BUCKLEITNER'S

Guide to Using Tablets With Young Children

Warren Buckleitner, PhD

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DEDICATION

To my daughters, Sarah and Jenna. You have been my best teachers.

ACKNOWLEDGMENTS

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INTRODUCTION

Using tablets with preschool-age children holds great promise for learning and fun. But there's a price to pay. It seems to also inspire concern and questions among adults charged with a child's care and well-being. I wrote this guide to ease this stress with good information—namely, easy-to-read tips and objective reviews of the best apps you can get. Think of this book as your trusted trail guide as you navigate this new terrain with your children.

If you're already comfortable with technology, you may think that using technology with a child means visiting a toy store and buying one of the many $100 "kids' tablets." Not so fast!

Today's tablets are powerful devices, and quality varies. They can play many roles in a child's life, for better or for worse. The outcome depends on which tablet you choose, the apps (or software programs) you put on it, and the context you create for its use.

This single device generically called a tablet can also be a movie camera, video game, artist's easel, or a million-channel TV. It can be a savior for a struggling student by providing interactive tutorials that can break down a tricky math concept or a set of spelling problems into simple steps. Or it can be nothing more than a distraction that absorbs hours of valuable time each day that could be spent more productively.

By sharing my expertise based on more than 20 years of experience with children's interactive media, I aim to help you make those important decisions to encourage children's play and learning.

As the editor of Children's Technology Review (CTR), I continually evaluate interactive media for young children. Two other teachers and I started CTR in 1993 after witnessing the explosion of children's software. CTR has grown from a small newsletter for colleagues into a powerful online database. By serving as an independent authority on children's technology, CTR has helped many parents, teachers, and librarians make educated choices about apps, video games, toys, and websites.

In 2001, we created the Dust or Magic Institute, an annual meeting of designers, researchers, and reviewers, with the intention to share examples of best practices in children's digital media. Besides those ventures, I spent ten years

covering children's technology for the *New York Times*. All that experience goes into the recommendations I make in this publication to help you choose technology wisely for the children in your care.

Before I begin, I would like to share a few important notes:

- This book is designed to be dynamic. New apps arrive every day. Therefore, in each section I link to a continually updated set of reviews in Children's Technology Review Exchange (CTREX). The links appear under icons labeled Stay Up to Date. They lead to a summary list. The links are designed to give you access to part of the list that contains the newer titles. To see the complete lists, you will need to be a paid subscriber to CTREX.

- I want my readers to know that I have no financial interest in any hardware or software company listed in this book. I've written this book from the point of view of a parent and teacher who puts the child first, always, ahead of the technology.

- You'll notice that many of the apps listed in this book run on Apple Products (primarily the iPad). I believe that hardware is only as good as the software it runs. As of this book's publishing date, the iPad is the best overall children's computing platform, by far. This may change in the future, and I've made every effort to describe the differences between various platforms to help you make the most out of what you might have.

Finally, successful use of technology must always start with an understanding of the child's age, interests, and individual abilities. So while you are using this publication to learn about technology, it is important to keep learning about the children in your care and make choices that reflect that knowledge.

1 Advice about Using Tablets

Putting a tablet in front of a child isn't enough. It's how you use this tool that matters. Here is a case in point from my experience with my seatmates during a trans-Atlantic flight.

I slid into the middle section of a Boeing 787, mentally ready for a seven-hour trans-Atlantic flight home. As a frequent flyer, I've learned to strategically choose my seat to increase the probability of having an empty one next to me. I was eager to spread out some work, plug into the AC power outlet, and get some writing done.

At first glance, I thought my scheme had worked. The middle section looked vacant. But a second glance shattered my work plans. It was filled by Nathan, age two years and three months. He was shy, smiling, and quickly retreated into his mother's arms. He soon returned my smile and shortly thereafter was exploring my earlobe. This was followed by a jumping session on his seat cushion that he had turned into a trampoline.

His mother was horrified. As we pulled back from the gate, she explained, extremely apologetically, that they were on their way to see Nathan's grandparents in Latrobe, Pennsylvania, for some quality bonding time. Although Nathan was used to traveling in airplanes, his mother noted something that every passenger in our section of the plane understood, "Seven hours is a long time."

"Yes, it is," I said with an understanding wink as I silently groped for the power outlet. I was determined to get some writing done anyway. I plugged in and employed "operation ignore Nathan" as I organized my computer work.

Out of the corner of my eye, I could see Nathan's mother rummaging through her "keep Nathan busy" bag. She seemed well prepared, with no-fail snacks, various toys, Nathan's cherished stuffed bear, and his special blanket. But there was one more thing. As soon as we were in the air, she pulled out her white iPad Mini in a leather case—the kind not made for kids—and set it up on Nathan's tray. "Don't worry," she said to me. "I've downloaded five of his favorite movies." The Disney-Pixar movie *Toy Story 3* was just starting, and for a few minutes I thought she was right.

But he wasn't fine. He had obviously seen the movie before. Even Buzz and Woody couldn't hold the attention of this wriggly two-year-old. Nathan started to do what normal two-year-olds do . . . move. The iPad kept falling, first back and then on the floor, and at one point, it ended up one row behind us.

