pizza!\*, 25  
New Kid on the Block, The\*, 25  
New Super Luigi U\*, 26  
ProScope Micro Mobile Digital  
Microscope Kit, 29  
Sago Mini Music Box\*, 26

Smithsonian- Saber-Tooth Trap,  
27  
Spell with Pip: An Oxford  
Spelling Game, 27  
SymbolSmash, 27  
Wii Fit U, 30  
Wonderful 101, The, 31  
Writing Wizard\*, 28

\* Donotes an "Editor's  
Choice." See p. 4





January 2014

Volume 22, No. 1, Issue 166

The past year has seen a dramatic increase in the number of commercial children's interactive media products, even more than the previous five years, combined. For better or for worse, that growth is controlled by one company, for one platform (see page 4). As we charge into 2014, here's a look at the past 12 months from our point of view.

## BETTER HARDWARE, BETTER SOFTWARE

- Of the 24 platforms we've reviewed products for, all but eight are extinct.
- We declare the CD-ROM as a delivery vehicle dead; last year it joined the eight track and cassette tape as obsolete vehicles for delivering content.
- Children's apps published by Amazon and Google have continued to improve in both quality and quantity, but incrementally when compared with Apple.
- Android tablets are increasingly being used by companies like Toys R Us to deliver curated collections of apps.
- Complexity is stunting the growth of the Android platform, however, the 2nd best option for children comes from two Apple rivals: Samsung and Google in the form of the Samsung Galaxy Tab 3 Kids (\$200, Samsung).
- Living room interactivity got a big boost this year due to large, affordable HD screens and two new video game consoles (the PS4 and Xbox One). We now know what the next five years of video games will look and play like.

## APPLE'S DOMINANCE HAS INCREASED

- Apple's iOS tightened its grip on children this year; iTunes is now the epicenter for innovation and creativity on a global scale.
- We estimate that there are about 47,500 viable iOS apps for children.
- The most affordable device that accesses these apps is last year's \$300 16 GB non-retinal display iPad Mini.
- Of the iOS apps release this year, 107 that received a rating of 4.3 or higher on our instrument. They are listed on page 7.

## CHILDREN'S INTERACTIVITY REMAINS FOGGY AND CONFUSING TO MOST ADULTS

- Business agendas are easy to find in children's interactivity, despite government and industry attempts to regulate the space, however 2013 brought an increase in good practice, including better age-gates and labels about in-app purchases.
- The debate over the appropriateness of using technology with young children is in the early stages and will continue throughout 2014, as indicated by recent books by NAEYC and the debate around the Fisher-Price iPad seat. More details about these trends in on page 5.

## LittleClickers: Minecraft

In case you've been stuck in an attic for the past five years, Minecraft is an online world that you can build, create and control all on your own. Never heard of it? Here are some FAQs about this incredible virtual world. Page 3.

## Mailbag: Help! My Kids Want Halo. Should I Cave?

Some common sense advice for a neighbor in distress (p. 23)

**Editor** Warren Buckleitner, Ph.D.,  
(warren@childrenstech.com) [WB]

**Director of Publishing** Matthew DiMatteo

**Editorial Coordinator & Circulation**  
Lisa DellaFave (lisa@childrenstech.com) [LD]

**Office Manager & LittleClickers Editor** Megan Billitti (megan@childrenstech.com)

**ONE YEAR SUBSCRIPTIONS** are \$60, for 12 monthly issues, 52 weekly issues plus online database access. Weekly issues are sent at 6 AM on Wednesdays EST. Site subscriptions available. Contact *Children's Technology Review*™, 120 Main Street, Flemington, NJ 08822 or call 800-993-9499. Visit [www.childrenstech.com](http://www.childrenstech.com) to learn more.

**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](mailto:lisa@childrenstech.com).

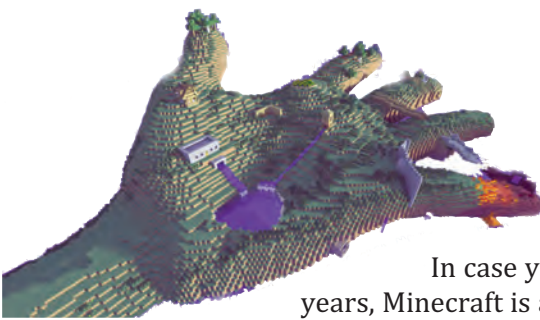
**OUR RULES.** No ads, gimmicks or politics; we work for the benefit of children. *CTR* follows editorial guidelines at (<http://childrenstech.com/editorial-guidelines/>). Highlights include:

- We don't sell or profit from the products we review. Review products are donated to the non-profit Mediatech Foundation ([www.mediatech.org](http://www.mediatech.org)).
- We don't distribute, sell or leverage subscriber information.
- Contributors are required to disclose bias.
- There is no sponsored or advertising content of any variety.
- We're transparent; making every effort to disclose review criteria and sources of potential bias.
- We don't skim conclusions from other services.

**PUBLISHER INFORMATION** *Children's Technology Review*™ (ISSN 1555-242X) is published monthly (12 issues) by Active Learning Associates, Inc. Send address changes or new subscriptions to *Children's Technology Review*™, 120 Main Street, Flemington, NJ 08822. **Use of this publication for any commercial publishing activity without prior written permission is strictly prohibited.** Readers are subject to the TERMS OF USE found at <http://childrenstech.com/disclaimer>  
**Contents © 2014 by Active Learning Associates, Inc.** All Rights Reserved.

## Your Subscription is Your Key to 11,274 Archived Reviews

Your paid \$30 or \$120 subscription to *CTR* includes exclusive password access to the new *Children's Technology Review* database — a collection of reviews going back to 1985. If you've lost or forgotten your password, please call 800-993-9499 between 9-3 PM EST.



# 5 sites & ten videos about MINECRAFT

LittleClickers is made possible by Computer Explorers. Safe, fun Internet explorations for children.

LittleClickers is brought to you by Computer Explorers, who is offering camps on programming. Visit [www.computerexplorers.com](http://www.computerexplorers.com) to learn more. The web-based (html) version of this page is at <http://www.littleclickers.com> with live links, plus a place to report any errors. Note that CTR and COMPUTER EXPLORERS do not have commercial interests in the sites listed on this page. Librarians and teachers are permitted to copy this page for non-profit use. To suggest a future topic or to report a bad link, please contact the editor, Warren Buckleitner [WB] [warren@childrenstech.com](mailto:warren@childrenstech.com), or the web editor, Megan Billitti [MB] [megan@childrenstech.com](mailto:megan@childrenstech.com); or call 908-284-0404 (9 - 3 PM, EST).

In case you've been stuck in an attic for the past five years, Minecraft is an online world that you can build, create and control all on your own. Never heard of it? Here are some FAQs.

**1. What is Minecraft? What do I need to play?** Minecraft is a game about breaking and placing blocks, that you play on your Mac or Windows computer. You need an Internet connection, and parent's permission. At <http://wapo.st/1cko96l> you learn that it was made 2009, by the Swedish company called Mojang.

**2. How much does it cost?** There are two versions: classic and beta. Classic is more creative and free to use, while beta is the paid version (\$27) with the adventure/survival modes. You can register at <https://minecraft.net/>. Make sure you read <http://bit.ly/1k4kpQV> to learn how to survive your first night online.

**3. What is a Minecraft block?** At <http://bit.ly/1lxg11H> you can read about this basic unit of play. Blocks can be made of just about anything — like dirt, wood or stone or you can make your own.



**4. Help! I've come across a mob! What do I do?** Mobs can be nice or mean. At <http://bit.ly/JrYjaH> can learn how to tell the difference. Check out <http://bit.ly/19Ewp1E> to see what the dangerous mobs are like, and how to beat them.

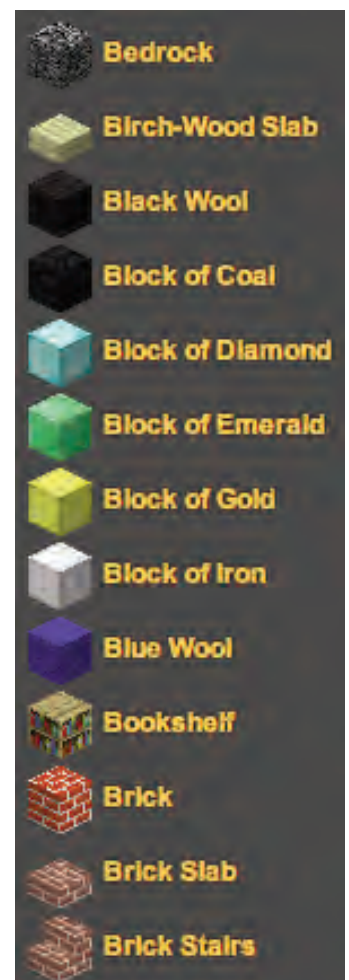
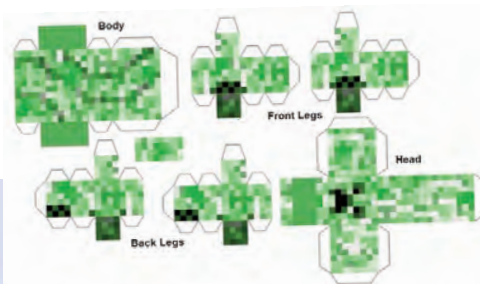
**5. How does Minecraft end?** Minecraft never ends, however, there is a way to 'beat the game.' We found a link at <http://bit.ly/1hSBIQC> that gives you step-by-step directions.

**6. What do Minecraft and Great Britain have in common?** At <http://bit.ly/JrYzXk> you can visit a version of a part of Great Britain that somebody made using 22 billion Minecraft blocks.

### Application:

1. Minecraft is best for ages 8-up. But we found blog that lists ideas for younger kids, that include taming a pet or building a house, at <http://bit.ly/1HP9qa>.

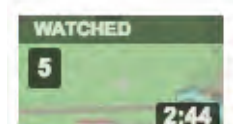
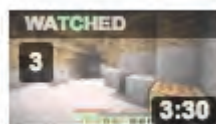
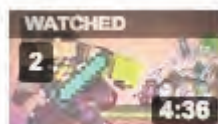
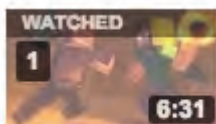
2. Print some blueprints to make some Minecraft products, at [bitly.com/19DsQhK](http://bit.ly/19DsQhK). You'll also need scissors and tape.



## Minecraft videos

Here's our YouTube videos for this month

[http://www.youtube.com/playlist?list=PLcBVHzUUEKw104bXa9UQKSES70\\_H1ADsA](http://www.youtube.com/playlist?list=PLcBVHzUUEKw104bXa9UQKSES70_H1ADsA)







BY WARREN BUCKLEITNER

Oh what a year it's been.

There has never been such a dramatic increase in the number of commercial children's interactive media products, than in the past 12 months. To call it a surge is an understatement.

Let me provide some details. There are now 24 platforms for children's interactive media; each representing a pipeline to deliver content in the form of some sort of device. This might be a mobile device, desktop computer or some sort of video game hardware. All but eight are now largely extinct; most notably Mac OS and Windows. Just five years ago, these two platforms formed the majority of products we reviewed. Let it be known that 2013 marks the demise of the CD-ROM.

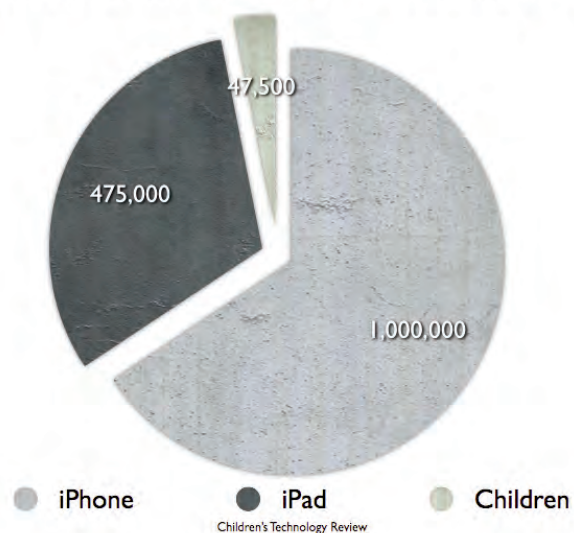
So what are the viable platforms for 2014?

The leader by a wide margin is Apple's mobile operating system, called iOS, which I'll discuss later. Others include Android 4.4 (called KitKat), the Kindle Fire OS (called Fire OS, which is a close cousin to Android), Microsoft's Windows Phone 8 for touch screens; Windows 8 for computers and Laptops, and Mac OS Mavericks (10.9.1) for non-touch screen Macintosh computers. Video game platforms include the Microsoft Xbox, Sony PlayStation and Vita and Nintendo Wii and DS. To make things more complicated, each platform is continually updated. So with time, comes new versions, improvements, and more complications, as the distance between your app release date and the most recent OS version gets wider.

**Fragmentation: The Achilles Heal of Android**

Unlike Apple iOS, which supports just four screen sizes (old and new iPhone and iPod Touch, iPad Mini and iPad), Android devices come in a dizzying array of sizes, shapes and resolutions. According to OpenSignal (in an article found by Barbara Chamberlin on the Dust or Magic Facebook group) at <http://opensignal.com/reports/fragmentation-2013/> there are now more than 11,000 varieties of Android devices, and nearly half of these are controlled by

**Estimated Number of iOS Apps for Children as of December 2013**



Samsung. If you're a publisher, you might find it hard to serve so many types of platforms; and if you're considering purchasing one of these devices, you may want to stay with a known brand and screen size. What can go wrong? Sometimes graphics don't line up, or the app might not start at all. Even Apple products can crash these days. Complexity continues to plague children's interactive content.

### The Dramatic Rise of Apple's iOS Platform

"Apps" were first introduced for the smaller sized iPod and iPhone in 2007. These were the first capacitive screens. The first children's apps for these devices were limited in function and by a small screen size, but they cut the ties with the mouse and keyboard, and introduced many children to their first swipe on a multi-touch capacitive screen. Developmentally they were a proven success — babies and toddlers could have meaningful interactions with screen content, much to the chagrin of the American Academy of Pediatrics.

In the spring of 2010, the late Steve Jobs introduced the iPad, with a larger screen and 10 hour batteries that created the perfect storm for children's digital content. Today Apple reports that there are "over 1,000,000 apps" for both small and large screens iOS devices (Apple, 2013). Of these, 475,000 run on the iPad, as of the fall of 2013 (Apple, 2013). The next task involved with counting children's apps requires a definition for what a children's app is. A rough solution is to take a close look at a sample, in this case the 200 best selling apps.

Of these, 20 were "specifically designed for children." If you use this 10% amount as a conservative estimate, there are about 47,500 iPad apps specifically designed for children as of December 2013. This is a staggering number, and it puts iOS far ahead of any other competitor. Here is a listing of the top rated iOS apps for 2013.

## 107 Editor's Choice iOS Apps

Here's an alphabetical listing iOS apps that received CTR's Editor's Choice award in 2013.

### 500 Hats of Bartholomew Cubbins, \$3.99

<https://itunes.apple.com/us/app/500-hats-bartholomew-cubbins/id589506710?mt=8>

Ages 6-12, Overall rating: 4.5 out of 5 stars

Why we like it: One of the joys of digital media is that you can dig up old classics; that your local library probably would not have on hand. Take this 1938 Theodor Geisel (Dr. Seuss) story about a king's fascination with hats.

Need to know: Note that this is one of Dr. Seuss' earlier works, with black and white illustrations. Also note that this is a rather wordy book -- better suited for middle and upper elementary age children. Teaching tip: Ask a child for their interpretation of the moral of the story.

Ease of use: 10/10

Educational: 9/10

Entertaining: 8/10

### 7 Little Words for Kids, \$0.99

<https://itunes.apple.com/us/app/7-little-words-for-kids/id598673952?mt=8>

Ages 7-up, Overall rating: 4.4 out of 5 stars

Why we like it: Quick -- What's another word for an old dinosaur bone? Your task is to build the answer, by combining word parts. There's one part on each square, inside a 4 x 4 grid. So you might see FO, SS and IL, which you can use to make "fossil."

Need to know: This is an excellent language and vocabulary enrichment activity for elementary-aged children. Shhh... don't tell them that the SAT has similar puzzles that are a lot less fun. See <http://youtu.be/R4bEdyxiL3I>.

Ease of use: 8/10

Educational: 10/10

Entertaining: 9/10

### A Cautionary Tail, \$4.99

<https://itunes.apple.com/us/app/a-cautionary-tail-for-ipad/id650708538?mt=8>

Ages 7-up, Overall rating: 4.5 out of 5 stars

Why we like it: A unique story is combined with rich animated illustrations, top quality production and excellent narration, but limited interactivity. The 26 screen story is based on the animated short of the same name, about a little girl who is born with a long, snake-like tail. The idea of a finger-like appendage growing out of a little girl could be disturbing to some children, but it certainly captures your attention. This app is not watered down in any way... teachers, make sure you pre-read this before presenting it to a group of kindergartners.

Need to know: The basic theme is about a child's struggle to fit into larger culture, and it touches on themes of loss, bullying, being different, and self-acceptance. The app includes behind-the-scenes videos where you can better understand how the film and app were made.

Ease of use: 9/10

Educational: N/10

Entertaining: 9/10

### ABC Actions, \$2.99

<https://itunes.apple.com/us/app/abc-actions/id715396289?mt=8>

Ages 3-8, Overall rating: 4.5 out of 5 stars

Why we like it:

Fifty common action words -- in English or Spanish -- come to life through 150 clear, authentic, open source photos and 100 select videos from YouTube.

This is an easy-to-use, richly illustrated language experience that can gently introduce either English or Spanish vocabulary. We



especially liked how you can toggle between Spanish or English on the fly.  
 Need to know: Note that you need an Internet connection in order to view the YouTube content; when offline, the videos don't play. It is important to update this app frequently, to keep the YouTube links working.  
 Ease of use: 9/10  
 Educational: 9/10  
 Entertaining: 8/10

**ABC Farm, \$2.99**  
<https://itunes.apple.com/us/app/abc-farm/id615898597?mt=8>  
 Ages 3-8, Overall rating: 4.6 out of 5 stars  
 Why we like it:

Your retinal display sizzles with this collection of 210 (or so) clear open-source photos of farm life, and farm animals. Each is organized by it's starting letter (for example, R is for Rooster). New to this version -- the ability to toggle between Spanish or English. Many of the pictures also have simple letter related games or pre-screened YouTube videos.  
 Need to know: You'll need an online connection in order to view the videos and the background music can drive you from the room, but it can be adjusted in the parent options.  
 Ease of use: 9/10  
 Educational: 10/10  
 Entertaining: 9/10

**Ace Geographer: Canada, \$3.99**  
<https://itunes.apple.com/us/app/ace-geographer-canada/id624673884?ls=1&mt=8>  
 Ages 10-up, Overall rating: 4.4 out of 5 stars  
 Why we like it:

Featuring a clean design based on mastery learning, this iOS app is designed to help you learn your Canadian Provinces and Territories by way of puzzles that ask you to match countries with flags, capital cities, flowers, official birds and so on by dragging and dropping each item onto a map.  
 Need to know: If you're looking for a solid quiz on Canada, this is a good choice.  
 Ease of use: 9/10  
 Educational: 9/10  
 Entertaining: 8/10

**All Fixed Up, \$3.99**  
<https://itunes.apple.com/us/app/all-fixed-up-interactive-kids/id583923680?mt=8>  
 Ages 4-8, Overall rating: 4.4 out of 5 stars  
 Why we like it: This 20 screen non-fiction ebook contains some innovative page transitions and animated features to support the story, in this case, about a father who has to be away from home

for an extended period of time. This is a situation that might be well known to a military family.  
 Need to know: The app contains links to social media on the last page. Also, it is not possible to change the gender of the traveling parent. So if mom travels you're out of luck.  
 Ease of use: 9/10  
 Educational: 9/10  
 Entertaining: 9/10

**Alphabeasties Amazing Activities, \$3.99**  
<https://itunes.apple.com/us/app/alphabeasties/id644280330?mt=8>  
 Ages 3-6, Overall rating: 4.6 out of 5 stars

Why we like it: Mysteries of upper and lower case letters are explained, in this collection of 26 letter tracing puzzles. The app effectively uses repetition and reinforcement to link meaning to the letters. For the letter A for example, you gradually fill in (or reveal) an Alligator, made entirely of A's. Fonts are varied, so children will see the letters as they appear in the real world.  
 Need to know: Teachers will like the way the hints, music and narration can be toggled on/off. If you're looking for an example of good pedagogy, look no further than this app.  
 Ease of use: 9/10  
 Educational: 10/10  
 Entertaining: 9/10

**Alphabet Animals: A Slide and Seek Adventure, \$1.99**  
<https://itunes.apple.com/us/app/alphabet-animals-slide-peek/id600589482?ls=1&mt=8>  
 Ages 3-6, Overall rating: 4.4 out of 5 stars

Why we like it: Letters are turned into beautifully illustrated animals in this simple alphabet-book app that is an ideal way to let children playfully discover some excellent illustration. You can also make your own namecard out of the animals and save it to your photo library.  
 Need to know: The interactivity is subtle, and hardly innovative, and alphabet apps are a dime-a-dozen these days. Get this one for it's artist merits.  
 Ease of use: 9/10  
 Educational: 9/10  
 Entertaining: 8/10

**Brain Jump With Ned the Neuron, \$1.99**  
<https://itunes.apple.com/us/app/brain-jump-with-ned-the-neuron/id703097320?mt=8>  
 Ages 6-11, Overall rating: 4.4 out of 5 stars

Why we like it: Like a leveled game of concentration on steroids, this set of memory games uses playful, animated characters that look like they might have come from an episode of Spongebob Squarepants. Need to know: The overall idea of this game is fun, and puzzles are well leveled.  
 Ease of use: 8/10  
 Educational: 9/10  
 Entertaining: 9/10

**Brave: Storybook Deluxe, \$6.99**  
<https://itunes.apple.com/us/app/brave-storybook-deluxe/id529245363?mt=8>  
 Ages 3-12, Overall rating: 4.8 out of 5 stars

Why we like it: One thing better than an Academy Award winning movie -- an app that expertly weaves the academy award winning footage between each screen. In addition, children can record narration over Disney music. Add to the mix a fun arrow shooting game, some jigsaw puzzles and coloring pages, and you have a solid app.  
 Need to know: The arrow shooting game is surprisingly fun. This is a another big download (568 MB) but the payoff is some amazing digital fireworks.  
 Ease of use: 9/10  
 Educational: 9/10  
 Entertaining: 10/10



### **Bugs and Buttons 2, \$2.99**

<https://itunes.apple.com/us/app/bugs-and-buttons-2/id686968315?mt=8>

Ages 3-12, Overall rating: 4.9 out of 5 stars

Why we like it:

Visually rich and thick with carefully leveled pre-math opportunities, this follow up to Bugs and Buttons (CTR February 2012), contains another 18 well crafted set of math and logic activities.

Need to know: There's more variety, better leveling and management features that make it possible to keep individual profiles for different children. We especially liked the multi-touch features so children can work collaboratively to solve puzzles.

Ease of use: 9/10

Educational: 10/10

Entertaining: 10/10

### **ChatterPix Kids (or ChatterKid), \$free**

<https://itunes.apple.com/us/app/id734046126?mt=8&uo=4&at=1013RC>

Ages 4-up, Overall rating: 4.6 out of 5 stars

Why we like it:

Talking puppet apps like Talking Tom are common these days. This one takes the concept up a notch, by letting you start with your own photo; to which you can add your own voice. Just trace a line for the mouth, record your voice, and see the lips move, accurately synched to up to 30 seconds of audio. If you've ever wanted to make your dog talk, this is your app. This app could be a perfect prop for a non-verbal child.

Need to know: There are two similarly named apps with the same features, so it's easy to get them mixed up: ChatterPix has social sharing features activated, to help spread the The Duck Duck Moose brand. With ChatterPix Kids, the social media features are turned off.

Ease of use: 9/10

Educational: 8/10

Entertaining: 10/10

### **Chuggington Chug Patrol Ready to Rescue, \$4.99**

<https://itunes.apple.com/app/id691969776?mt=8>

Ages 3-up, Overall rating: 4.6 out of 5 stars

Why we like it:

Easy to use and fun to explore, here's one of the best releases yet from Ireland-based StoryToys. There are four language options and nine story related activities. You can pluck the thorns from the lion's paws, or shake the trees to get fruit to feed the hungry animals.

Need to know: The graphics and narration and music are of excellent quality. That, combined with an easy to use interface make this an excellent addition to any child's virtual bookshelf.

Ease of use: 9/10

Educational: 8/10

Entertaining: 9/10



### **CoLAR Mix, \$free, and \$2.99**

<https://itunes.apple.com/us/app/colar-mix-3d-coloring-book-app/id650645305?mt=8>

Ages 3-up, Overall rating: 4.5 out of 5 stars

Why we like it:

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](http://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: Note that this app doesn't work on older iOS devices (ipod and iphone3 or earlier).

Four sheets come free; eight are sold for \$2.99 as an in-app sale.

To print out pages, visit <http://www.colARApp.com>. The locked pages are shown to children, which could tempt them into making an in-app purchase. In-app options include a "dot" template from author Peter Reynolds.

Ease of use: 8/10

Educational: 9/10

Entertaining: 9/10

### **Cosmic Reactor, \$2.99**

<https://itunes.apple.com/app/cosmic-reactor-arithmetic/id674255659?ls=1&mt=8>

Ages 5-11, Overall rating: 4.4 out of 5 stars

Why we like it:

Two players compete in seven fast-paced math facts mini-games, testing their addition, subtraction, multiplication or division skills.

Need to know: The app turns your iPad into a two player buzzer (players sit face to face with the iPad in the center). There are different challenge levels, making this a useful app. Part of the Fingerprint Network.

Ease of use: 9/10

Educational: 8/10

Entertaining: 9/10

### **Cuddle Puzzle - Learn Shapes, Numbers, Music and More, \$1.99**

<https://itunes.apple.com/us/app/cuddle-puzzle-learn-shapes/id680512702?mt=8>

Ages 3-up, Overall rating: 4.5 out of 5 stars

Why we like it:

Great for a young preschooler, this app contains eight jigsaw puzzles arranged by difficulty. Unlike traditional drag and drop puzzles, these start easy, showing a child just three or four parts.

Once those are solved, another set of pieces is revealed; a technique that is excellent at pulling children into the process.

Need to know: This app is good for informal exploration of shape and music concepts, and it a good co-op play experience (although it is not multi-touch). This is a rather large app (942 MB) that is well worth the cost and room.

Ease of use: 9/10

Educational: 9/10

Entertaining: 9/10

### **Curious About Shapes and Colors, \$2.99**

<https://itunes.apple.com/us/app/curious-about-shapes-colors/id641420643?mt=8>

Ages 2-up, Overall rating: 4.9 out of 5 stars

Why we like it:

Before you sigh "oh no, another puzzle app", fear not... this one raises the standard, and is well worth the \$3 download for either iOS or Android. The puzzles are disassembled toys, which you can put together and operate, providing you follow the blueprint-like templates. Sometimes you drag and drop, but other times your finger is like a cutting torch, as you trace the shapes. For help, there's The Man With The Yellow Hat.

Need to know: Of the 15 Curious George games and apps we've reviewed, this is the best.

Ease of use: 10/10

Educational: 10/10

Entertaining: 10/10



**Daniel Tiger's Day & Night, \$2.99**

<http://pbskids.org/mobile/>

Ages 3-up, Overall rating: 4.5 out of 5 stars

Why we like it: Nicely designed and responsive, this app playfully introduces the concept of morning and evening routines by way of ten responsive activities -- five for day and five for night. The well designed menu makes it easy to find something that is fun. This app "hard wires" a child's finger to each activity.

They can zip a sweater, moving it up and down, pump up Daniel Tiger's muscle suit using a pump, and brush Daniel's teeth to the rhythm of a song. The result is a playful idea, framed in a setting that is high in child control.

Need to know: There are now two Daniel Tiger apps -- this is by far the better choice. The first was Play at Home with Daniel Tiger. The instructions can be toggled between English or Spanish. The install takes 495 MB. Created by Cricket Moon for PBS Kids.

Ease of use: 10/10

Educational: 9/10

Entertaining: 8/10

**Dexteria Jr., \$2.99**

<https://itunes.apple.com/us/app/dexteria-jr.-fine-motor-skill/id624918435?mt=8>

Ages 2-5, Overall rating: 4.5 out of 5 stars

Why we like it: Three simple, highly structured activities could be useful for introducing someone to multi-touch screen. For example, Pinch the Pepper lets you try out your emerging pincer grasp (the muscles you use when you use your thumb and forefinger to pick something up). The better you do, the harder the challenge.

Need to know: This app isn't for everyone. It was designed for Occupational Therapists, but the low price and good design make it of interest to a very young (or old) person just starting to use a multi-touch screen for the first time. See also Dexteria.

Ease of use: 9/10

Educational: 9/10

Entertaining: 8/10

**Disney Animated, \$9.99**

<https://itunes.apple.com/us/app/disney-animated/id632312737?mt=8>

Ages 10-up, Overall rating: 4.875 out of 5 stars

Why we like it:

Turn your iPad into a museum of Disney animation, with rare footage of Walt Disney himself voicing Mickey Mouse. You can reach right into this app to rotate artifacts; plus there are four animation simulations to let you try out some ideas on for size.

Need to know: This is a big app that costs a lot. For students of animation or Disney aficionados, this is a must download.

Ease of use: 10/10

Educational: 10/10

Entertaining: N/10



**Disney Infinity Toy Box App, \$free with in-app sales**

<https://itunes.apple.com/us/app/disney-infinity-toy-box/id625520018?mt=8>

Ages 6-up, Overall rating: 4.7 out of 5 stars

Why we like it:

Powerful, easy to use but also containing plenty of tempting \$1.99 in-app sale items, this open-ended construction kit expands the Disney Infinity cluster of toys and video games, onto your iPad. It also represents a portal to toys and video games, so consider yourself warned. As with the Minecraft app, you can freely build and explore, however, we found this experience to be easier to use and to offer more creative options.

Need to know: Those who question the use of the multi-touch tablet for building and gaming should try this app. It's evidence that it can be done, in a very engaging way.

Ease of use: 9/10

Educational: 9/10

Entertaining: 10/10

**Disney Kerpoof Tell A Story, \$2.99**

<https://itunes.apple.com/app/id630197048?mt=8>

Ages 6-up, Overall rating: 4.7 out of 5 stars

Why we like it:

Why read an eBook about dinosaurs, when you can design your own? Based on the Kerpoof web app from Disney's Kerpoof.com this powerful storytelling app makes it easy to design and save interactive, narrated, multi-page eBooks using a set of animated Dinosaurs. It would be an excellent early language/writing/creativity experience for elementary classrooms.

Need to know: This app is free of licensed content in the clip art library. Besides the Disney brand in the splash screen, this app is 100% mouse ear free.

Ease of use: 8/10

Educational: 10/10

Entertaining: 9/10

**Dr. Panda's Beauty Salon, \$1.99**

<https://itunes.apple.com/app/id623193844>

Ages 2-up, Overall rating: 4.4 out of 5 stars

Why we like it: Ever want to put some lipstick on a pig? This app can make it happen. Easy to play, and designed around a theme children understand, Dr. Panda's Beauty Salon (\$1.99, TribePlay) lets you run your own beauty spa for large animals.

Need to know: The start is a little confusing, because you have to wait for an animal customer to show up at the door (you hear a bell ring). The app has a Toca Boca feel to it, with no points or timed challenges. The parent options ("tap three times") contain a unique option -- to turn on/off the promotion screen that shows when the app is first launched (it is on by default); plus spots for social media and external links.

Ease of use: 9/10

Educational: 8/10

Entertaining: 9/10

**Dr. Panda's Home, \$2.99**

<http://www.drpandagames.com>

Ages 2-7, Overall rating: 4.4 out of 5 stars

Why we like it:

Twenty playful mini-games let children clean Dr. Panda's Home, as they sort, scrub and complete patterns to earn coins to unlock prizes. There's a night-day cycle, so they might make breakfast in the morning and set an alarm clock at night.

Need to know: You can get out of any activity at any time, and there's no way to fail; for example incorrect matches just fall to the ground. There is no print and no language and some of the graphics seem hurriedly done. But these are minor points that children will happily overlook.