Nathan found a solution. He turned around, sat on his serving tray, and then propped the iPad on his seat. From this position, he soon started a game of peekaboo with the passengers in the row behind us, forgetting the movie completely. Then he started playing with all the buttons within his reach, turning the overhead light on and off and calling the flight attendant.

It became clear that I wasn't going to get much work done on this flight. Out of self-preservation and for the good of the others, I took out my iPad and showed him an app called My Very Hungry Caterpillar, by StoryToys. The caterpillar was waiting, hungry, and—like Nathan—growing bored. It followed my finger around the screen, so I started talking to it, as if I were talking to a pet. "So . . . how do you like flying on an airplane, little caterpillar?" I asked. "Are you still hungry?"

I started picking fruit from one of the trees, and Nathan's small hand reached over to my iPad, attracted by one of Eric Carle's beautiful green and yellow pears. We were just reaching our cruising altitude when a spark of magic happened.
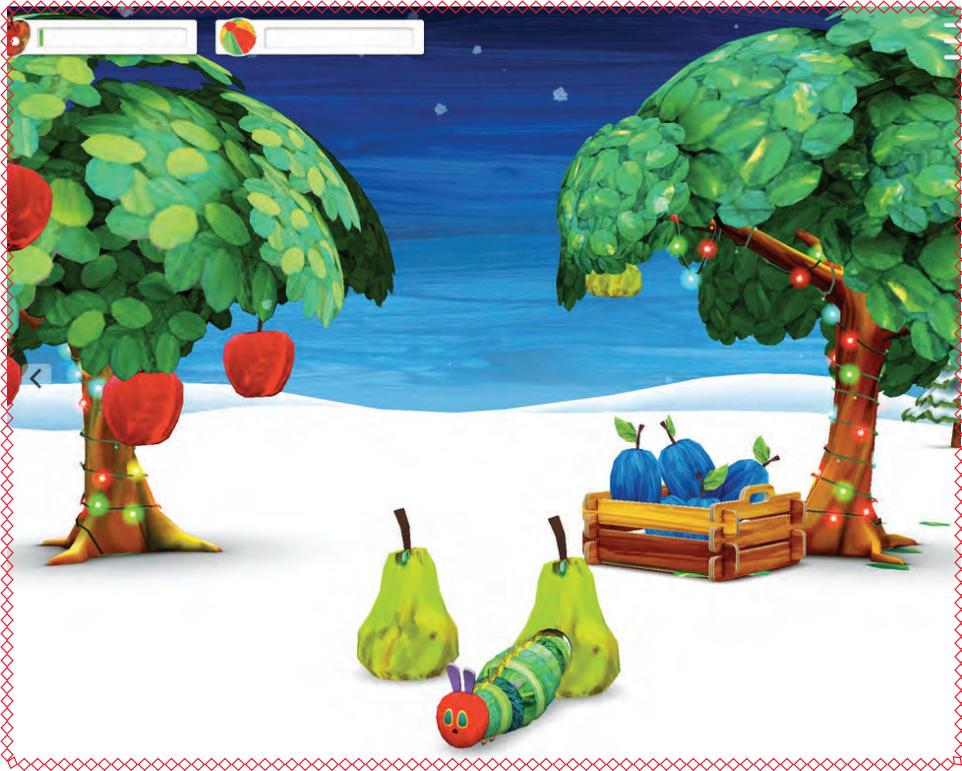
My Very Hungry Caterpillar ©2015 StoryToys. Used with permission.

The instant Nathan's finger touched the screen, the pear popped off the tree and fell to the ground. "Apple!" he cried, with a huge smile. To Nathan, even the pears and the plums were apples, but the hungry caterpillar didn't care. It kept eating as Nathan and I took turns plucking fruit. No words, lessons, or tutorials were exchanged between Nathan and me. We just played.

I could tell that Nathan was in the very early stages of learning to interact with a touch screen. Up to this point in his short life, iPads had mostly displayed moving pictures for passive watching. The idea that he could interact with the characters on the screen seemed extremely exciting to him. He jabbed faster and squealed louder. His instinct was if he pressed harder, he would get the result more quickly, and he was not so good with swiping.

In five minutes, my iPad had moved from my seat to Nathan's, and he had mastered the swipe. My hungry caterpillar was now Nathan's very hungry, very curious, very busy caterpillar. My app kept Nathan's fingers busy and his mind engaged with new ideas. His mother obviously preferred this type of screen time to the passive Disney watching that was the only other alternative. And after three hours, Nathan was asleep with a happy smile. So was his mother. When we landed, Nathan's mom asked me for the name of the app that had transformed her child and our flight.

Choosing an Appropriate Tablet

Before buying apps, you have to carefully consider which tablets will work best for the children who will use them. You can choose among Android models from many different manufacturers, which run Google's Android operating system, and Apple's different iPad models, which run Apple's iOS operating system.

Screen Size

One factor is screen size; you generally have three options when choosing mobile devices for children:

- **Small (a 4- to 6-inch screen, measured diagonally)—** These devices include phones and the iPod Touch, which can easily fit in a child's hand and may feel more personal.

- **Medium (a 6- to 9-inch screen)—**This category includes the Kindle, iPad Mini, most Android Kids Tablet models (Nabi, Kurio), and Samsung Galaxy Tab Kids Edition models.