Ease of use: 10/10

Educational: 7/10

Entertaining: 9/10



### Dr. Panda's Supermarket, \$1.99

<https://itunes.apple.com/app/id609405853>

Ages 2-6, Overall rating: 4.6 out of 5 stars

Why we like it: One of a series of now over ten apps (see also Dr. Panda's Daycare and Dr. Panda's Beauty Saloon) this app lets children manage their own supermarket, with ten well designed mini-games that pop up at random. There's a bit of diner-dash to the game play with lots of sorting.

Need to know: This is an urban supermarket (you load your food into a taxi) and the activities pop up randomly, so it's not always clear what you do. Our kindergarten testers soon figured it out, however.

Ease of use: 8/10

Educational: 10/10

Entertaining: 10/10

### Dr. Panda's Veggie Garden, \$1.99

<https://itunes.apple.com/app/id585512923?mt=8>

Ages 3-6, Overall rating: 4.6 out of 5 stars

Why we like it:

Here's yet another fun, easy to play app from China-based TribePlay. This time, children get to tend to a garden, and serve a continual stream of animal customers. As with other apps in the Dr. Panda series, all the challenges are bite sized and insure success. The result is a playful sorting, matching, fine-motor experience.

Need to know: Content includes 30 types of activities that include planting seeds, watering plants, plucking quickly growing weeds or scaring away bugs. There are five animal customers and 12 types of fruits and vegetables. A parental area, which is not protected, contains external links, plus options for sound and music control. All in all this is an excellent addition to any app library.

Ease of use: 9/10

Educational: 9/10

Entertaining: 9/10



### DragonBox Algebra 5+, \$5.99

<https://itunes.apple.com/us/app/dragonbox-algebra/id522069155?mt=8>

Ages 5-12, Overall rating: 4.3 out of 5 stars

Why we like it: The first part of a two level algebra game, DragonBox Algebra 5+ is an iPad app that turns simple algebra equations into a card game. The idea is to let children discover some of the key concepts behind variables and balancing equations. The game uses a mastery learning scoring mechanism, like Angry Birds, to present a series of progressively more challenging puzzles where you combine cards in order to balance equations. If you mix and match well, you earn more stars. The goal? "to secretly teach algebra."

Need to know: The game was created by Patrick Marchal and Jean-Baptiste Huynh, the latter a high school teacher. You can toggle between 13 languages, and adjust the sound. There are social media links between levels (you can "like" your progress on Facebook). Note: See also DragonBox Algebra 12+, with harder challenges.

Ease of use: 7/10

Educational: 10/10

Entertaining: 9/10

### Draw This App, \$free with in-app sales

<https://itunes.apple.com/us/app/draw-this-app/id625018367>

Ages 6-up, Overall rating: 4.5 out of 5 stars

Why we like it:

This is a clean, straightforward set of self-correcting art sketching tutorials, with content sold as an in-app purchase (the first two levels are free). Your efforts are graded, with a score and a com-

ment such as "really?" (for low scores). The scoring is less than accurate, but it's close and it successfully motivates you to practice for a better score.

Need to know: Created in Toronto by artist Peterson Hamilton, this app adapts cursive writing teaching techniques, for shapes. Content includes four drawing modes including left and right handed, and six units in version one, hoping to build a complete library over time. Note that you might want to use a stylus to help you see your line.

Ease of use: 9/10

Educational: 9/10

Entertaining: N/10

### Drawnimal, \$1.99

<https://itunes.apple.com/us/app/drawnimal/id586239095?mt=8>

Ages 3-5, Overall rating: 4.3 out of 5 stars

Why we like it: One of the delightful surprises we spotted in Cinekid's 2013 Applab was Drawnimal; an app that contains one animal per letter of the alphabet. Children first pick a letter, and then see just part of an associated animal. The result is a high level of engagement by the children.

Need to know: The design is less than perfect. The main menu hides part of the alphabet, which is presented in a grid, and children don't know how to get out of a particular animal picture (you're supposed to swipe down). Created by artist Lucas Zanotto, from Finland. Also, while we appreciated the English translation, we noted the use of the word "zed" for the "z" in zebra. These are minor issues. All in all, this simple design works with younger children, and makes them feel in control. See the video .... Five languages (English, Spanish French, German and Italian).

Ease of use: 9/10

Educational: 9/10

Entertaining: 8/10

### Easy Studio - Animate with Shapes!, \$3.99

<https://itunes.apple.com/us/app/id593847174?mt=8>

Ages 6-up, Overall rating: 4.6 out of 5 stars

Why we like it: Ideal for creating a setting where a child can discover the magic of animated images, this app combines a simple touch and drag interface with the animation tools and a nice tutorial; plus sets of objects that can be dragged and dropped into place on the screen.

Need to know: There is no audio to this app, and we would've liked to be able to freely sketch. The price of these features is complexity, however, and this app keeps things simple.

Ease of use: 9/10

Educational: 10/10

Entertaining: 9/10

### Endless Alphabet, \$free for a limited time

<https://itunes.apple.com/us/app/endless-alphabet/id591626572?mt=8>

Ages 3-6, Overall rating: 4.8 out of 5 stars

Why we like it: Looking for a great early reading app for preschoolers? Endless Alphabet turns letters into singing actors who work in small troupes to build words. Because each letter sounds itself out when touched, it playfully introduces phonemic relationships, in the context of words.

Need to know: Endless Alphabet isn't really endless at least when you first install it. The first version only goes up to the letter G -- the rest of the alphabet is loaded whenever you start the app, as long as your iPad is online.

Ease of use: 10/10

Educational: 10/10

Entertaining: 9/10



### Fairy Tale Maze 123, \$2.99

<https://itunes.apple.com/us/app/fairy-tale-maze-123/id633819326?ls=1&mt=8>

Ages 4-up, Overall rating: 4.5 out of 5 stars

Why we like it:

Video review at <http://youtu.be/gfDRBmfgYxk>.

This is a collection of 20 mazes, each designed around a popular fairytale theme. In one maze, you lead the prince to Rapunzel; in another you help the three little pigs visit their homes in the correct order to avoid the wrath of the wolf. The mazes vary in complexity, sometimes containing multi-stage features. All in all, this is a solid app that is well worth the download.

Need to know: The background music can get annoying but you can toggle it off in the parent settings. This is the third and the most advanced in a series of maze-related apps from this publisher. If you have younger children, try Preschool Maze 123.

Ease of use: 9/10

Educational: 9/10

Entertaining: 9/10

### Four Little Corners, \$2.99

<https://itunes.apple.com/app/four-little-corners/id598573155>

Ages 3-8, Overall rating: 4.5 out of 5 stars

Why we like it: Everyone wants to fit in, but sometimes it's not so easy. Here's a wonderful iPad adaptation of a picture book that is proof that children's authors are starting to figure out tablet-based technology for practicing their craft.

Need to know: This was the Winner of the BolognaRagazzi Award for the Fiction category. There's not a lot of content with this app; and there's not that much to do. But the animation, sounds and graphics nicely support the story.

Ease of use: 10/10

Educational: 9/10

Entertaining: 9/10

### Frozen: Storybook Deluxe, \$6.99

<https://itunes.apple.com/us/app/frozen-storybook-deluxe/id610955645?mt=8>

Ages 5-up, Overall rating: 4.3 out of 5 stars

Why we like it: Beautiful, big (800 MB) and pricey, this app makes a nice extension of the animated Disney movie "Frozen." It is possible to record your own narration on each page and turn the screen upside down to take the frozen view of the story (a nice touch). This is a beautiful app, with cool (pun intended) page transitions and cut scenes from the movie. Need to know: While the story is greatly abbreviated, there's enough to keep children exploring. If you like the movie this is a nice enrichment app.

Ease of use: 8/10

Educational: 9/10

Entertaining: 9/10

### Get Rocky Premium, \$4.99

<https://itunes.apple.com/us/app/get-rocky-premium-fingerprint/id686585816?mt=8>

Ages 6-12, Overall rating: 4.3 out of 5 stars

Why we like it: Fun and fast paced but clunky in places, this tilt-and-slide adventure game mixes an earth science agenda with a common video game play pattern.

Need to know: Content purists might be distressed by the liberal mixing of fiction and nonfiction; gaming purists may find the challenges to be confusing (you don't know when you're meeting an enemy or a friend). You also get a sense that this app is collecting some sort of data about the child. In this premium version, which we reviewed, there is a lot of play value with no in-app sales or gimmicks and the app remembers your progress.

Ease of use: 9/10

Educational: 8/10

Entertaining: 9/10

### Grandma Loves Bugs, \$.99

<http://fairladymedia.com/products/grandma-loves-bugs/>

Ages 4-8, Overall rating: 4.5 out of 5 stars

Why we like it: This latest edition in the "Grandma" apps series presents ten fast-paced, generally well designed mini-quizzes that playfully introduce school readiness skills, with a tiny pinch of entomology (the study of insects) mixed in.

The age-gated parent options make it easy to customize this app, toggling on/off the different activities. Need to know: Most of the games don't stray from a multiple-choice format. There's a dose of Grandma stereotyping, and Grandma's prompts at the start of an activity get repetitive.

Ease of use: 9/10

Educational: 10/10

Entertaining: 9/10



### Grandma's Kitchen, \$0.99

<https://itunes.apple.com/us/app/grandmas-kitchen/id602808356?ls=1&mt=8>

Ages 4-7, Overall rating: 4.4 out of 5 stars

Why we like it: Finally, if you're looking for a way to keep some school-like content in front of your early elementary-age child over the summer, here's an excellent app. Seven games are hosted by Grandma, who expertly services up snappy one liners and jigs with math, reading and logic puzzles.

Need to know: Don't tell the kids but the brain behind Grandma is Dr. Connie Bossert, the mother of two, and a Ph.D. in Educational Psychology. They won't want to know that Grandma is really an educational psychologist.

Ease of use: 8/10

Educational: 9/10

Entertaining: 9/10

### Grimm's Sleeping Beauty: A 3D Popup Book, \$4.99

<https://itunes.apple.com/app/id568368779?mt=8&stw>

Ages 3-6, Overall rating: 4.7 out of 5 stars

Why we like it: Well designed and fun to play, this StoryToys' rendition of Sleeping Beauty contains 35 story-related puzzles. You solve problems that involve fine motor practice, using your memory and spatial relations as you dress-up fairies, find presents to give to the princess, solve 3D mazes, and listen to solve a musical memory puzzle.

Need to know: Each page is narrated in your choice of English, French, German, Spanish, Italian, Korean and simplified Chinese; which is one of the options found in the parent's menu. This is an excellent addition to any preschool or early elementary app library.

Ease of use: 10/10

Educational: 8/10

Entertaining: 9/10





### **Happi & The Pirates, \$2.99**

<https://itunes.apple.com/us/app/happi-pirates-spelling-math/id622075576?ls=1&mt=8>

Ages 8-up, Overall rating: 4.3 out of 5 stars

Why we like it: It's not often that you find a spelling game combined with a logic game. This is like a mashup of a grid game like battleship with a crossword puzzle; and you are rewarded with a jigsaw puzzle. The design isn't flashy, but the first stages of the game are well leveled, making the entire experience hard to stop playing.

Need to know: You must use your "spell-power" to uncover treasure chest keys, and use deductive skills to unlock troves needed to search Pirate Island for clues to the final puzzle. There are eight language options, and your progress is saved. All in all, there's plenty of content in this app to explore.

Ease of use: 8/10

Educational: 10/10

Entertaining: 9/10

### **Haunted House Activity Book, \$1.99**

[http://bit.ly/HH\\_it](http://bit.ly/HH_it)

Ages 3-8, Overall rating: 4.5 out of 5 stars

Why we like it: Turn your child's iPad or iPhone into a haunted house, with one of the best halloween apps we've reviewed.

There's plenty to do, as you search for hidden pumpkins or try to hit ghosts from a ghost train as you try to earn badges. The graphics and sounds are just edgy enough for a preschooler.

Need to know: Watch out... this app offers additional content that looks fun but costs extra from the main menu. This is the second app this week for StoryToys. See also Goodnight Mo ([http://bit.ly/GM\\_itu](http://bit.ly/GM_itu)); another excellent preschool app.

Ease of use: 9/10

Educational: 7/10

Entertaining: 10/10

### **Hopscotch: Coding for Kids, \$free**

<https://itunes.apple.com/us/app/hopscotch-coding-for-kids/id617098629?mt=8>

Ages 7-up, Overall rating: 4.75 out of 5 stars

Why we like it: We've been asking for it; somebody finally delivered ... a Scratch-like programming experience on the iPad. But let's be clear -- Hopscotch isn't a replacement for Scratch; instead it's a great primer, and it will be a valuable teaching tool for every educator. Need to know: We longed for a better choice of sprites, and wanted the ability to create our own (all things easily done in Scratch). We'll hope for a future version of Hopscotch that incorporates the camera.

Ease of use: 9/10

Educational: 10/10

Entertaining: N/10

### **Human Body, The, \$2.99**

<https://itunes.apple.com/us/app/the-human-body-by-tinybop/id682046579?mt=8>

Ages 4-up, Overall rating: 4.9 out of 5 stars

Why we like it: The first in a planned series, this New York City designed app lets children explore the wonders of the human body, without embarrassment. The result is one of the best human anatomy experiences we've reviewed. The animated graphics are clear, yet free of gore. Of particular note are the working models of the human eye and ear, that incorporate the features of the camera and microphone.

Need to know: You can create individual profiles for each child, plus parent options that let you track children, and multiple language options are available. See the full review for the list. Works with all devices, except the iPad 1.

Ease of use: 9/10

Educational: 10/10

Entertaining: 10/10

### **IMAG•N•O•TRON, \$0.99**

<https://itunes.apple.com/us/app/imag-n-o-tron-fantastic-flying/id534396897?mt=8>

Ages 3-up, Overall rating: 4.5 out of 5 stars

Why we like it: Jaw-droppingly cool, this augmented reality (AR) app requires a camera equipped iOS device and a copy of the \$18 printed book: The Fantastic Flying Books of Mr. Morris Lessmore. After the \$.99 app is installed, you turn on your camera, open to a page, and watch the sentences come to life, swirling around your head -- in your room. Amazing.

Need to know: This is one of those high novelty apps. You do it a few times and that's it.

Ease of use: 9/10

Educational: 8/10

Entertaining: 10/10

### **Iron Man: Armored Avenger, \$1.99**

<https://itunes.apple.com/us/app/iron-man-armored-avenger/id584254246?mt=8>

Ages 4-10, Overall rating: 4.5 out of 5 stars

Why we like it: This well designed 29 screen interactive Marvel storybook features an excellent mix of things to do and things to read. The good vs. evil story pulls kids in; and the narration by Comic Book legend Stan Lee has a dramatic tone to it.

Need to know: At one point in the story, you take on the role of Iron Man. You can choose from three Iron Man suits and three levels of difficulty in the minigame. All in all, this is an excellent app, with easy to read text.

Ease of use: 10/10

Educational: 8/10

Entertaining: 9/10

### **Jungle Book, The, \$4.99**

[http://bit.ly/JB\\_it](http://bit.ly/JB_it)

Ages 3-up, Overall rating: 4.6 out of 5 stars

Why we like it: Easy to use and fun to explore, here's one of the best releases yet from Ireland-based StoryToys. Like many children's eBooks, you can turn the pages with a swipe or by using the page turn icons. The StoryToys apps take the page transitions a step further, however, with a 3D effect that is controlled by your tablet's accelerometer. It's as if the book were on a 3D pedestal. There are four language options and nine story related activities. You can pluck the thorns from the lion's paws, or shake the trees to get fruit to feed the hungry animals. The graphics and narration and music are of excellent quality. That, combined with an easy to use interface make this an excellent addition to any child's virtual bookshelf.

Need to know: limited content; if you have the first in the series, it's not that different

Ease of use: 9/10

Educational: 8/10

Entertaining: 9/10

### **Just Going To The Dentist, \$0.99**

<https://itunes.apple.com/us/app/just-going-to-dentist-little/id592226462?mt=8>

Ages 2-5, Overall rating: 4.6 out of 5 stars

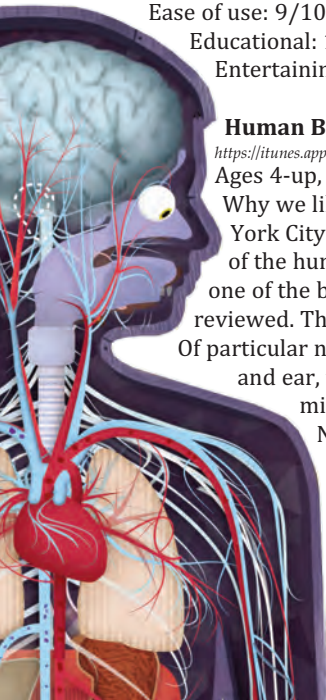
Why we like it: Every kid has to go to the dentist -- here's an app that helps children deal with that reality. Based on the Mercer Mayer print book, twenty hidden creatures are scattered throughout the story, to keep things fun, and all of the text is read out-loud, with a simple tap.

Need to know: Note that the Dentist is played by a male hippo -- the assistant is female. The story has excellent object/text association, typical of other Oceanhouse apps, and it is possible to record your own narrator track, which can be saved in case you have to go on a business trip, and your child wants to hear a familiar voice.

Ease of use: 10/10

Educational: 9/10

Entertaining: 9/10





**Kindoma Storytime, \$free**

<https://itunes.apple.com/us/app/kindoma-storytime/id621742145?mt=8>

Ages 2-8, Overall rating: 4.5 out of 5 stars

Why we like it: Now you can share a bedtime story with Grandpa, even though there may be hundreds of miles in between. Kindoma Storytime mixes ebooks and videochat features.

It works as long as you're using an iPad with a good Internet connection, and you don't mind a few hoops to get two accounts synced. Need to know: Other than the page turns and hand highlighting, there are no interactive features in the books. So things can seem a bit dry. However, we were able to get it working on our 900 mile test. Sure, we could've used Skype, but somehow the Peter Rabbit book made things feel more fun.

Ease of use: 8/10  
Educational: 9/10  
Entertaining: 9/10

**Learn The States With Flat Stanley, \$1.99**

<https://itunes.apple.com/us/app/learn-states-flat-stanley/id632991688?mt=8>

Ages 5-up, Overall rating: 4.4 out of 5 stars

Why we like it: We've reviewed dozens of USA geography quizzes over the years, and this one ranks up there with the best, due to a slingshot that is used to enter your answers, a play pattern familiar to anyone who has played Angry Birds.

Need to know: The format can get a bit repetitious, and there could be more audio assistance.

Ease of use: 9/10  
Educational: 9/10  
Entertaining: 8/10

**Little Red Riding Hood, \$4.99**

<https://itunes.apple.com/us/app/little-red-riding-hood-nosy/id626696483>

Ages 3-8, Overall rating: 4.7 out of 5 stars

Why we like it: This funny, easy to control edition of Little Red Riding Hood is full of surprises, including an ending that you help create. You can take eight paths through the woods, where you collect various items you'll need to trick the wolf and free Grandma from the closet. This is one of the most notable accomplishments from British based Nosy Crow to date. Need to know: You may recall that the traditional version of this tale has a rather gory theme, of being eaten by a wolf. This time, the wolf locks Grandma in a closet, and, depending on which items you collect, may be scared away by a spider.

Ease of use: 9/10  
Educational: 10/10  
Entertaining: 10/10

**Match Blitz, \$free**

<http://www.appstore.com/matchblitz>

Ages 4-up, Overall rating: 4.6 out of 5 stars

Why we like it: This fast-paced multiplayer (two to four players at once) iPad app lets you race against your friends to try to spot the matching symbols, scattered around the screen. It is a classic "huddleware" activity, meaning a small group of children can play together.

Need to know: This would be an excellent app for long car ride with multiple players.

Ease of use: 9/10  
Educational: 9/10  
Entertaining: 9/10

**Matching Puzzle Cards: Colors, \$2.99**

<https://itunes.apple.com/us/app/matching-puzzle-cards-colors/id57752604?mt=8>

Ages 2-4, Overall rating: 4.5 out of 5 stars

Why we like it: This app turns the pedagogy of the flash card inside out, by turning them into simple snap-together jigsaw puzzles. Because it is high in child control, this is a good first introduction to touch screens, with a bit of fine-motor development and language experience mixed in.

Need to know: Content is limited (12 colors and 24 related object words) but the song has lyrics and a game where you race the bunny to collect his eggs. All in all, this is a solid, well designed title, with limited content. <http://youtu.be/mctY-6hqcM0>

Ease of use: 9/10  
Educational: 9/10  
Entertaining: 9/10

**Mathtopia+, \$3.99**

<https://itunes.apple.com/us/app/mathtopia/id569333308?mt=8&ls=1>

Ages 5-up, Overall rating: 4.6 out of 5 stars

Why we like it: Fast-paced and addicting, Mathtopia provides math drill, by putting sums inside a Tetris-like game board. As new numbers drip down the screen, you swipe to exchange the numbers, to make matches. When they match, the row disappears and harder numbers fall.

Need to know: This app was written by a former State Senator, but the sums still add up (we checked). We noticed you can get a pretty high score by simply guessing on the easy level, however. There are several teaser versions a lower price; it's best to spring for the full version, called Mathtopia+ for \$3.99.

Ease of use: 10/10  
Educational: 9/10  
Entertaining: 9/10

**Max's Pirate Planet - A Board Game Adventure, \$2.99**

<https://itunes.apple.com/us/app/maxs-pirate-planet-board-game/id624896120>

Ages 7-up, Overall rating: 4.3 out of 5 stars

Why we like it: This is a pirate-themed, turn-based, pass and play board game for up to four players. The game board is shaped like the planet; a clever design that is well executed.

Need to know: Once you discover Barnacle Bill's secret hideout, you must defeat him in a cannon shoot out to win the game and get all the gold. One game can be saved.

Ease of use: 8/10  
Educational: 8/10  
Entertaining: 9/10

**Mazement, \$1.99**

<https://itunes.apple.com/us/app/mazement/id605676549?mt=8>

Ages 8-up, Overall rating: 4.4 out of 5 stars

Why we like it: Fast paced and fun, this is a ball rolling maze game where you tilt your iPad in order to move from one level to the next. Along the way, you avoid holes and pick up items to score points.

Need to know: Each maze has a story based theme (generally related to ghosts or dungeons), and the more you play, the harder the maze. All in all, it is a very fun game that is fairly forgiving, and hard to stop playing.

Ease of use: 9/10  
Educational: 8/10  
Entertaining: 9/10





**Mickey Mouse Clubhouse: Paint & Play**, \$4.99

<https://itunes.apple.com/us/app/mickey-mouse-clubhouse-paint/id658426204?mt=8>

Ages 3-12, Overall rating: 4.5 out of 5 stars

Why we like it: Children experiment with the relationship between 2D and 3D objects in this holiday themed creativity experience. It is also seasonal; featuring items that can change throughout the year: in this case related to the winter holidays. Need to know: Along with the traditional coloring and fill items, there's a magic wand that turns the items in to fully animated 3D characters. Other content includes the ability to make cupcakes for the bake sale, use an in-app camera to create your own textures and a Mousekemusik Player. Coloring programs abound; which is why this is so refreshing.

Ease of use: 8/10

Educational: 9/10

Entertaining: 10/10

**Montessori Math: 1st Operations**, \$3.99

<https://itunes.apple.com/us/app/id627950311?mt=8>

Ages 5-8, Overall rating: 4.6 out of 5 stars

Why we like it: Maria Montessori would probably have loved this set of innovative activities, especially the number spitting game where you place your fingers on both sides of the multi-touch screen. There's also a set of dynamic number tables that help you visualize the underlying patterns in numbers and number relationships.

Need to know: The first menu is cluttered, But don't let that slow you down from downloading this app immediately, especially if you have an interest in helping young children learn about math concepts.

See also Montessori Math: Add & Subtract Large Numbers, the big brother app to this one.

Ease of use: 8/10

Educational: 10/10

Entertaining: 9/10

**Montessori Math: Add & Subtract Large Numbers**, \$4.99

<https://itunes.apple.com/us/app/id661156236?mt=8>

Ages 6-9, Overall rating: 4.3 out of 5 stars

Why we like it: Designed specifically for children who can already read "large" 2-digit numbers like 12 or 78; on up to 9,999, this Montessori-inspired set of three activities presents a step-by-step, drag and drop approach to addition and subtraction.

Need to know: The overall presentation is clean but dry, making it well suited for a large screen classroom display. Our testers found the tiles to be rather small, and all the dragging required to create larger quantities became tedious. The is the second in a series. See also Montessori Math: 1st Operations.

Ease of use: 8/10

Educational: 10/10

Entertaining: 7/10

**Moose Math**, \$2.99

<https://itunes.apple.com/us/app/moose-math-by-duck-duck-moose/id660345152?mt=8>

Ages 5-up, Overall rating: 4.8 out of 5 stars

Why we like it:

App number 17 from Duck Duck Moose covers early elementary (Kindergarten and First Grade) math by way of some solid counting, sorting and classifying games. Each game lets children playfully master skills that will provide an excellent foundation for later math learning, and the games are paired with an individualized record keeping system, that stores progress and profiles for each child. Math educators will appreciate the fact that this app is 100% flashcard free, yet still manages a good deal of leveled practice.

Need to know: This app can store an "unlimited" number of student profiles, meaning a teacher of 25 could have individual book-

marks and records for every child. Not a bad deal for a \$3 app. See also Park Math and Fish School for well designed Duck Duck Moose titles.

Ease of use: 9/10

Educational: 10/10

Entertaining: 9/10

**More Trucks**, \$1.99

<https://itunes.apple.com/app/id609771588>

Ages 3-7, Overall rating: 4.5 out of 5 stars

Why we like it: This sequel to the first Trucks from Duck Duck moose offers four fun and playful vehicle-themed activities. Our testers especially liked putting out the fires, playing tic-tac-toe against the firehouse dog, and racing the drag racers.

Need to know: Girls, don't be put-off by the truck theme. The play patterns driving this app will appeal to both genders and all ages. Some of the activities are tricky at first, so be on hand the first time through.

Ease of use: 8/10

Educational: 8/10

Entertaining: 9/10

**Motion Math: Match**, \$2.99

<https://itunes.apple.com/us/app/motion-math-match/id690085518?mt=8&ls=1>

Ages 5-12, Overall rating: 4.5 out of 5 stars

Why we like it: Here's a fresh, multi-touch approach to the age-old task of practicing your math facts. Using a simple grid consisting of math equations, sets or single numerals, you try to simultaneously touch two or three matching sums at the same time. Content includes 35 rewards, with four levels of challenges and faster game play at the harder levels. We liked how you can store profiles for different students.

Need to know: Besides unlocking the tiles, there is no story aspect to this app, so it could become rather dry. However the straightforward approach, combined with the innovative way to touch the sums makes this app noteworthy.

Ease of use: 8/10

Educational: 10/10

Entertaining: 8/10

**Motion Math: Pizza!**, \$3.99

<http://www.appstore.com/motionmathpizza>

Ages 7-up, Overall rating: 4.7 out of 5 stars

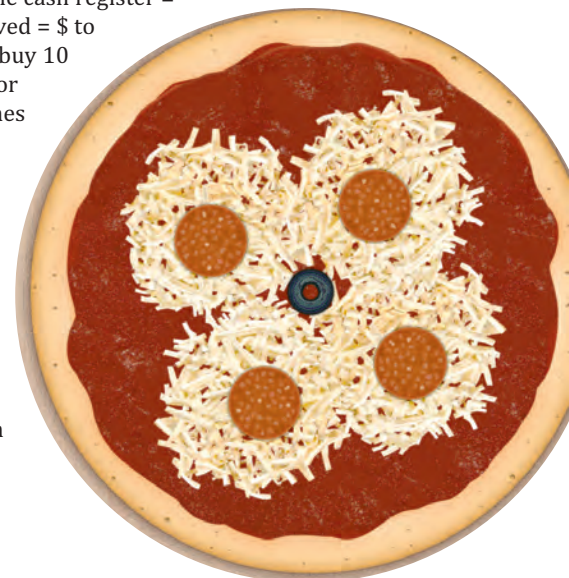
Why we like it: This playful, powerful applied math experience gives meaning to math facts by putting them to work in a pizza business. It's like a cross between Lemonade Stand and Diner Dash. Fast math at the cash register = more customers served = \$ to ponder "is it best to buy 10 olives for \$5, or 30 for \$14?" This app teaches that pricing is an art and a science.

Need to know: The content is extremely curriculum friendly, and multiple player profiles are supported. This is an excellent supplementary experience for use at home or in the classroom.

Ease of use: 8/10

Educational: 10/10

Entertaining: 10/10





### MyScript Calculator, \$free

<https://itunes.apple.com/us/app/myscript-calculator/id578979413?mt=8>

Ages 5-up, Overall rating: 4.75 out of 5 stars

Why we like it: Transform your iPad or Android device into a smart mathematical slate, capable of letting children sketch out any math problem.

You start by writing, using your finger, any numeral or mathematical expression, such as 2 + 2. Your imperfect-looking numerals suddenly melt into a perfect math equation, along with the answer.

Need to know: This type of app could give a child another way to practice math facts, and fine motor skills needed to write, all using a touch screen.

Ease of use: 9/10

Educational: 10/10

Entertaining: N/10

### NameGames, \$free, \$3.99 for full version

<https://itunes.apple.com/us/app/namegames/id584935132?mt=8>

Ages 8 Months - up, Overall rating: 4.5 out of 5 stars

Why we like it: Designed to let babies and toddlers control your iPad's screen, NameGames (formerly called Pictoo's NameGames) is a mash-up between a photo album and a busy box. When a baby -- either accidentally or intentionally -- touches a bubble on the screen with your face, he or she will hear a prerecorded message. Need to know: The free version lets you store just two profiles, encouraging you to upgrade. Strengths include a well done tutorial, to guide you through the setup. We found the camera and voice recording to be easy to use. Weaknesses include no control over the background music, and the background visuals are "kinda cheesy." Being able to turn your own images and sounds into an app that is high in child control makes this app noteworthy.

Ease of use: 9/10

Educational: 9/10

Entertaining: 9/10

### Peppa Pig Happy Mrs. Chicken, \$2.99

<https://itunes.apple.com/gb/app/peppa-pig-happy-mrs-chicken/id388615641#>

Ages 3-6, Overall rating: 4.4 out of 5 stars

Why we like it: Solid, fun and simple, this collection of six no-fail games features Peppa Pig and his animated animal friends. It is one of several Peppa Pig apps. The art is uncluttered, which lends itself nicely to the multi-touch screen.

Need to know: The more you play, the more stickers you win. If you turn off the sound some of the narration is also removed. But you can adjust the sound. We didn't try the Android version; but noticed that some people complained about installation problems.

Ease of use: 9/10

Educational: 9/10

Entertaining: 9/10

### Petting Zoo, \$.99

<https://itunes.apple.com/us/app/petting-zoo-by-christoph-niemann/id602773895?mt=8>

Ages 3-up, Overall rating: 4.5 out of 5 stars

Why we like it: This innovative "immersive sketch" by New York Times cartoonist Christoph Niemann connects one "page" (or screen) with the next by way of often related interactive features. For example, in one screen you can play with the musical teeth of an alligator. When you press the page turn icon, the teeth become legs which run away and turn into a giraffe.

Need to know: There are 21 animals, many of which respond to touches or swipes. This app has a high novelty effect, but it fades

quickly because the content never changes. It is a good example of innovation in interactive children's publishing.

Ease of use: 10/10

Educational: 9/10

Entertaining: 10/10

### Pigeon Presents, Mo on the Go!, \$3.99

<https://itunes.apple.com/us/app/pigeon-presents-mo-on-go/id593697686?mt=8>

Ages 4-up, Overall rating: 4.7 out of 5 stars

Why we like it: More bite-sized than "Don't Let the Pigeon Run this App", this easy to use, fun collection of five activities offers plenty of silliness, good big band music and variety; all with an underlying creativity theme.

Need to know: This is a noisy app, and it's a big download, weighing in at 905 MB. But there's a nice variety, and the underlying creativity options are good for children.

Ease of use: 10/10

Educational: 10/10

Entertaining: 9/10

### Pitch Painter, \$3.99

<https://itunes.apple.com/us/app/morton-subotnicks-pitch-painter/id519738403?mt=8>

Ages 3-5, Overall rating: 4.5 out of 5 stars

Why we like it: A child's finger becomes a musical paintbrush, where colors equal sounds, in this case from musical instruments from around the world. This app was made by Morton Subtonic, a music educator with a history of using computers to help children see musical relationships.