- **Large (a 10- or 13-inch screen)—**Options include the regular iPad, the iPad Pro, and various Android models such as the Samsung Galaxy Tab.

Each size has unique characteristics, but for a younger child, regular-iPad-sized screens deliver the most bang for the buck. That's because most children's apps were designed with this screen size in mind. Screen fonts are the right size, and navigation icons are slightly larger.

Internal Storage

Another consideration is the amount of storage. Many non-iPad tablets, such as the Amazon Fire, come with a fixed amount of internal memory measured in gigabytes (GB). In 2015, the average size of a child's app was about 130 megabytes (MB), with a range of 30 MB to 987 MB. To put this in context, a really big app can take up as much as 1 GB of space. Most educational apps are much smaller, about 50 MB (meaning 20 could fit into 1 GB).

A movie like the HD version of *Toy Story* takes up about 5 GB of storage. With most iPads, you have the choice of 16, 32, 64, or 128 GB of memory, with a price range of $400 to $900. Most low-cost Android tablets come with only 8 GB of built-in memory, but they tend to offer some sort of expansion slot. If so, you can increase this built-in storage using an SD or a micro SD card. A 16 GB card costs about $10.

How much do you need? To find out, consider how many apps and videos you want to store on your device:

- Small, or 16 GB, can hold only three full-sized movies, 16 of the biggest apps, 123 average-size apps, or 800 of the smallest apps. But that doesn't leave much room for photos or music, which can easily eat up another 5 or 6 GB.

- Medium, or 32 GB, is the best balance between size and price, giving you the ability to store 246 average-sized apps.

- Large, or 64 GB, gives you 492 average-sized apps.

- Extra-large, or 128 GB, can hold about 984 average-sized apps.

Protective Case

Tablets are incredibly robust devices with no moving parts. My 2010 first-edition iPad has been dropped, stepped on, and attacked by dogs, and its battery has

lived through hundreds of charges or partial charges, when plugged into different power sources all around the world. Sometimes it has hiccups, such as when I update the Apple operating system, iOS. But five years later as I write this, it is still being used in a classroom every day.

The biggest worry is dropping your tablet on a hard floor or having it transformed into a bathtub toy. There is no good solution to the bathtub situation except to make water play strictly off limits when using the tablet. However, you can protect against dropping by purchasing a silicone or rubber frame or a foam case made specifically for young children. Most Android tablets include a case in the purchase price.

When choosing protective covers, consider these questions:

- Does the case block important controls such as the on-off or volume buttons?

- Is the headphone jack easy to access?

- Is it hard to connect to the charging port?

- Does the case adequately protect the device?

- Can you easily snap the tablet in and out of the case?

In terms of protective cases for iPads, two brands stand out: Big Grips and Gripcase USA. Here is why:

- Gripcase by Gripcase-USA (www.gripcase-usa.com), ages three and up. On the plus side: Gripcase comes in five colors and has handles that can let you hang your iPad from a hook. The high-density foam generally doesn't block the key ports or speakers. Drawback: The case takes up a lot of room and makes the iPad harder to slip into a backpack. As with just about any case, you have to slip it off to find some of the ports.

- Big Grips Tweener and Big Grips Slim by KEM Ventures Inc. (www.biggrips.com), ages three and up. On the plus side: Big Grips Tweener is a thinner foam case designed for the iPad Mini; the Big Grips Slim is similar for the iPad. The case holds your iPad snuggly in a cushion of foam, greatly increasing the chance that it can survive even a dramatic fall. Of all the KEM foam cases, the Slim for the iPad and the Tweener for the iPad Mini offer the best combination of protection and portability.

Ideal Tablet Purchases

BUCKLEITNER RECOMMENDS

Get a regular-size iPad with two cameras and at the very least 32 GB of internal storage, if you can afford it. The front-facing camera is best for seeing your own face, and the rear-facing camera allows you to take photos and videos of other people and things while seeing what you are shooting. Despite costing more, this configuration will give you the biggest bang for your buck. An iPad Mini is the next best option. Reserve some money for a protective foam case and at least 50 apps, if you want to keep your purchase safe and keep it usable for the child.

If you prefer an Android, the Samsung Galaxy Tab Kids, for ages 3 and up, is hard to miss, with its bright orange and yellow case. It also stands at the head of the pack of current 7-inch tablets when it comes to some key factors—namely, ease of use, parental controls, and app selections—making it one of the better choices for children. This tablet offers access to just about everything Google—Google Mobile Services, Google Search, Gmail, Google Plus, YouTube, Google Talk, Google Maps, and especially the Google Play Store.

If you purchase a tablet with a capacitive touch screen, you will want to have a stylus as well. AppCrayon by Dano Toys is cheap (about $10), light, and fun to use. It works with any type of tablet or smartphone (Apple or Android) that has a capacitive touch screen. The triangle-shaped 4-inch stylus is made of soft rubber, with black strips of conductive material on the side that effectively transfer your hand's capacitive charge down to the black squishy stylus tip, essentially giving you an extension of your finger. The triangular shape is easy to grip and won't roll off the table. A loop on the end makes it possible to put it on a lanyard. The only drawback might be that children—and dogs—will want to chew on it. Just about any variety of stylus will be fine, however, and the most important judge is the child who will use it.