Need to know: The menu is a rather cryptic, but once you figure it out, there are a lot of cool effects to try. For example, you can make a song and then flip it upside down, or hear it backwards.

Ease of use: 8/10

Educational: 10/10

Entertaining: 9/10

### Play Lab, \$free, \$1.99 for the full version

<https://itunes.apple.com/us/app/play-lab/id?mt=8>

Ages 3-6, Overall rating: 4.6 out of 5 stars

Why we like it: Responsive, innovative interactive design meets heavy handed in-app sales, in this free app, which is best described as a playground full of interactive toys.

Need to know: These games empower a child as they gently and playfully introduce early math and logic concepts. The full version is available as an in-app purchase for \$1.99. If you design children's apps, make sure you pay a visit to the Play Lab. Created in Seoul, Korea by Korean based CJ Educations.

Ease of use: 10/10

Educational: 9/10

Entertaining: 9/10

### Playground 3 - ABC Edition, \$3.99

<https://itunes.apple.com/us/app/playground-3-abc-edition/id574794981?mt=8>

Ages 4-6, Overall rating: 4.4 out of 5 stars

Why we like it: Excellent pedagogy comes to the iPad in the form of six clean, self-correcting activities that present early phonics, the alphabet, and letter formation in a context where accuracy is rewarded with challenges. In the letter tracing activity, for example, staying within the lines earns stars, but going outside the line results in a short "bonk"; instant feedback that helps to shape careful behavior.

Need to know: While a better name for this "playground" might be "drill ground", this collection of six activities effectively provides leveled practice.

Ease of use: 9/10

Educational: 10/10

Entertaining: 6/10



### Preschool Maze 123, \$1.99

<https://itunes.apple.com/us/app/preschool-maze-123/id593710986?mt=8>

Ages 3-up, Overall rating: 4.5 out of 5 stars

Why we like it: Preschool Maze 123 offers 16 more easy to play solve, generally well designed touch screen mazes, each with different themes that include pirates, aliens and penguins. The more you play, the harder things get, creating an excellent fine motor, visual/spatial experience.

Need to know: For younger children try Toddler Maze 123 with easier mazes.

Ease of use: 9/10

Educational: 9/10

Entertaining: 9/10

### Questimate! - Pro, \$8.49

<https://itunes.apple.com/au/app/questimate!-pro/id681378925?mt=8&ign-mpt=uo%3D2>

Ages 9-up, Overall rating: 4.4 out of 5 stars

Why we like it: "How many cans of soda would be as tall as a toaster?" This is one of the questions waiting for you in the paid (full) \$8 version of Questimate, a timed, social estimation game where you are presented with a variety of comparison-types of questions. A free trial version is also available.

Need to know: From an educational point of view, the task of estimating is incredibly valuable, and this app, while not perfect, is



great for the job. Some items -- like the size of a tortoise or the speed of a cab, can vary widely depending on the context. That's why the use of Wikipedia as a fact checking mechanism is helpful. Still, Wikipedia isn't always 100% accurate, and this variance can put you in a frustrating situation. All things considered, this is an excellent way for children or adults to start estimating together.

Ease of use: 9/10

Educational: 10/10

Entertaining: 8/10

### Quick Math+, \$1.99

<https://itunes.apple.com/app/quick-math+/id703287370?ls=1&mt=8>

Ages 10-up, Overall rating: 4.625 out of 5 stars

Why we like it: Your iPad's screen becomes a magic, smart slate where you can draw answers to math problems. Featuring multi-levels, a social leader board, and a classroom friendly interface, this sequel to Quick Math introduces some new game modes that deal with memory and estimation.

Need to know: The idea is simple -- you race the clock to improve your score, and earn stars to unlock new avatars. This app uses MyScript by Vision Objects <http://www.visionobjects.com>. See the app in action at <http://youtu.be/nCCiW2cUvmg>.

Ease of use: 9/10

Educational: 10/10

Entertaining: N/10

### Quick Tap Spanish, \$1.99

<https://itunes.apple.com/app/quick-tap-spanish-premium/id677784035?ls=1&mt=8>

Ages 5-11, Overall rating: 4.4 out of 5 stars

Why we like it: This noisy, fun quiz game turns your iPad into a two player race, to see which player can match 100 common Spanish words the fastest. Two players race head to head - on the same iPad.

Need to know: This app is noisy but you can pause at any time.

The first player to win 7 rounds becomes the champ. This app is part of the Fingerprint Network of games which offers a curated list of other apps. We didn't like the use of an unconventional small font that won't work well on smaller screen's.

Ease of use: 9/10

Educational: 9/10

Entertaining: 9/10

### Ruff's Bone, \$4.99

<https://itunes.apple.com/us/app/ruffs-bone-interactive-storybook/id601996502?mt=8>

Ages 2-8, Overall rating: 4.6 out of 5 stars

Why we like it: He's baaaack! If you're in your early 20's, you might remember Ruff, the loveable, slightly frustrated dog from the Living Books. Now he's on the iPad, still in search of his Sunday bone. Each of the 12 screens contains an exotic location, full of hot spots to explore. The app is available in English and Spanish.

Need to know: The graphics, adapted from the CD-ROM, appear a bit fuzzy but our testers didn't mind. The interactive gags still hold their charm.

Ease of use: 9/10

Educational: 9/10

Entertaining: 10/10

### Sago Mini Bug Builder, \$free

<https://itunes.apple.com/us/app/sago-mini-bug-builder/id657821775?mt=8>

Ages 1.5 to 5, Overall rating: 4.7 out of 5 stars

Why we like it:

This no-fail activity lets a child transform a simple shape into a zany bug. You start with a cocoon (or egg) and touch it to help it hatch.

Need to know: You can then choose from eight outline shapes, and make a design using an ultra-simple set of drawing tools. If you like, you can add a hat or legs, feed your bug, and give it a bath. Projects can be saved as photos in your photo gallery as "bugshots." There are no in-app purchases or third-party advertising.

Ease of use: 10/10

Educational: 8/10

Entertaining: 9/10

### Sago Mini Forest Flyer, \$1.99

<https://itunes.apple.com/us/app/sago-mini-forest-flyer/id640702076?mt=8>

Ages 2-up, Overall rating: 4.5 out of 5 stars

Why we like it: Children use their finger to steer a bird around a forest, where they discover 32 different animated routines. You start by touching the birdhouse, which rings a bell.

Need to know: The routines are responsive and offer an element of surprise. It's best to think of this app as a busy box that promotes exploration, feelings of control, and discovery.

Ease of use: 10/10

Educational: 8/10

Entertaining: 9/10

### Sago Mini Music Box, \$.99

<https://itunes.apple.com/us/app/sago-mini-music-box/id734464274?mt=8>

Ages 2-5, Overall rating: 4.8 out of 5 stars

Why we like it: Excellent as a no-fail, "first app" for a toddler or



preschooler, this app contains two musical adventures Row Row Row Your Boat and Twinkle Twinkle Little Star. In order to move the boat to the end goal, you simply touch the screen. Each touch causes a note of a song to play. The top part of the screen plays higher notes than the lower part of the screen.

Need to know: This app is easy enough for a 2 year old (just slap at the screen) but it has enough hidden surprise to appeal to an

older child.

Ease of use: 10/10

Educational: 9/10

Entertaining: 9/10

### Sago Mini Ocean Swimmer, \$1.99

<https://itunes.apple.com/us/app/sago-mini-ocean-swimmer/id731041554?mt=8>

Ages 2-4, Overall rating: 4.9 out of 5 stars

Why we like it: Like "Forest Flyer" (CTR June 2013), where you fly a bird around with your finger, Ocean Swimmer uses the same game mechanic using a little fish, with more art, characters and animation. There's no place you can't visit, and no way to fail.

Need to know: This is the kind of app that can stimulate a lot of language; making it a nice shared experience. Use guided discovery questions, e.g., "I wonder what happens if you touch that mean looking fish."

Ease of use: 10/10

Educational: 9/10

Entertaining: 10/10

### Sago Mini Pet Cafe, \$0.99

<http://www.youtube.com/watch?v=R3umf0o4zs>

Ages 2-4, Overall rating: 4.9 out of 5 stars

Why we like it: Looking for a great first-app for a toddler or preschooler? Three fail-safe activities playfully pull children to a setting where they can discover the first math and logic concepts that include counting to 10, sorting by color, matching shapes and mixing colors -- all while doing something that every child loves ... feeding animals.

Need to know: There's no way to fail, and the different animals have quirky eating behaviors, such as using a napkin or burping, to keep things interesting.

Ease of use: 10/10

Educational: 9/10

Entertaining: 10/10

### Sago Mini Sound Box, \$free

<https://itunes.apple.com/us/app/sago-mini-sound-box-fun-sounds/id640709006?mt=8>

Ages 1-up, Overall rating: 4.7 out of 5 stars

Why we like it: This app engages even the youngest child -- even toddlers -- with musical concepts in a way that could only be done with a motion sensing touch screen. There are nine sound collections to explore; including chimes, drums, or barnyard sounds. Each tap makes a colorful dot that rolls around the screen; longer touches make higher sounds and bigger dots.

Need to know: This is the first app in a planned series. The app was originally called Sound Shaker, released in 2009 by zinc Roe, the small Canadian studio recently acquired by Toca Boca. It's free right now, to promote future releases.

Ease of use: 10/10

Educational: 8/10

Entertaining: 9/10

### Shiny Party, \$2.99

<https://itunes.apple.com/us/app/shiny-party/id618658350?mt=8>

Ages 2-5, Overall rating: 4.5 out of 5 stars

Why we like it: Four easy to play matching games introduce shapes and visual discrimination in a playful setting. Made in Australia, there are two modes of play: story and game.

Need to know: Activities include: find shapes within pictures; match shapes of differing sizes, colors and orientations; complete picture puzzles by fitting shapes of different orientations together; join basic shapes to form other shapes; and recognize parts of an object and put them together to form a whole.

Ease of use: 9/10

Educational: 9/10

Entertaining: 9/10

### Shiny Picnic, \$1.99

<https://itunes.apple.com/us/app/jungle-picnic/id550930045?ls=1&mt=8>

Ages 2-4, Overall rating: 4.3 out of 5 stars

Why we like it: Three well designed activities with limited content are embedded in a simple story, creating a playful logic and language experience. The text has touch-and-hear scaffolding, increasing the literacy value of the experience.

Need to know: It's hard to go wrong with this app. Past progress is not remembered in the games, you can't control background music, and the narration has an Australian accent (this app was published by a studio in Australia). All external links are behind a parent gate. For \$1.99 this app is well worth the download.

Ease of use: 9/10

Educational: 9/10

Entertaining: 8/10

### Sofia the First, \$3.99

<https://itunes.apple.com/us/app/sofia-the-first-story-theater/id587649152?mt=8>

Ages 5-up, Overall rating: 4.5 out of 5 stars

Why we like it: Featuring excellent graphics and narration this is the story of a little girl who learns that being a princess isn't hard, but acting like one must come from the heart. A story theater lets you retell the story your way, with your narration.

Need to know: Interactive elements are minimal. As with many princess/king/queen scenarios, there are inherent gender and cultural bias overtones in the story. The font is a non-conventional script that might bother some teachers.

Ease of use: 9/10

Educational: 9/10

Entertaining: 9/10

### Sparky's Birthday Surprise, \$free

<https://itunes.apple.com/us/app/sparkys-birthday-surprise/id688456828?mt=8>

Ages 3-6, Overall rating: 4.4 out of 5 stars

Why we like it: You can't argue with the price of \$free, especially if it's bilingual (Spanish and English) and the text can be narrated, one word at a time.

Need to know: The story is shallow and the counting, coloring and shape matching activities are hardly innovative. But the topic is important and the price is right. This app would work well in either a home or school setting.

Ease of use: 9/10

Educational: 8/10

Entertaining: 8/10

### Splash Math Kindergarten, \$free/\$9.99

<https://itunes.apple.com/us/app/splash-math-grade-1-5/id672658828?mt=8>

Ages 3-6, Overall rating: 4.4 out of 5 stars

Why we like it: This well designed, highly structured math drill serves up sets of basic math problems that start with counting and move into addition, subtraction and other math concepts.

There are eight lessons. After you finish a set of ten, you earn animals or plants that you can use to populate your planet, which is a



nice touch. We've seen this formula tried many times before, but rarely so well.

Need to know: Nice touches include progress tracking and leveling. This app gives you a month for free, but the charges you \$10/month. If your child is making progress, their scores will be held hostage until you pay up.

Ease of use: 9/10

Educational: 10/10

Entertaining: 7/10

### StoryBots Tap & Sing, \$free

<https://itunes.apple.com/us/app/tap-sing/id602903380?mt=8>

Ages 2-8, Overall rating: 4.8 out of 5 stars

Why we like it: Video review at <http://youtu.be/yoBO6nfQDXU>.

Well designed, free and responsive, this is a living xylophone that has keys that can teach you songs. Each note on the two octave scale is represented by one of JibJab's StoryBot characters. You can toggle between four voices.

Need to know: For the price of \$free, you get three songs (Mary Had a Little Lamb, This Old Man and Row Row Row Your Boat).

For more interesting songs, you need to subscribe for \$4.99/month -- sold as an in-app sale, a process that is not well designed (if a child knows your password, an accidental subscription could be activated).

Ease of use: 10/10

Educational: 9/10

Entertaining: 10/10



### StoryToys Jr. Farm 123, \$free

<https://itunes.apple.com/us/app/farm-123-free-storytoys-jr/id508002368?mt=8>

Ages 2-6, Overall rating: 4.5 out of 5 stars

Why we like it: Transform your iPad into a magical 3D popup book, full of animals that spring to life when touched. The objective -- to introduce early number concepts. When you flip a page, the graphic elements pop up. All in all, this is a good addition to any early childhood app library.

Need to know: There are hundreds of apps that do the same thing -- What makes this one stand out is the way the 3D graphics are synced with your screen movements, giving it a "book on a stage" effect.

Ease of use: 10/10

Educational: 8/10

Entertaining: 8/10

### Strangebeard: The Pirate Princess, \$4.99

<https://itunes.apple.com/us/app/strangebeard-pirate-princess/id706000405?mt=8>

Ages 5-up, Overall rating: 4.5 out of 5 stars

Why we like it: Weighing in at 36 pages, with nine responsive pirate-themed games, this pirate adventure features a female lead character and plenty of adventure; not to mention games that

pop-out of the pages. There are four language options, and the interactive components are top notch.

Need to know: Some of the games are quite challenging, for the wrong reason. There's a boat steering game where you move vertically to avoid horizontally moving obstacles. But it is easy to skip a game, or replay any page.

Ease of use: 9/10

Educational: 8/10

Entertaining: 10/10

### Tale of a Snowflake, The, \$1.99

<https://itunes.apple.com/us/app/tale-snowflake-water-cycle/id569337179?mt=8#>

Ages 3-10, Overall rating: 4.3 out of 5 stars

Why we like it: This beautifully illustrated eBook introduces children to the concept of the water cycle. In the story, a little girl captures a talking snowflake, who explains how she started as a drop of water in the ocean that evaporated and eventually turned into a snowflake.

Need to know: The big idea? The circulation of water has gone on for billions of years, and it will continue once again. The content makes it easy to jump between pages, and teacher options let you adjust the text, music and sound effects; or toggle between English & Persian (Farsi).

Ease of use: 9/10

Educational: 9/10

Entertaining: 9/10

### Teachley: Addimal Adventure, \$3.99

<https://itunes.apple.com/us/app/teachley-addimal-adventure/id661286973?mt=8>

Ages 5-up, Overall rating: 4.8 out of 5 stars

Why we like it: Designed specifically to help a young child conceptualize single digit addition (typically when aged 5 to 7 years), this app manages to pull off the nearly impossible -- making addition meaningful, by keeping things challenging (and interesting) while providing enough support so that children feel successful. For frosting, there's a zany group of pun-spouting cartoon characters, called "addimals."

Need to know: Teachers of early elementary children should especially take note of this app. This is a welcome addition to any early math app library and it demonstrates how the iPad can be leveraged to help children conceptualize abstract concepts related to number.