Replacing TV Time with App Time

Besides tablets and smartphones, you can consider another option: Apple TV 4th Generation ($150 and up). It offers a nice, hidden surprise for families: a growing number of apps that are compatible with Apple TV are showing up in the App Store. Seeing these app icons on your living room TV helps to blur the line between app time and video time. You can find video options from PBS Kids Video, StoryBots, and YouTube. But you can also find some interactive options. You can turn your screen into a giant planetarium with Star Walk Kids, or an interactive fairy tale with Sago Mini Fairy Tales. The offerings make it easier to turn that big screen into something to play with instead of just to watch. The

controllers, which you charge using your Apple-to-USB connector cable (just like an iPhone or iPad), connect to the TV using Bluetooth and are just as responsive as any game console. Besides the small Siri Remote that is included, you will probably want to buy the $50 Nimbus SteelSeries controller, which could easily be mistaken for a Microsoft Xbox or Sony PlayStation controller. This new generation of Apple TV also has built-in assistive technologies. Besides the ability to use voice search by having Siri in the remote, you can turn on a voice-over feature to have the menu icons read out loud.

Initial Use of Your Tablet

When using a new tablet for the first time, make sure you have a wireless network (wi-fi) connection. If any challenges arise, it usually helps to ask experienced users for advice and to search online for solutions to specific problems. As with any online research, make sure you're consulting reputable sources.

Touch-Screen Skills

Chances are that you can already use a touch screen effectively without classes or tutorials. Like the thousands of other skills a child acquires in the early years,

StoryBots Tap & Sing ©2015 JibJab Media. Used with permission.

touch screen skills come through playful exploration. Children begin handling tablets with jabs, and ultimately they become sufficiently skilled to use coordinated, multitouch gestures. The mastery of touch screens is a gradual process, as with speaking or writing. First, the child scribbles with crayons before learning to write with a pencil and paper. Gradually, with playful experimentation and formal learning, the child moves from scribbles to something resembling letters. Eventually, the child can produce words, sentences, and paragraphs. Similarly, touch screens require a combination of experimentation and some simple modeling from adults. Over time and with experience, children will learn how to interact in more sophisticated ways with touch screens.

As children spend time with responsive apps, they will become proficient, mastering more subtle techniques such as the swipe, the flick, the pinch and unpinch, and even the five-finger open and close. These two five-finger screen behaviors start with a fairly coordinated pincer grasp, a developmental skill that tends to appear at about twelve months of age. The reverse pincer grasp, called the "unpinch," appears much later. Children master both five-finger gestures only with plenty of experience, whether they are dealing with real objects, such as carrots or tidbits of cereal, or with responsive apps in the digital world.

Tablet Basics

When you first take a tablet out of the box and its design is unfamiliar, it can be difficult to do even simple tasks such as adjusting the volume or finding the plug to charge the battery. Before you try to turn on your new tablet, you might want to use an existing computer to view a how-to video on YouTube that explains your specific device and the basics for getting started. It helps to be familiar with the basics of turning on the hardware and opening software apps before you take the tablet out of the box.

For example, if you have an Android device, it may not have a physical home button, which allows you to exit from an app and return to the home screen. Android, an operating system currently developed by Google, powers a wide range of devices from different companies that tend to be much cheaper than Apple devices. However, fewer apps are available for Android devices, and some people find Android tablets harder to use than iPads. Because many Android devices do not have a physical home button, children can get trapped in an app. Some Android developers have compensated for these challenges by creating child-friendly shells that lay over the Android operating system. Shells can include features such as an app timer and the ability to create individual profiles for children.
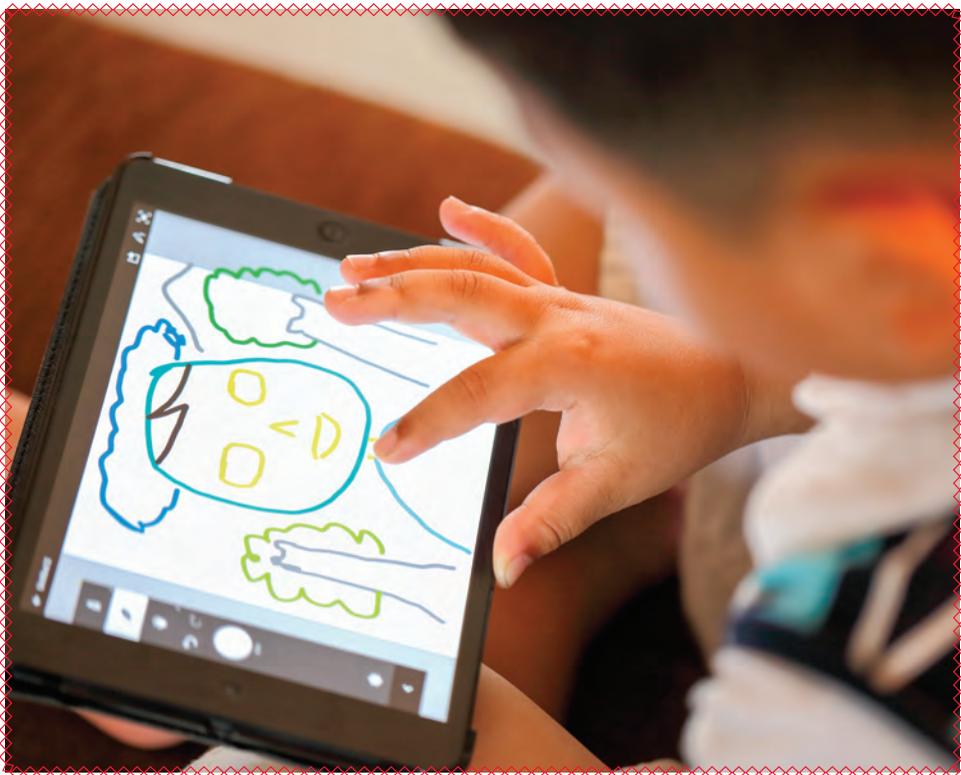
One popular model is the Amazon Fire HD Kids Edition, which comes with an initial price that includes one year of access to thousands of books and videos. Although the app selection is again a fraction of the Apple offerings, the Fire's low price and higher-quality content library makes it worthy of consideration. Just remember that after the year is up, you will have to pay a monthly fee to continue your child's access. Also watch the amount of on-board storage. Some of the Amazon tablets have very little internal storage (just 8 GB) and no SD card expansion. This means that even though you might be able to buy lots of apps, music, books, and movies, you won't have the room to store a large amount. Amazon does offer a two-year, no-questions-asked guarantee for replacement if the child breaks the tablet.

Using the Apps

It is simple enough for children to open an app; they can tap the appropriate icon on the screen and start it up. But there are many more necessary navigation skills for fully capitalizing on tablets and apps. Like riding a bike or walking, children can't master these navigations skills just from being shown how to make the gestures with their fingers; they have to experiment and practice! So stock your tablet with responsive apps that instantly reward any touch with a meaningful response (see recommendations in Chapter 3).
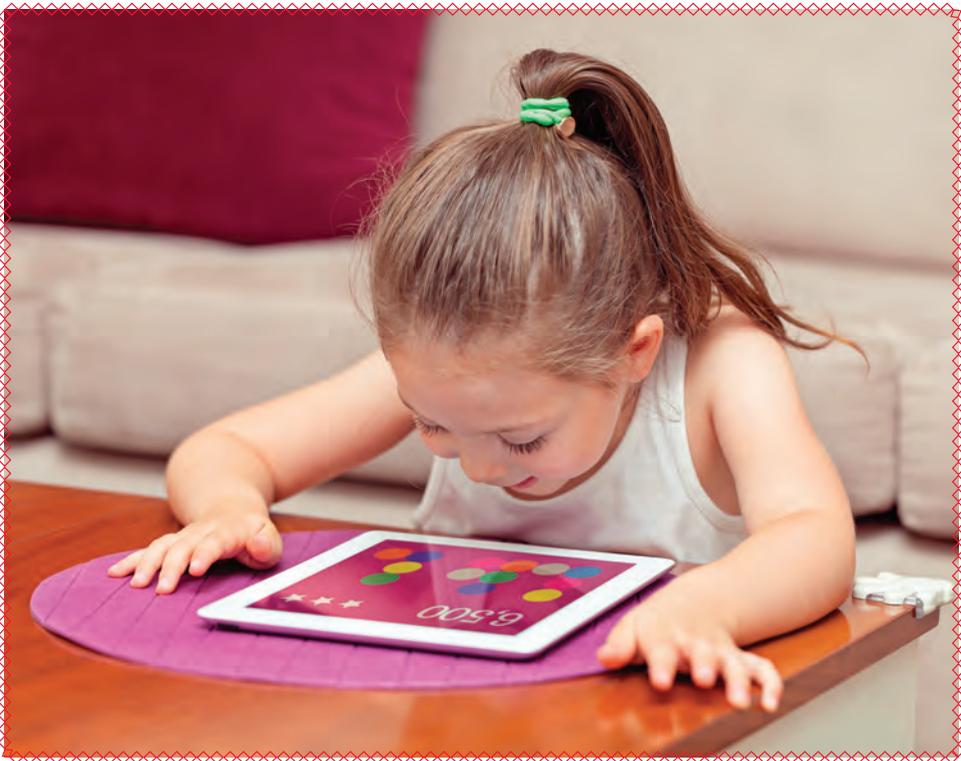
Once you have a large assortment of apps, you and the child will need to know how to find a particular one. On an iPad, swipe down anywhere on the screen with one finger. A search option should appear with a keyboard. Of course, if the child does not yet know letters or can't type, you will need to help with the search. Type a few letters of the title to see a list and tap the name to open it. Note that you can also search by the name of the app publisher. On an Android tablet, you can either download and install an app for app searching or search for an app from within the Google Play store. Start Google Play, and touch the magnifying glass in the My Apps column.

To delete an app on an iPad, hold your finger on the icon for a few seconds until it starts to wriggle. Touch the X to delete it. Press the home button to stop the apps from wriggling. If you accidentally delete an app, you should still have a copy floating around in the cloud, just in case you want to download it later.

To delete an app from an Android tablet, go to the device's settings menu and then go to the apps or application manager menu. Find the app you would like to remove, and click on the uninstall option.