Ease of use: 9/10

Educational: 10/10

Entertaining: 9/10

### Tipping Point Adventure Game, \$1.99

<https://itunes.apple.com/us/app/tipping-point-adventure-game/id579849894?mt=8>

Ages 10-up, Overall rating: 4.7 out of 5 stars

Why we like it:

Fun and challenging, this five chapter science-fiction adventure that starts with a view of a modern-day living room out in present time in your living room, when you intercept a cryptic message.

An in-game hint system is very helpful, letting you determine how many clues you need.

Need to know: While testers greatly appreciated the hint system, the navigation icons are hard to see. Reading is required to use the clues, and some of the puzzles are HARD. This game is proof that games like "Myst" can work well on a tablet.

Ease of use: 8/10

Educational: 9/10

Entertaining: 10/10

### Toca Builders, \$9.99

<https://itunes.apple.com/us/app/id652077009?mt=8>

Ages 5-11, Overall rating: 4.8 out of 5 stars

Why we like it: Block play comes to your iPad, with the help of six



playful anthropomorphic machines -- aka the builders -- and a 60 by 60 square grid. The clever machines each offer a set of controls with a gentle learning curve that presents just the right type of challenge for the older preschooler.

Need to know: The large blocks don't allow for a lot of detail. In addition, it is less than easy to undo an accidental block placement, but the tradeoff for the lack of features is the simplicity, which is why this

app works so well.  
Ease of use: 9/10  
Educational: 10/10  
Entertaining: 10/10

### Toca Cars, \$.99

<https://itunes.apple.com/us/app/toca-cars/id689936776?mt=89:20:45 PM>  
Ages 3-9, Overall rating: 4.5 out of 5 stars

Why we like it: The cars follow your finger, which makes them hard to control, but it also adds to the fun. The result is a compelling fine motor experience that's easy to start fooling around with, and that you can find yourself still playing an hour later. Don't overlook the dog that chases your car. There are no rules and lots of possibilities.

Need to know: Testers wanted a larger area to explore (the driving area seems similar to the area found in Toca Builders) and found the cars less than easy to control. This is the 13th Toca Boca App we've reviewed; and it is one of the most innovative. It's nice to see that Toca Boca's irreverence is as strong as ever.

Ease of use: 8/10  
Educational: 8/10  
Entertaining: 10/10



### Toca Hair Salon Me, \$2.99

<https://itunes.apple.com/us/app/toca-hair-salon-me/id730873197?ls=1&mt=8>  
Ages 3-up, Overall rating: 4.9 out of 5 stars

Why we like it: The third edition of Toca Hair Salon lets you import your own photos, and morph them onto the animated faces of your haircut customers; complete with blinks, yawns and stretches. The effect is rather startling. When you combine this feature with all the easy to use Toca Hair tools, you have one of the best creativity apps of the year.

Need to know: You'll need to grant the app permission to use the camera and to store photos.

Ease of use: 10/10  
Educational: 9/10  
Entertaining: 10/10

### Toca Mini, \$2.99

<https://itunes.apple.com/us/app/toca-mini/id718082838?mt=8>  
Ages 3-8, Overall rating: 4.7 out of 5 stars

Why we like it: Children can playfully explore some powerful graphic design concepts with this 3D figurine decorating experience. You start with a blank, pudgy figure and a set of colors and stamps. The more you add, the more your figure "wakes up" and comes to life; definitely a nice touch.

Need to know: Sometimes you can't remove a stamp, and the stamps don't always drag the way you expect them to. You can take a photo, but you can't save or edit your prior work. This app looks simple, but it's actually a powerful template.

Ease of use: 10/10  
Educational: 9/10  
Entertaining: 10/10

### Todo Telling Time, \$3.99

<https://itunes.apple.com/us/app/todo-telling-time/id666462848?mt=8>  
Ages 5-8, Overall rating: 4.7 out of 5 stars

Why we like it: Excellent for introducing and reinforcing time telling skills (specifically analog and digital clocks, calendars and general units of time) Todo Telling Time contains six multi-level exercises.

Especially noteworthy are the record keeping features, and the use of real time in the main menu. For example, the current (actual) time and date are displayed on the clock and calendar shown on the main menu, along with your work log.

Need to know: This app has some looping music and it's not easy to reset the levels. All in all, this is a must-download app for any early elementary learning environment.

Ease of use: 9/10  
Educational: 10/10  
Entertaining: 8/10



### Touch, Look, Listen: My First Words, \$1.99

<https://itunes.apple.com/us/app/touch-look-listen-my-first/id731859081?mt=8>  
Ages 2-4, Overall rating: 4.7 out of 5 stars

Why we like it: Clear illustrations and multiple language options, combined with StoryToys famous ease of use and 3D popup pages, make this "visual dictionary" an outstanding addition to any early reader's iPad. Content includes 100 common words in English, French, German, Spanish and Chinese.

Need to know: The pedagogy works -- it helps you explore new words while reinforcing those they already know. The second language option lets you explore French, German, Spanish and Chinese. See also Farm 123.

Ease of use: 10/10  
Educational: 9/10  
Entertaining: 8/10

### Turn And Learn, \$free

<https://itunes.apple.com/us/app/turn-learn-words-ease/id548917415?mt=8>  
Ages 6-up, Overall rating: 4.4 out of 5 stars

Why we like it: Featuring a clean design and multiple language options, Turn and Learn is a smart flashcard app that makes it easy to practice basic vocabulary words in English, German, French, Italian and Russian.

Need to know: The design is gimmick free and the challenge increases with your ability. The downside is that you quickly use up all the words in one particular language. If you want a general introduction to the sound of several languages, this is an excellent app.

Ease of use: 9/10  
Educational: 9/10  
Entertaining: 7/10



### Two Left Feet, \$1.99

<https://itunes.apple.com/us/app/two-left-feet/id663690837?mt=8>

Ages 4-up, Overall rating: 4.4 out of 5 stars

Why we like it: Based on the book by Adam Stower (Bloomsbury Children's Books), this is an app/physical book/ebook combo. If you have a printed copy of the book (\$16) you can use your iOS device to bring it to life. The design resembles the Morris Lessmore book/app combo from last year.

Need to know: The app will work with any existing edition of the book. In addition, users of the app without the book can print out a special canvas to create the same effect. The story is good and the visual effects have a very high novelty effect, but there's no actual interactivity. Other than taking a screen shot, this is a watch and listen type of experience with lots of frosting and not much cake.

Ease of use: 8/10

Educational: 9/10

Entertaining: 10/10

### Welcome to the Vampire's Lair...If Your Dare!, \$2.99

<https://itunes.apple.com/us/app/vampire-kids-story-book-scary/id572764423?ls=1&mt=8>

Ages 5-up, Overall rating: 4.4 out of 5 stars

Why we like it: This playful 10 page ebook would be good around Halloween, but can hold a child's interest any time of the year.

Each screen contains narrated text with highlighted words; plus a finger-eating plant and a bug squishing game, not to mention a piano keyboard made of screaming coffins. Don't miss the face decorating activity that uses your front-facing camera, and lets you paste weird eyes or fangs onto your face.

Need to know: You can record your own narration or toggle between English, Spanish and Portuguese. This is a good general purpose language experience.

Ease of use: 9/10

Educational: 7/10

Entertaining: 10/10

### What Will I Be?, \$2.99

<https://itunes.apple.com/us/app/what-will-i-be/id593449762?mt=8>

Ages 3-up, Overall rating: 4.4 out of 5 stars

Why we like it: Wondering what you'll be when you grow up? Now there's an app for that. Nineteen clear watercolor illustrations depict different professions, featuring either a male or a female lead character and his/her father, acting out the jobs.

Need to know: In terms of interactive design, this is nothing special. But the story, art and narration is top notch. Engagement is increased because a dog is hidden on each page.

Ease of use: 9/10

Educational: 8/10

Entertaining: 9/10



### Writing Wizard, \$0.99

<http://bit.ly/writingwizard>

Ages 3-up, Overall rating: 4.5 out of 5 stars

Why we like it: Teachers: take note of this app. Letter tracing apps are common, but few can be customized like this one.

Designed in France by the creators of the highly regarded Word Wizard, this letter and word tracing experience gives you the choice of three handwriting styles, and dozens of other options.

Need to know: This app isn't as simple or elegant as Letter School, but it offers more customization and record keeping features. You can make your own word list, and record audio for each word.

Ease of use: 8/10

Educational: 9/10

Entertaining: 8/10

### Wubbzy's Dance Party, \$2.99

<https://itunes.apple.com/us/app/wubbzys-dance-party/id635871029?mt=8>

Ages 3-up, Overall rating: 4.5 out of 5 stars

Why we like it: Based on "Meet the Wuzzles," this responsive, well-designed app lets your child play along with Wubbzy and pals, Daizy, Walden and Widget.

Need to know: Content includes 20 pages with text highlighting and lots of responsive hot spots, four mini-games that highlight shapes, colors and counting and two videos. There's a Read to Me and a grown-up's corner with controls over sounds. Created by Cupcake Digital. See also Wubbzy's Magic School, with similar design.

Ease of use: 9/10

Educational: 8/10

Entertaining: 10/10

### Wubbzy's Magic School, \$2.99

<https://itunes.apple.com/us/app/wubbzys-magic-school/id626284893?mt=8>

Ages 3-up, Overall rating: 4.5 out of 5 stars

Why we like it: This responsive, well-designed app lets your child play along with Wubbzy and pals, Daizy, Walden and Widget.

There are three reading modes - Read & Play, Read to Me, and Just a Book. The mini-games cover counting, number and shape recognition, sight word recognition, memory and letter identification. All in all, this is a solid app.

Need to know: See also Wubbzy's Dance Party for a similar design.

Ease of use: 9/10

Educational: 8/10

Entertaining: 10/10



## Best Video Games

A new batch of Wii U games joined two new game hard core game consoles (the PS4 and Xbox One) in 2013. Here are some of the top children's products.

### Animal Crossing: New Leaf, \$35

Ages 6-up, Overall rating: 4.8 out of 5 stars

Why we like it: This downloadable edition of Animal Crossing for the Nintendo 3DS (through the eShop) lets you become mayor for the first time. The previous mayor, Tortimer, will visit you to tell you about the tropical island he now lives on. According to our testers, who were familiar with past Animal Crossing titles, "this game does what the next edition of Animal Crossing should do." They like the new ability to swim and take control of the town.

Need to know: There's plenty of searching and mini-games. You can also participate with up to three other players in mini games, rent a wetsuit and dive into the ocean to catch underwater creatures or swim around for some virtual exercise. Note that you'll want to have an SD card to store this game.

Ease of use: 9/10

Educational: 9/10

Entertaining: 10/10



### Disney Planes, \$50

Ages 5-up, Overall rating: 4.5 out of 5 stars

Why we like it: Fun, fast paced and easy to play, this one or two player flying simulation, based on the Disney animated film, takes players above the world of Cars for an adventure with four flying characters (Dusty, Echo, Bravo and Ishani). In terms of flying sims, there's not much that is innovative about this game, other than the entertaining characters.

Need to know: Content includes ten environments from the film, each with a set of challenges.

There are four modes of play - Air Rallies, Story, Free Flight, and Balloon Popping; and single player or drop-in/drop-out two player co-op play with any of the characters featured in the game.

Ease of use: 9/10

Educational: 8/10

Entertaining: 10/10



### Game & Wario, \$40

Ages 7-up, Overall rating: 4.8 out of 5 stars

Why we like it: Fast, fun and great for a small group, Game & Wario is a collection of games designed specifically with the Wii U GamePad in mind.

Need to know: As you play, you can earn tokens that can be used in a chicken-themed machine called Cluck-a-Pop, which contains in-game prizes and microgames. Other features include Miiverse Sketch where players try to draw words that have been suggested by others online. This feature only works if your Wii U is online.

Ease of use: 9/10

Educational: 9/10

Entertaining: 10/10

### LEGO Batman 2: DC Super Heroes, \$40

Ages 6-up, Overall rating: 4.7 out of 5 stars

Why we like it: LEGO Batman 2: DC Super Heroes returns for the Wii U, offering plenty of two player collaborative problem solving, on par with other LEGO games. You play as Batman or Robin, and get help from Superman, Wonder Woman and Green Lantern. You can travel around Gotham City by walking or flying using the Batmobile, Batwing or Batboat.

Need to know: All in all, this is an excellent addition to your game library. It is a great game for an adult to play with child.

Ease of use: 9/10

Educational: 9/10

Entertaining: 10/10

### LEGO Legends of Chima: Laval's Journey, \$30

Ages 8-up, Overall rating: 4.4 out of 5 stars

Why we like it: Fifteen levels of problem solving involve helping Laval, a brave warrior and prince of the Lion Tribe, fight for justice. You see, Laval must unlock the secret of the legendary triple-CHI armor before his arch-rival, Cragger, can manipulate its power to threaten the balance of Chima.

Need to know: Your points can be used for items in an online store, called the Chima Vault ([www.lego.com/chima/the-vault](http://www.lego.com/chima/the-vault)). These items can also be used in the LEGO Legends of the Chima Online when in the online world.

Ease of use: 9/10

Educational: 7/10

Entertaining: 10/10

### Luigi's Mansion: Dark Moon, \$40

Ages 6-up, Overall rating: 4.25 out of 5 stars

Why we like it: This sequel to the 2001 GameCube release takes place in six haunted Mansions. It nicely leverages the abilities of the 3DS. It puts a map and your progress on the lower screen so you always know where you are and how you're doing, and you can use the 3DS camera and motion sensing when fighting or exploring.

Need to know: There's plenty to do, plus there's a multiplayer mode that I did not try in the game that we downloaded. We liked how easy it was to explore. At some points, the controls feel limited (e.g., while using the Poltergust). All in all, however Nintendo has done a great job reviving Luigi's ghost-hunting career.

Ease of use: 8/10

Educational: N/10

Entertaining: 9/10



### **Mario & Sonic at the Sochi 2014 Olympic Winter Games, \$50**

Ages 6-up, Overall rating: 4.5 out of 5 stars

Why we like it: Here's your ticket to Russia, for the Sochi 2014 Olympic Games. Events include curling, skiing, and figure skating pairs, as well as a new event: snowboard slopestyle.

Need to know: The gameplay works well with the motion sensing abilities of the controllers. The multiplayer events, such as the four man bobsled, are fun, especially when all four players have to push the big bobsled down co-op style.

Ease of use: 9/10

Educational: 8/10

Entertaining: 10/10

### **Pikmin 3, \$60**

Ages 12-up, Overall rating: 4.6 out of 5 stars

Why we like it: This Wii U version of Pikmin is the best version we've played.

Need to know: You can now split your Pikmin squads among the three explorers to maximize your strategy or use the Wii U GamePad controller as an in-game camera to capture the alien-safari environment. If you have a Wii U (and \$60) this is an excellent game. See the video at <http://youtu.be/UXKskjE10SY>

Ease of use: 8/10

Educational: 9/10

Entertaining: 10/10

### **Tearaway, \$40**

Ages 8-up, Overall rating: 4.7 out of 5 stars

Why we like it: From the creators of LittleBigPlanet, comes an innovative PlayStation Vita game that is available only as a download. As you explore, you tilt the screen and use the back touch screen quite frequently.

Need to know: Our testers noted that "the controls feel flexible and the use of touchpad is amazing. Tearaway also has PS Vita's motion sensing, much like the Wii U Gamepad, and makes it feel like you're holding a magic camera.



Ease of use: 8/10

Educational: 9/10

Entertaining: 10/10

### **Wii Party U, \$50**

Ages 5-up, Overall rating: 4.7 out of 5 stars

Why we like it: Another great game from Nintendo. This party game (for 1-4 players) lets you compete using your Mii character in a variety of games. It provides new ways to play with others using the Wii U GamePad. For example, in the Lost-an-Found Square game, you are lost in a playground and must describe your surroundings to the other players based on what you see on the GamePad, in order for the other players to find your location. Content includes 80 minigames that can be played on your own, without the TV, using the Wii U GamePad only.

Need to know: Wii Party U is a marvelous edition to Wii based family entertainment. The \$50 bundle includes a regular Wii Remote. Developed by NDCUBE Co., Ltd. for Nintendo.

Ease of use: 9/10

Educational: 9/10

Entertaining: 10/10



## **Best Hardware**

Besides two new game consoles; and we reviewed one of the many varieties of Google Chromebooks released this year; as well as 25 types of tablets.

### **Acer C720 Chromebook, \$200**

Ages 6-up, Overall rating: 4.7 out of 5 stars

Why we like it: With 8.5 hour batteries, a price of \$200 and the weight of an iPad air, what's not to like about the Acer C720 Chromebook. It proves that affordable Chromebook, powered by Google Docs, will have a growing presence in more backpacks over the next year.

Need to know: This device does not have a touch screen; and it won't run most games. If you need Adobe or Microsoft Office to do your work, you'll find that you'll quickly start bumping into limitations. However, for 80% of most student work, email and web-based work, the Chromebook is an affordable, durable, plug-free solution.

Ease of use: 9/10

Educational: N/10

Entertaining: N/10



### **iPad Mini, \$300 (for the 16 GB non-retinal, 2012 edition)**

Ages 2-up, Overall rating: 4.8 out of 5 stars

Why we like it: 16 GB model price has been lowered to \$300. This device can run all iPad content (the iPhone or iPod Touch can't). It represents the best content/dollar ratio.

Need to know: Make sure to budget for a protective case.

Ease of use: 9/10

Educational: 10/10

Entertaining: 10/10

### **LeapPad Ultra, \$150**

Ages 4-9, Overall rating: 4.3 out of 5 stars

Why we like it: The durability and security. But now, for the first time in Leapfrog history, the screen looks great, and there's no need for AA batteries.

The three Ultra headlines are 1) the beautiful, clear, 7 inch touch screen; 2) the rechargeable batteries and 3) extremely locked down Wi-Fi, used primarily to download more apps and play heavily curated videos.

Need to know: Weaknesses include a lack of apps, some laggy screen responsiveness in some of the apps and less-than-intuitive



screen rotation. Also, you can't upgrade the storage, and the speakers are OK. The main drawback, however is when compared to Android and Apple-based options, there's only a fraction of content this device can run, and it's controlled by one source: Leapfrog. For parents looking for a controllable, locked down digital backyard for their children, who are willing to pay more for the much less content, LeapPad Ultra represents a major advance over the LeapPad 2.

Ease of use: 10/10  
Educational: 6/10  
Entertaining: 10/10

### Samsung Galaxy Tab 3 Kids, \$200

Ages 3-up, Overall rating: 4.5 out of 5 stars  
Why we like it: With the bright orange and yellow case, the Samsung Galaxy Tab 3 Kids (\$200) is easy to pick out of the crowd. It also stands at the head of the pack of current 7 inch tablets when it comes some key factors, namely ease of use and parental features and app selection, making it our leading choice for a non-Apple device for children for 2013.  
Need to know: This tablet offers access to just about everything Google - Google Mobile Services, Google Search, Gmail, Google Plus, YouTube, Google Talk, Google Maps. The most interesting feature many be the combination of access to both the Google Play Store and a new store called Samsung Apps Kid's Store.  
Ease of use: 9/10  
Educational: 9/10  
Entertaining: 9/10

## Software, Sites, Toys & Virtual Worlds

### Disney Infinity, \$75

Ages 5-up, Overall rating: 4.6 out of 5 stars  
Why we like it: On first glance, Disney Infinity looks a lot like Activision's Skylanders. When you take a closer look, however, you realize that comparing the two isn't accurate. The video game component was created by respected Avalanche Studios.  
Need to know: In the Sandbox mode, you can also build and share worlds, and program elements, say, to trick another player into stepping onto a spring-loaded stand. All things considered, this is a very fun, and potentially very expensive game. If you pay \$13 for an individual figure, you can unlock other parts of the virtual world. The more figures you have, the more access you have, and the more money you'll spend. You get the idea. See the demo at <http://youtu.be/NEZNS7LACU8>  
Ease of use: 9/10  
Educational: 8/10  
Entertaining: 10/10

### eMedia Singing Method, \$60

Ages 10-up, Overall rating: 4.4 out of 5 stars  
Why we like it: Can't afford singing lessons? Now you can, as long as you have a Mac or Windows computer with a DVD-ROM drive, plus an Internet connection for online activation.  
Need to know: We especially liked how you can toggle on/off the accompaniment. The song library is varied, with 80 songs pulled from pop, folk, jazz, R&B, opera, classical and showtunes. Tutorials are given by way of 30 videos. If you are a vocal coach or teach singing lessons, this is a good tool to know about.

Ease of use: 9/10  
Educational: 10/10  
Entertaining: 8/10

### Rijksmuseum Online Art Collection, \$free

Ages 10-up, Overall rating: 4.6 out of 5 stars  
Why we like it: Amsterdam's Rijksmuseum <https://www.rijksmuseum.nl> is a free, online archive of 125,000 high resolution images. Each image gives you the ability to zoom in, making it possible to examine the individual brush strokes in the eye of van Gogh's famous self portrait.  
Need to know: This type of access and ability to examine details make this collection very useful for art students. See the writeup in the New York Times <http://nyti.ms/1465viS>.  
Ease of use: 8/10  
Educational: 10/10  
Entertaining: N/10

### Scratch 2.0, \$free

Ages 7-up, Overall rating: 4.9 out of 5 stars  
Why we like it: Three things to know about this update to the Scratch programming language, which uses jigsaw-puzzle like bits of code that snap together, bringing programming within reach of novices. The first is that you no longer need to download or install anything. Second, is that it works best with a traditional Mac or Windows computer, with an Internet connection, browser and Flash. The third thing is that the language has been enhanced with additional sensors that use your webcam or microphone to detect motion or sound.



Need to know: Because Android tablets can run Flash, it is possible to view existing projects, however, most are designed with a mouse and cursor in mind. Scratch 2.0 is a welcome new option, and you certainly can't argue with the price. Testers: "Scratch is legit. It's nice how they give kids this kind of programming power without appearing too formidable." Visit <http://scratch.mit.edu/> for more information.  
Ease of use: 9/10  
Educational: 10/10  
Entertaining: N/10

### ADVERTISEMENT

Save the Dates for *Dust or Magic in 2014!*

[www.dustormagic.com](http://www.dustormagic.com)

Masterclass • Mar 23,  
Bologna, Italy

eBook Retreat • Apr 27-29,  
Honesdale, PA

AppCamp • Jun 8-10,  
Marshall, CA

Institute • Nov 2-4,  
Lambertville, NJ





# MAILBAG

## My kids want Halo. Should I cave?

Dear CTR—

*HELP! Jeffrey, our 8 year old son, has been asking (begging) for "HALO" for the xbox. In our attempt to be good parents, we have always said that we would not have toys with guns in the house ;) That said, both Jeffrey and Julia (age 13) say that Halo is "nothing like" CALL OF DUTY. They have played at their friend's houses and tell me that the game is primarily shooting aliens -kind of space age, not very bloody or gory, and no bad language. He has also reminded me that he has been shooting LEGO men for "years." SO . . . the million dollar question is..... Should we cave? Please let me know your thoughts when you have a minute. Many thanks,  
Sarah*



Dear Sarah,

The first step is to know exactly what you are dealing with so you're not just basing this decision on what your kid's are telling you. Let's start with the ESRB. Also read the ESRB descriptions, at ESRB.org. The ESRB is the best place to get a quick, objective description of a video game; and the content descriptors tell you exactly what's in the game. You'll see what a classic "first person shooter" is (the same as "Call of Duty" by the way. Halo is a very violent game, and you do kill stuff.

*FROM THE ESRB*

*Halo 4*

*Platform: Xbox 360*

*Rating Category: M*

*Content Descriptors: Blood, Violence*

*Other: Includes online features that may expose players to unrated user-generated content (Xbox 360)*

*Rating Summary: This is a first-person shooter in which players control futuristic super-soldiers who engage in military campaigns against alien forces. Players use pistols, scoped rifles, machine guns, grenade launchers, and futuristic weaponry to kill enemies in ranged combat; battles are highlighted by cries of pain, realistic gunfire, and large explosions. Stealth moves (i.e., "assassinations") can also be used to attack enemies from behind (e.g., snapping their necks or stabbing/impaling them with bladed weapons). During one cutscene, a human character cries out as her body disintegrates, exposing layers of muscle tissue. Large blood-splatter effects occur when humans are shot; some sequences depict bloodstained environments.*

Next let's visit YouTube. Type "halo" and "gameplay" into the search engine and you can see exactly what the footage looks like. Here's one such link: <http://youtu.be/ba2yOaadM6o> You can see that there is some bad language (though fewer "f" words than Call of Duty), and there are other live players who say just about anything. There's also some problem solving and quite a bit of strategy... it's like tag with flamethrowers; if you're playing w/friends you can figure out strategies to kill the other guys. As a parent, I was less concerned with this level of fantasy violence because I watched my daughters and often played along, and I could see that it wasn't bothering them. It made for some wonderful bonding time. Most of the fun of Halo is that it's a multi-player game. It's also a deep game; so it can open up a few years of play... hey it might distract them from Disney Infinity. I'm hoping this gives you the information you need to make an informed decision. Remember there is no right or wrong answer. Just don't go into it carelessly, and make it together. Good luck and keep us informed.

Sincerely yours,

*Warren Buckleitner*

Warren Buckleitner, Editor, CTR



# Feature Reviews

JANUARY 2014

Here's an alphabetical listing of new products, along with a full review, specific ratings and tester feedback. The "Entry Date" refers to the date we first learned of the product.

## Annie's Picking Apples 2: Learning Games

This app gives you a playful context for counting from 1 to 20 in English, Spanish, French and German. It mixes jigsaw puzzles and apple sorting (by color), and keeps records.

In the app, children help Annie the squirrel pick apples, prepare pies, and put together puzzles in 27 worlds which are arranged like a board-game.

Features include: parental controls for parents and educators to track a single child's performance; enable the time control screen and set the time the child will be able to play and manage turns among children; highlights the achievements and progress in each level of play; progressive difficulty in each level in each of the games; and original music.

You can toggle the languages on the fly, making this a good way to provide informal experience counting in new languages.

Details: Real Fun Learning, [www.realfunlearning.com](http://www.realfunlearning.com). Price: \$2.99. Ages: 4-up. Platform: iPad. Teaches/Purpose: math, counting, spatial relations, German, Spanish, French and English. Rating (1 to 5 stars): 4 stars. Entry date: 8/22/2013. [WB]

Ease of Use	8	80%
Educational	8	
Entertaining	8	
Design Features	8	
Good Value	8	

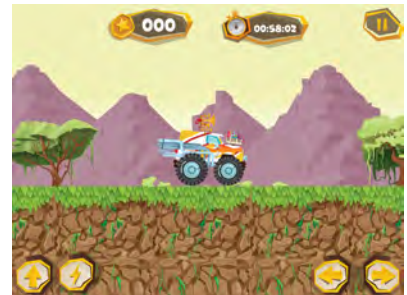


## Build a Truck

Limited creativity meets a driving/collecting play pattern that looks and acts a lot like "Trucks" and "More Trucks" by Duck Duck moose. The premise is fun -- assemble and decorate a truck, and then drive it through one of three tracks, collecting as many coins as possible. The over-stylized menus limits a child's creative possibility for fun. It is fun to see how fast you can make it through the course, which is a timed challenge. There are four tracks: snow, jungles, sewers and a surprise random track. for unlimited play. The random track keeps things interesting. The truck controls are not responsive. All in all, this is a fun experience with limited creative options and some child control. Corey says: this app game is pretty fun as you build trucks and race them in a side scrolling track. I liked how you can collect coins to upgrade trucks. This app seems simple.

Details: Duck Duck Moose, . Price: \$1.99. Ages: 3-up. Platform: iPad, 96.4 MB. Teaches/Purpose: creativity, spatial relations. Rating (1 to 5 stars): 4.1 stars. Entry date: 12/18/2013. [WB]

Ease of Use	7	82%
Educational	8	
Entertaining	9	
Design Features	9	
Good Value	8	








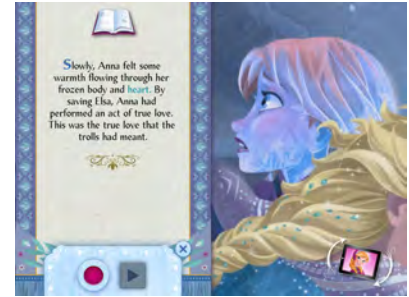
### Frozen: Storybook Deluxe

Beautiful, big (800 MB) and pricey, this app makes a nice extension of the animated Disney movie "Frozen", with some additional early reading practice and spatial problem solving opportunities. While the story is greatly abbreviated, there's enough content to keep children exploring. It is also possible to record your own narration on each page. The ebook portion of the app uses an innovative navigation mechanic, where you can rotate the screen 180 degrees to take the perspective of each sister. When using the regular narration, the words are highlighted as they are read, helping children who like the story make connections between words, sounds and meaning. Other content includes the ability to create your own snow globe or Frozen scenes with a limited set of "frosty" drawing tools.

In the 12 screen story, optimist Anna teams up with mountain man Kristoff and his loyal reindeer Sven, on a journey that involves meeting trolls and Olaf the snowman, in a race to find Anna's sister, Elsa, whose icy powers have trapped the kingdom in eternal winter. If you like the movie and have some spare room and money, this is a nice enrichment app.

Details: Disney Publishing Worldwide, [www.DisneyDigitalBooks.com](http://www.DisneyDigitalBooks.com). Price: \$6.99. Ages: 5-up. Platform: iPad, iPhone, 800 MB. Teaches/Purpose: reading, spatial relations, art, creativity, symmetry. Rating (1 to 5 stars): 4.3 stars. Entry date: 12/3/2013. [WB]

Ease of Use	8	86%
Educational	9	
Entertaining	9	
Design Features	9	
Good Value	8	


### Motion Math: Pizza!

This playful, powerful, applied math experience gives meaning to those endless math facts. How? By putting you in charge of your own pizza business. It's like a cross between MECC's Lemonade Stand and Diner Dash with a lot of applied math. In order to keep your customers happy you need to add quickly. The faster you calculate, the more money you make. There's even a bit of language experience, because you get to name your own pizzas.

The more money you make, the more you can buy signs and other upgrades to your store. As your profits grow, you unlock new ingredients and design new pizzas. You're stuck with questions like "is it best to buy 10 olives for \$5, or 30 for \$14?" You also learn that pricing is both an art and a science. You need to cover your costs, but if you raise the price too much, customers will complain (and leave). The sounds and graphics are curriculum friendly, making this an excellent supplementary experience, for use at home or in the classroom.

Details: Motion Math Games, [www.motionmathgames.com](http://www.motionmathgames.com). Price: \$3.99. Ages: 7-up. Platform: iPad, iPhone. Teaches/Purpose: math facts, addition, subtraction, addition, multiplication; math fluency, logic, memory. Rating (1 to 5 stars): 4.7 stars. Entry date: 12/17/2013. [WB]

Ease of Use	8	94%
Educational	10	
Entertaining	10	
Design Features	9	
Good Value	10	





### New Kid on the Block, The

Here's a delightful blast from the past ('93 to be exact). Originally a Living Book (Broderbund, 1993), The New Kid on the Block brings 16 poems by Jack Prelutsky to life, with both read to me and let me read modes. Prelutsky's funny poems are especially effective with children, dealing with such things as a dog that is put together wrong and homework blowing up. Mark Schlichting says "with Living Books we experimented with 'living' text, where children could tap on any word and hear it pronounced or build the whole sentence word by word. With The New Kid on the Block we were able to go one step further; every noun identifies itself in animation and every verb does its action, turning this app into a living dictionary."

Details: Wanderful, [www.wanderfulstorybooks.com](http://www.wanderfulstorybooks.com). Price: \$4.99. Ages: 4-up. Platform: iPad, iPhone, Mac OSX (Android is planned). Teaches/Purpose: reading, poetry, rhyming, language. Rating (1 to 5 stars): 4.6 stars. Entry date: 11/22/2013. [WB]

Ease of Use	9	92%
Educational	10	
Entertaining	9	
Design Features	9	
Good Value	9	






## New Super Luigi U

Fun, fast and solid, but slightly unoriginal, and a timer that makes you feel rushed, this edition of Luigi U lets you take on 80 new courses set in the world of New Super Mario Bros. U.