For a child's very first screen experience, choose an app like Sago Mini Music Box from Canadian publisher Sago Sago Toys, where any touch on the screen makes a sound. Of course, there's also My Very Hungry Caterpillar by StoryToys. If it worked with Nathan for seven hours on an airplane, it might work for your child too.

BUCKLEITNER RECOMMENDS

STAY UP TO DATE

Use this link to check out CTREX reviews of other starter apps that are responsive and can help a child make the connection between their hand motions and activities on a screen.

http://bitly.com/1GpNI8N

Care and Safety

Think about setting aside a place for the children to use the tablet as you would other learning and play materials, such as a picture book or a tub of blocks. Put the tablet within their reach, and make sure it is near some sort of power outlet. You may find a spot for it on a table, in a clear container, or mounted on a wall. Make sure the children always know where to find and keep it.

Note that although there is little risk of a shock from the USB cables that connect the tablet to a power outlet, young children should not be plugging or unplugging electronic devices. Take the precaution of using safety plugs in all unused AC power outlets.
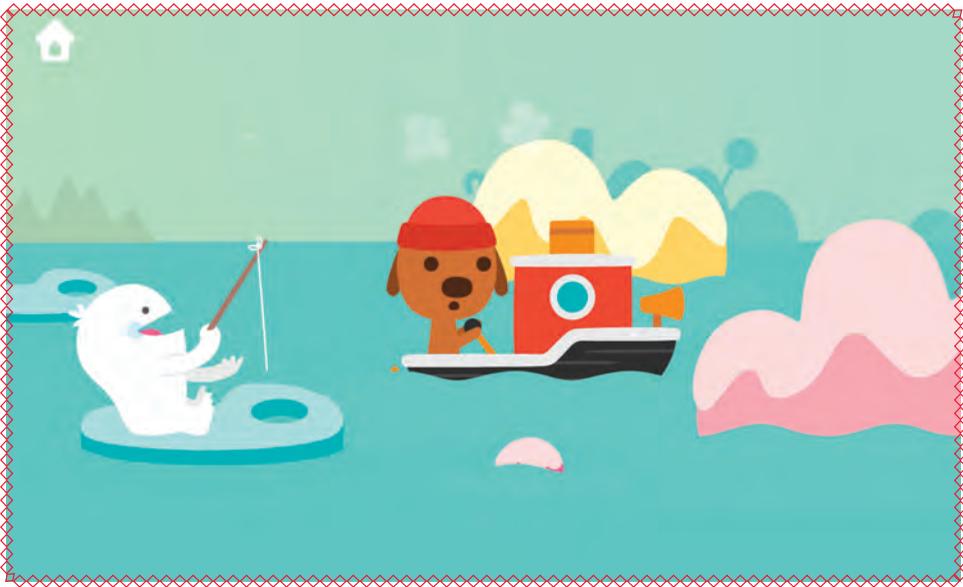
Sago Mini Music Box. ©2015 Sago Sago Toys. Used with permission.

If an app makes a sound when children touch the screen, they are more likely to keep experimenting and learning how to use the device.

After you put the tablet in its foam case, you can personalize it. You might want to put a family photo on the lock screen, which is the first screen you see. For the home screen—which is the background for all the app icons—don't use an image that is cluttered because it will be distracting to the eyes. You might want to stick with one of the built-in images. Make sure you have a high contrast between the app icons and the background.

Skip using a clear plastic screen cover. All tablets have a slippery surface that is intended to be self-cleaning. The surface is also designed to be childproof and scratch resistant. This hard screen has huge benefits for use with young children, whose fingers are commonly covered with some sort of slimy substance. The best way to clean the screen is with a soft cloth—I use my shirt sleeve. For the hard jobs, you can also use an extremely small squirt (just a few drops) of water with the cloth, taking care not to let moisture near any openings on the device.

Introducing a New App

The first time a child uses an app, a little guidance can go a long way. The best way to introduce a new concept is with something real—the more tangible, the better. As an all-knowing adult, it's incredibly tempting to take over and make sure it's done right. But that approach runs contrary to the way young children

learn. Remember Jean Piaget's well-known comment, the gist of which was: when you teach a child something, you take away forever his chance of discovering it for himself. Piaget's advice holds true for children's apps.

So how do you overcome the temptation? Use a tried-and-true teaching technique called guided discovery. As you point to an icon on the screen, ask the child, "What does that do?" That way, you point at the solution, but you don't tell the answer. You literally guide the child toward the discovery. Of course, it can be hard to watch a child struggle, but that can be when the learning is most significant. Strive for self-control instead of stepping in and taking over. Give children a bit of slack in the leash of learning. The paths they take might be different, but they also might be more interesting.

Before introducing the app to the child, try using it yourself. Become familiar with how the menus work, take note of any difficult spots, figure out how to control sound and files, and so on—all before you introduce it to the child.