Each course contains a reduced time limit and a higher concentration of enemies and obstacles. Up to five players can play, with Nabbit taking the place of Mario as a playable character. Nabbit cannot use power-ups, but is invincible to enemies and obstacles. Other features let you share victories with the community via the Miiverse feature, and play using a Wii Remote controller, the Wii U GamePad controller, or a Wii U Pro Controller. The game will be released as downloadable content for New Super Mario Bros. U in the Nintendo eShop for \$20, however, in honor of the year of Luigi, the game will also be available as a standalone packaged game that doesn't require New Super Mario Bros U.

Corey said "New Super Luigi U's map is the same as New Super Mario Bros. U but the former's level designs are shorter, look different, and also have a 100 second timer. Gameplay is the same platforming gameplay as New Super Mario Bros. U where you hop on enemies to kill them and avoid falling or getting hit. Power-ups are the same. The 100 second time limit which makes you rush through the level. I feel the 100 second time limit should be extended by more than 60 seconds. Graphics, music, and sounds are the same as New Super Mario Bros. U with graphics being HD and sounds being great. Like New Super Mario Bros U, New Super Luigi U manages to keep the side-scrolling platforming gameplay great with HD graphics.

New Super Luigi U isn't bad, but I think Nintendo should increase the time limit by 60-100 seconds more. Final verdict for this game is 7.7/10, with great new level designs, Nabbit's ability. Downsides include feeling rushed, a recycled map and a lack of originality.

Details: Nintendo of America, [www.nintendo.com](http://www.nintendo.com). Price: \$30. Ages: 8-up. Platform: Wii U. Teaches/Purpose: logic, timing, teamwork. Rating (1 to 5 stars): 4.4 stars. Entry date: 6/12/2013. [WB]

## Sago Mini Music Box

If you're looking for an excellent music program for your preschooler, this app contains two short musical adventures -- Row Row Row Your Boat and Twinkle Twinkle Little Star. Each is especially high in child control. In order to move the boat to the end goal, you simply touch the screen. Each touch causes a note of a song and you soon notice that that top part of the screen plays higher notes than the lower part of the screen. This app is easy enough for a 2 year old (just slap at the screen) but it has enough hidden surprise to appeal to an older child.

Details: Sago Sago, [www.sagosago.com](http://www.sagosago.com). Price: \$.99. Ages: 2-5. Platform: iPad. Teaches/Purpose: music, causality. Rating (1 to 5 stars): 4.8 stars. Entry date: 12/4/2013. [WB]

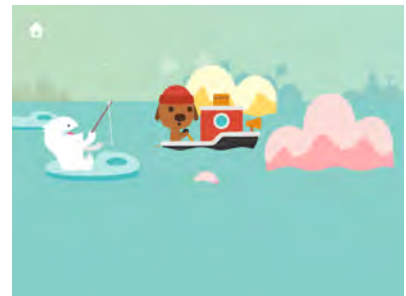
Ease of Use	8
Educational	N
Entertaining	9
Design Features	9
Good Value	9

88%



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

96%







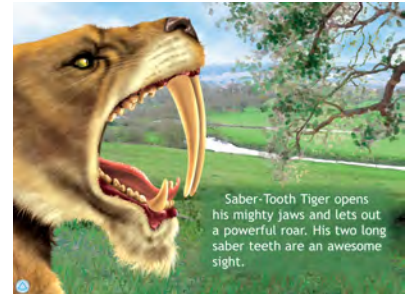
### Smithsonian- Saber-Tooth Trap

Great ebook design from Oceanhouse Media meets limited content, as children explore the environment of the Saber-Tooth Tiger by way of clear illustrations from Soundprints and the Smithsonian Institution.

In the story, the Saber-Tooth Tiger is hungry. He approaches a calm and inviting lake in search of a meal, unaware that it's filled with a sticky, tar-like substance. Features include the ability to record your own voice, share voice tracks with others that own the app. The app feels like a great sample of content, however. It leaves you wanting more.

Details: Oceanhouse Media, [www.oceanhousemedia.com](http://www.oceanhousemedia.com). Price: \$1.99. Ages: 3-8. Platform: iPad, iPhone, iPod Touch (iOS 5.0 or later). Teaches/Purpose: science, reading. Rating (1 to 5 stars): 4.1 stars. Entry date: 12/12/2013. [WB]

Ease of Use	10	82%
Educational	8	
Entertaining	7	
Design Features	8	
Good Value	8	



### Spell with Pip: An Oxford Spelling Game

Spelling practice meets arcade-style gameplay in this children's dictionary app. Pip the parrot is the host, who collects correct letters and squawks when he loses a feather. He leads children through worlds of increasing difficulty, collecting letters and spelling words. To spell a word, you "fly" the parrot with your finger to each letter in the correct order. Sometimes the letters won't "stick" however, reducing the responsivity.

Content includes 3,000 leveled words that work either in US or UK English, each from the 'Oxford First Dictionary'.

As the game progresses, collected words are added to the 'My Dictionary' feature in the app so that children can track their progress and explore definitions and language at their own pace. Features allow multiple profiles to be set up so that several users can progress through the game at different rates. The music can be overbearing, but can be toggled off from the main menu, and the audio controls have separate sound controls for music and sound effects.

Details: Oxford University Press, [www.oup.co.uk](http://www.oup.co.uk). Price: \$4.99. Ages: 4-8. Platform: iPad, iPhone (140 MB). Teaches/Purpose: spelling. Rating (1 to 5 stars): 3.9 stars. Entry date: 12/10/2013. [WB]

Ease of Use	8	78%
Educational	8	
Entertaining	8	
Design Features	7	
Good Value	8	



### SymbolSmash

Good music meets crude design that doesn't stray far from multiple-choice, didactic presentations of classical music related information.

Content comes from Marion Musry's music classes. In the ebook mode, children visit with characters like Trixie the Treble Clef and Crescendo Croc. The first module in the series is based on Jacque Offenbach's 19th century French opera "Voyage to the Moon." There are six games that don't have much to do with making music.

Details: SymbolSmash Ltd., [www.symbolsmash.com](http://www.symbolsmash.com). Price: \$2.99. Ages: 2-up. Platform: iPad. Teaches/Purpose: music, musical instruments. Rating (1 to 5 stars): 2.5 stars. Entry date: 12/5/2013. [WB]

Ease of Use	8	50%
Educational	5	
Entertaining	4	
Design Features	4	
Good Value	4	



## Writing Wizard


Letter tracing apps are commonplace, but few can be customized to a specific child like this one. Designed in France by the creators of the highly regarded Word Wizard, this app is designed to help children trace letters and numerals in your choice of three handwriting styles ((Zaner Bloser, D'Nealian and Handwriting Without Tears). Content includes 26 letters, each with animated stickers and sound effects. Once each tracing is complete children can they can interact with them by way of four games. You can also trace short words, such as your name.

This app isn't as simple or elegant as Letter School, but it offers more customization and record keeping features. Teachers will want to know about this app. Other features include the ability to keep progress reports, replay and export tracings, create your own word list, and record audio for each word.

Details: L'Escapadou, <http://lescapadou.com>. Price: \$.99. Ages: 3-up. Platform: iPad. Teaches/Purpose: tracing, writing, fine motor skills. Rating (1 to 5 stars): 4.5 stars. Entry date: 8/8/2013. [WB]

<b>Ease of Use</b>	8
<b>Educational</b>	9
<b>Entertaining</b>	8
<b>Design Features</b>	10
<b>Good Value</b>	10

90%








# Future Releases & Updates

JANUARY 2014

*This section contains a listing of products in the process of being reviewed, but not yet rated. We also include significant updates of older products.*

## Ben 10 Omniverse 2

The latest installment in the Ben 10 series features a new adventure with Ben and his Omnitrix-powered alien forms as he battles against a new galactic threat, the Incurseans.

Ben heads to Earth with his partner Azmuth and ventures into the Incurseans warship to try and thwart Emperor Mileous. This is a new storyline created by the writers of the Cartoon Network show. You can play as characters from the show including Ben and his group of Omnitrix aliens. You can join the fight with 10 alien forms in the console version and 17 on the Nintendo 3DS, including Big Chill, Bullfrag, Rath, and Eatle, each with their own role in combat and platforming; alien upgrades - Omnitrix select aliens by class on console, allowing players to store their favorite aliens by size and speed and select them on the fly as needed; and open-ended combat system allowing players to perform multi-alien attacks and powerful combo finisher move. Developed by High Voltage Software (console versions) and 1st Playable Productions (Nintendo 3DS). Prices are \$40 for Xbox 360, PS3 and Wii U and \$30 for Wii and Nintendo 3DS.

Details: D3Publisher of America, Inc., [www.d3publisher.us](http://www.d3publisher.us). Price: \$40. Ages: 8-up. Platform: Xbox 360, PlayStation 3, Wii U, Wii, Nintendo 3DS. Teaches/Purpose: lotic. Entry date: 10/21/2013.



## DiscoRobo

DiscoRobo is a dancing robot that moves along with your favorite songs and uses beat detection technology to math the music with 56 dance moves. The robot also displays eight facial expressions that light up and change as he dances. It is available in four colors - red, blue, pink and purple. There is also a DiscoRobo app available for free download on Android and iOS devices that will allow you to guide and customize your DiscoRobo dance steps. You can shake your phone or swipe across the virtual DiscoRobo on the screen, and the robot will mimic the movements to the beat. You can also control the real robot as captured by your devices camera. Also available is the DiscoRobo Special Set, \$80, which includes a DiscoStage speaker set. The DiscoStage is a portable MP3 player speaker with internal memory for music storage and device connectivity. It comes with a special platform to stand DiscoRobo on its head, available in four colors to match your DiscoRobo, and requires 8AA batteries. It is also sold separately for \$35.

Details: Topsy Robotics, [www.topsy.com](http://www.topsy.com). Price: \$45. Ages: 4-up. Platform: iPad, iPhone, Android. Teaches/Purpose: robot, music. Entry date: 9/20/2013.



## Disney Infinity Rapunzel

The latest figurines in the Disney Infinity family include Rapunzel, Wreck-It Ralph's Ralph and Vanellope, and a Toy Box Pack featuring Anna and Elsa from Frozen, which also includes two Skydome Power Discs. Other new power discs are also available. All the characters can interact with characters outside their own worlds, so Ralph can meet up with Captain Jack Sparrow and Rapunzel with Mater from Cars.

In order to totally drive parents crazy, Ralph will be sold exclusively at Best Buy, while Vanellope will be exclusive to Target. So if your child wants both characters from Wreck-It Ralph, you need to go to two different stores. And if you want Rapunzel, you need to go to Walmart.

Details: Disney Interactive, Inc., [www.disney.com](http://www.disney.com). Price: \$13. Ages: 5-up. Platform: Windows, Wii, Wii U, PlayStation 3, Xbox 360. Teaches/Purpose: logic, creativity, collaborative play. Entry date: 11/13/2013.





### **Kre-O: CityVille Invasion Skyscraper Mayhem**

Fun, well designed but potentially expensive due to the app/toy monetization scheme, this LEGO-like experience lets you build your own city and defend it from invasion.

The \$40 Skyscraper Mayhem that we reviewed comes with eight "Kreon" figures and 431 pieces that let you build a skyscraper and three vehicles. The set includes a Sonic Motion brick that make real city sounds, as well as five motion bricks that make your Kreon figures move. The kit requires 3 "AAA" batteries (not included). Other CityVille Invasion sets are available including Marina Madness (\$20).

The set also includes a code that lets you unlock game content in the free Kre-O CityVille app. In the app, you are the Commanding General of the CityVille S.O.S. (Special Operations Squad), and must stop the evil Dr. Mayhem and his minions from conquering your city, and the world. Features of the app include: Five unique combat maps; 15 weapons; 35 characters to play, each with unique and upgradeable hats and suits; 25 story missions, plus 400 replayable challenges to complete; 13 types of buildings to construct and defend with defense turrets.

Details: Hasbro, Inc., [www.hasbro.com](http://www.hasbro.com). Price: \$40. Ages: 6-14. Platform: iPad, iPhone, iPod Touch, Android. Teaches/Purpose: spatial relations, building. Entry date: 11/13/2013.



### **Legend of Zelda: The Wind Waker HD, The**

Clear, HD graphics and new features come to the Wii U version of Zelda; in The Legend of Zelda: The Wind Waker.

You guide Link as he sets out on the massive Great Sea to find his kidnapped sister. You will sail the seas in search of lost islands, battle enemies, fight mighty bosses and seek out the legendary Triforce. Features include: 1080p visuals, Wii U GamePad features that lets you manage your inventory and view maps; and a new sail that gives you more speed and brings you to your next destination faster.

Once you receive the "Tingle Bottle" item, you can connect with others by posting comments to Miiverse. Through this feature, comments or screen shots posted on Miiverse will wash up in various locations, such as the shores, of other players' games. You can also take and store a greater number of pictures as well as higher-quality photos with an improved Pictograph and then post them on Miiverse, and continue to play even when the TV is off using the GamePad.

Details: Nintendo of America, [www.nintendo.com](http://www.nintendo.com). Price: \$50. Ages: 8-up. Platform: Wii U. Teaches/Purpose: logic, spatial reasoning. Entry date: 6/12/2013.



### **ProScope Micro Mobile Digital Microscope Kit**

At NAEYC last month, Mark Bailey demonstrated the ProScope Micro Mobile Digital Microscope Kit (\$150, Bodelin) that comes with accessories that can turn a fourth generation iPod Touch or an iPhone 4 or newer into a handheld microscope.

Included with this kit is the lens assembly, which features a 20-80x zoom range, an adjustable lens collar, twelve built-in LEDs, and rechargeable power supply that provides up to five hours of continuous operation at maximum illumination.

A device sleeve lets you adjust it for the iPod Touch. Using the device's camera, the ProScope Micro Mobile Kit allows you to easily snap still photos and video of the magnified image using your iPod. The built-in rechargeable power supply provides up to five hours of operation. Available at [B & H bhpho.to/1d9QsqT](http://B&Hbhpho.to/1d9QsqT)

Details: Bodelin, [www.bodelin.com](http://www.bodelin.com). Price: \$150. Ages: 3-up. Platform: iPad, iPhone. Teaches/Purpose: science, a computer microscope. Entry date: 12/12/2013.



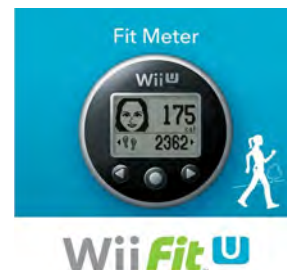


## Wii Fit U

Wii Fit U features many of the activities from Wii Fit and Wii Fit Plus, as well as more than 20 new activities that integrate the features of the GamePad and Wi Balance Board. The original workouts, such as bouncing on a trampoline or learning how to salsa dance, are designed to make fitness fun. You can also create your own personalized workout routine with Yoga, Strength exercises and other activities, or choose from recommended routines based on your fitness goals. Wii Fit U also features the new, improved Fit Meter, which lets you continue your workout outside the home. You clip it to your belt and it tracks not only the number of steps taken, but also the intensity and altitude of those steps. These combined data points provide you with an overview of your day's activities. You can sync this information to the game, allowing you track your activities and compare them to those of other members of your family. We liked the LED information screen.

Wii Fit U also features online gym communities where you can track with progress with family and friends, and work together to view and share your favorite activities. The Fit Meter retails for \$19.99, and you can download a trial version of Wii Fit in the Nintendo eShop.

Details: Nintendo of America, [www.nintendo.com](http://www.nintendo.com). Price: \$free. Ages: 6-up. Platform: Wii U. Teaches/Purpose: physical fitness. Entry date: 11/13/2013.



## Wonderful 101, The

Play as Wonder-Red, the leader of the Wonderful 100, as you unite your band of "Wonderful ones" to morph into powerful transformations such as a fist, sword, glider, or gun to battle invaders throughout Blossom City and all of Earth. They can also synthesize into bridges, chains and other objects that help you make it through the world's different environments.

As you play you will explore each stage to find helpless citizens and recruit them to join your army of heroes. The more heroes you gather, the more powerful your Unite Morphs will become. Other features let you fight alongside friends in five-player local co-op multiplayer, where each player controls a Wonderful One character. You earn parts by fighting aliens to upgrade or buy entirely new Unite Morphs at the in-game shop. For 1-5 players.

Details: Nintendo of America, [www.nintendo.com](http://www.nintendo.com). Price: \$60. Ages: 3-up. Platform: Wii U. Teaches/Purpose: logic. Entry date: 6/12/2013.