In some cases, you can try modeling the app, using some self-talk. As you play with the app, think out loud so the child can see what you're doing. "I'm going to touch that bear . . . I wonder what will happen." Keep your tone informational rather than artificially enthusiastic; you're describing, not selling. When the time is right, let the child have a turn or take over what you're doing. While the child is playing, label what you see going on. If appropriate, play along and take turns.
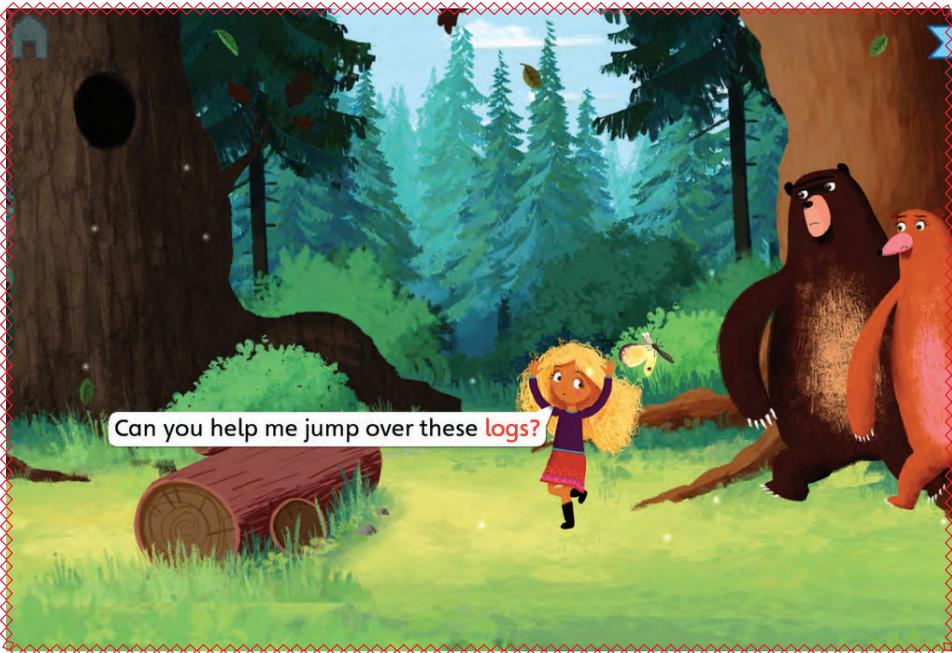
Goldilocks and Little Bear ©2015 Nosy Crow Ltd. Used with permission.

Interactive stories allow children to make choices for how the tale plays out.

Remember, it works best to use guided discovery or simply put your hands in your pockets to allow the child the freedom to explore. If you would like, you can see an example on YouTube as I watch two-year-old Max play with the program Busy Shapes (https://www.youtube.com/watch?v=JDTmbHYvVYk&feature=youtube).

Handy Tips

Questions and problems are going to arise when you're using technology. When something goes wrong with your tablet, your go-to solution is to find a different computer or smartphone and type your specific problem into a search engine. You'll be surprised at how much help you can find. In this section, I also will share some advice for specific problems.

Childproofing Your Tablet

Before the child starts using the tablet, you will want to take steps to protect the investment. You will need to turn on password protection for your device and for the app store where you purchase and download. Through parental controls, you can set restrictions on which content ratings you allow for apps. This does not prevent children from seeing mature content when they search. However, you can restrict what they are able to buy or download. You can also remove the Internet browser if you would like.

The Google Play site provides information about setting parental controls on your devices that use the Google site. (Go to https://support.google.com/ and search for "parental controls.") Go to the Apple support site to read information on setting parental controls on iPads or iPhones and to find out how to turn off in-app purchases (https://support.apple.com/en-us/HT201304). Amazon Fire Kids Edition has some default settings to keep the content child-friendly, and Amazon provides information on setting parental controls on other Fire tablets (http://www.amazon.com/gp/help/customer/display.html?nodeId=201729930). Also consider your privacy settings and whether you want to turn off location services for some or all apps. Just be aware that some map and weather-related apps depend on these features.

Speedy Charging

Imagine this scenario: You're headed out the door for a car trip, and you reach under the sofa to find your child's tablet. But it's dead!

If this should happen to you, there are several ways you can speed the charging:

- **Use a large-sized charger.** Phone or tablet chargers generally come in two sizes, a smaller 5-watt size and a larger 15-watt size. The larger size has three times the power and the ability to charge the device faster. However, the larger size will speed up the charging process only on devices designed to draw more power from the higher-watt chargers. Not all phones will charge faster, but generally a tablet will.

- **Use airplane mode.** Go to the settings, and turn on airplane mode. This turns off the radio transmitter in the tablet, saving energy so your battery can charge faster.

- **Turn off apps.** Your tablet will charge faster if it's not busy doing other things.

- **Keep an external battery handy.** Options vary in price from about $15 to $40, and they range greatly in size. Most start at 10,000 milli-amps, which is enough to give you at least a few hours of power in a pinch.

Screen Cleaning

Many people think that when they touch a tablet screen, they're touching glass. But they are actually touching a thin, clear polymer that is coating a special type of hardened glass, which makes it oleophobic, or resistant to oils. Besides being strong and hard, the screen's surface is slippery compared to glass, so body oils would rather stick to your finger, where they belong, rather than the screen surface.

To check it out, put a drop of vegetable oil on the screen and smear it around a bit. You'll see that it forms tiny beads, like the water on a duck's back. So you can simply wipe it off with a dish towel. But you still may see smudges left over from gooey fingers.

Follow the manufacturer's instructions for screen cleaning, but generally, you should avoid harsh substances such as household cleaners, alcohol, acetone, ammonia, or any abrasive cleaner. Instead, turn off the tablet so you can see smudges easier, and use a microfiber cloth to wipe the screen. If you still have a smudge, you can add some moisture with a puff of breath and rub a bit longer without the pressure. You can also try a slight misting of distilled water with the cloth; just don't get any liquid near the edges or near any openings.

Dealing with Water Damage

Unfortunately, sometimes a child's tablet will get wet. This isn't likely to end well, because water and electronics don't mix. If this happens:

1. Dry off the device with an absorbent towel or cloth. Get as much water as possible out of the device. It can be risky to blow-dry or vacuum the tablet, as this moves the moisture around.

2. Place the device into a large bowl of dry rice for a day; it will draw the moisture out.

3. If the device still won't turn on, consider trying to change the battery. This process isn't for the faint of heart, however, because some tablet parts are glued together. You may want to take it to an authorized dealer.

If you do end up having to replace the hardware, you should still have a copy of all your content in the cloud, providing you've synced your tablet to a computer or downloaded the apps from the Amazon Appstore, Google Play, iTunes, or another app cloud storage service. In that case, your apps should be safe and sound, living on a server for the app store. As long as you have your screen name and password, you have a key to your virtual app storage closet.

Questions and Tips

This section covers some common challenges that arise when children are using tablets and suggests problem-solving strategies.

Limiting Time on an App

On an Android device, you can download a timer app for controlling the amount of time a child spends on an app. A feature called Guided Access in Settings on the iPad will allow this kind of control also. To find it, go to Settings, General, Accessibility, and then scroll to the Learning section. Tap Guided Access to turn it on. Basically, you will use a count-down timer that shuts the app off after the time limit that you set.

Avoiding an Accidental Exit from an App

You also might find it useful to limit how a child can exit an app.

On an iPad, if the child accidentally swipes the screen with four or five fingers, the entire app will move off the screen and get replaced with another app screen. This happens when a feature called Multitasking Gestures is turned on. This can result in tears, especially for a young child.

To see if your iPad has this setting turned on, touch the screen with all five fingers at once and swipe to the side. Does the entire screen slide with your motion? If so, your iPad has Multitasking Gestures turned on. To turn it off, go to Settings, General, and look for the multitasking option. Toggle it off. If your iPad is frequently used by younger children, it's probably smart to keep this option disabled.

Trouble-Shooting Problems

Let's face it—children are hard on gadgets. My two daughters and two dogs have managed to damage many things over the years, including many mobile phones and laptop-charging cables, and on one sad day, a laptop screen was shattered.
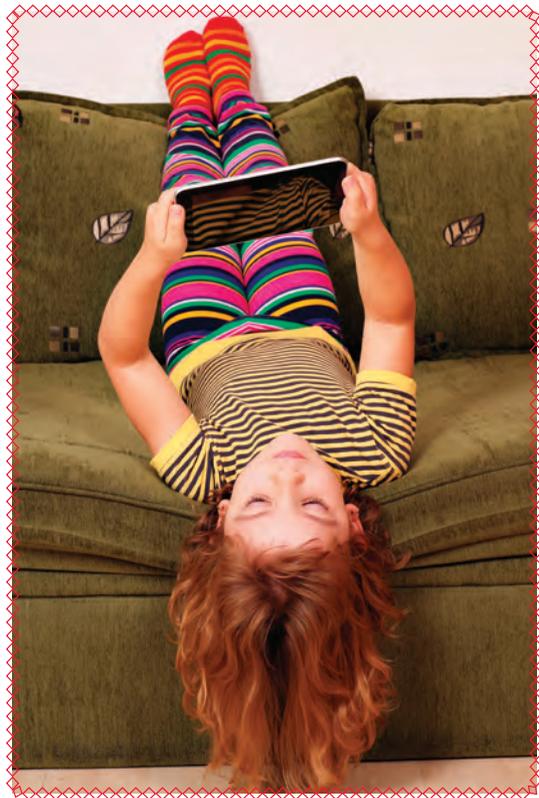
Here are some common issues that might arise with tablets:

- **Problem: The screen is cracked.** Under extreme cases, the screen will crack but still function. Remember that a screen is not really glass—it's a laminated, thin layer of extremely hard plastic and glass. So there's no danger of sharp edges. But sorry—a broken screen should be fixed professionally. The good news is that many independent screen-fixing shops are springing up and repair costs are dropping to around $100.

- **Problem: The tablet is frozen.** Hold the sleep-wake (or on-off) button for five seconds or so. For iPads, you should ideally see "slide to power off" appear. Use the button to restart your iPad, and it should be usable. For iPads or Android devices, doing a complete restart can help to clear out any glitches or frozen apps.

  If you can't turn off your device, you can try to reset it as a last resort. That involves pressing the sleep-wake button and home button for at least 10 seconds until the Apple logo appears on the screen.

- **Problem: The screen is dark, and the tablet won't respond to the on-off button.** To make sure the battery has some charge, plug it into the wall for at least fifteen minutes. If the tablet still won't turn on, use another device to find directions for resetting the tablet.