



Children's TECHNOLOGY REVIEW EXCHANGE

Spring 2021: March, April and May

Hey kids!! Content
FOR RENT

Get your mom's
iPad Code!



A photoshopped screen capture from *Toca Life World Build Stories*, which uses a pay-as-you-go-model. There are no such signs in the actual app.

Children's Technology Review Spring 2021

March - May 2021
Volume 29, No. 1 Issue 244

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* Denotes "Editor's Choice."

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ONE YEAR SUBSCRIPTIONS are regularly \$60 for four quarterly issues in PDF format, plus full online database access. Weekly issues are sent mid-week. Site subscriptions are available. Contact *Children's Technology Review*™, 126 Main Street, Flemington, NJ 08822 or call 908-284-0404. Visit www.childrenstech.com to learn more.

PRODUCT SUBMISSIONS. Send one product or download code with release information to Warren Buckleitner (warren@childrenstech.com) Editor, 126 Main Street, Flemington, NJ 08822 (Phone: 908-284-0404).

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- We don't skim from other reviewers.

PUBLISHER INFORMATION *Children's Technology Review*™ (ISSN 1555-242X) is published weekly, with four monthly PDF issues by Active Learning Associates, Inc. Send address changes or new subscriptions to *Children's Technology Review*™, 126 Main Street, Flemington, NJ 08822 or circulation@childrenstech.com. **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>

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"Dare mighty things." The message coded in binary on a parachute by Ian Clark — a NASA Perseverance engineer.

MARS IS COOL

The easter egg style message printed in binary code on the Perseverance parachute ("Dare mighty things.") was excerpted from a larger quote by Teddy Roosevelt, who said "Far better is it to dare mighty things, to win glorious triumphs, even though checkered by failure ... than to rank with those poor spirits who neither enjoy nor suffer much, because they live in a gray twilight that knows not victory nor defeat." Have a look at the photograph at <https://mars.nasa.gov/mars2020>. Can you dust off your binary and crack the code?



The quote is also on the wall of mission control.
<https://youtu.be/3XjGGt0RsJM>



MANY POPULAR CHILDREN'S APPS TRICK CHILDREN

Back here on earth, parents are starting to loath their children's tablets, for good reason. "It creates an endless source of conflict in our house — all he wants to do is watch movies" said one mom with a 2 1/2 year-old-son (in full disclosure, we're talking about my Grandson). My advice remains the same. If movies are the only option on your iPad, expect trouble. You'll bring all the linear media "glued passively to the screen" issues into your home. If you hide the icons on YouTube, Disney+ and son on, and fill your iPad with "nutritious" developmentally appropriate options, like the math apps we've described on page 6 your child's attraction to his or her iPad can become something you feel good about.

Another source of trouble comes when busy parents or children download "free" apps that are specifically engineered to tease children into spending lots of real money. On page 3 of this issue, I've started to publish my analysis of Apple's top 100 kids' apps. My working title of this work is called "Like Taking Candy from a Baby, Revisited" playing off the title of the 2008 paper I published on children's Internet sites, at <https://bit.ly/3v5EBsQ>. As part of this work, I've created a set of seven ethical content descriptors. See page 3.

Finally, I'm happy to inform you that Dust or Magic has a date and location. It will be May 27-29, 2022 at Asilomar in Monterey CA. That's plenty of time to get vaccinated. Stay safe; and enjoy the issue. Feedback always welcome.

Note our quarterly format for 2021-22.

Spring (March 1)

Summer (BolognaRagazzi Winners, June 1)

Fall (September 1)

Winter (December 1)

Our weekly reports will continue to be delivered to subscribers by email. Contact us with questions (info@childrenstech.com).

Dust or Magic

Save the date — The next Dust or Magic will be May 27-29, 2022 at

Asilomar Conference Grounds in Monterey, CA

Your Subscription is Your Key to 13,332 Archived Reviews

Your paid \$60 subscription to *CTR* includes exclusive password access to the *CTREX* database — a collection of reviews going back to 1985. If you've lost or forgotten your password, email info@childrenstech.com or call 908-284-0404 and leave a message.

Like Taking Candy from a Baby, Revisited

A survey of popular children's apps by Warren Buckleitner

Every Saturday morning, my father would give me an allowance of \$.25 cents. Sometimes he'd run out of quarters (I was the fourth of six kids, and it was the 1960s) so he'd give me two dimes and a nickel instead. My older brother convinced me that it was better to get three coins instead of one. From a child development point of view this makes sense. I was a five-year-old preoperational thinker. At age eight, my brother was a stage ahead of me.

So to me larger coins have more value. That's why I'd willingly give up my smaller dime for his larger nickel, week after week. It wasn't until I was a few years older that I understood that I was being shortchanged. And I like to remind my brother that he owes me about \$30 in 1965 dollars (about \$250).

This developmental logic was useful to know back in 2008 when I collaborated with Consumers' Union to explore what happens when young children go online. We used ethnographic methods, asking parents to videotape their own children when they went online. It was an eye-opening study. The children, aged 3-to 12-years, were both sophisticated and vulnerable. On one hand, they were able to use search engines, and could use passwords to make purchases. On the other hand, many would fall for the false promises of banner ads or shady links by downloading "free" games, ending at sites like Addicting Games, Mulberry.com and Nick.com; with games specifically designed to sell TV programming, toys, deliver ads or — in one case — to change a parent's default browser settings.

Back when children's media was young, this type of behavior rang alarm bells even though there were just a few channels running on big, dumb TVs. The head of the FCC, Newton Minow, called television a "vast wasteland," and Fred Rogers, Joan Ganz Cooney were able to convince government leaders to invest in ethical TV options that helped shape an entire generation.

From a human development perspective, a young child growing up today is very much like a child growing up a half-century ago. You can still trick a child to give up her dime for your nickel. It's even easier to trick them into downloading a "free" app. Children's media, and the way it is sold and delivered, has changed dramatically thanks to pocket sized devices with clear screens and unlimited channels. And so have the ethical challenges.

To better understand exactly what's going on, I turned to the source: Apple, who promotes a list called "100 Free Apps for Kids." Many of these have full reviews with more details in CTREX or in this issue. Here are some of the most common ethical and unethical practices in these apps.

- **Behavioral advertising.** Ads for external website pages, clicking an advertisement, watching a video or submitting a form.
- **Contextual advertising.** When a publisher puts links to their other apps, toys or licensed characters inside the app. An app featuring LEGO toys is considered contextual advertising.
- **Free.** The word "free" is misused and overly interpreted in children's media. A free app can mean many things. Most commonly, it means that the download is free, and there's a sample of content before a purchase must be made. This purchase is called an IAP (in app purchase). A better word would be "sample."

- **Intermittent reinforcement.** It works to keep gamblers on a slot-machine, and it also works to keep a five year old coming back to an app by offering "gifts every week" and in some cases a roulette wheel. Some days you get rewarded; other days not.
- **Onboarding.** Start with an easy, fun game with intuitive controls to get you to stay in the game. Once you're invested, you start bumping into a paywall to increase the chance that you'll make a purchase.
- **Peer pressure.** You see the avatars of other live players with fancy accessories. Or you're told that there are other players waiting to play with you, behind a paywall.
- **Teasing.** Showing a tempting item that they can't have without making a purchase, downloading an app or watching an ad.

Here are the results of the first 14 out of 100 planned Ethical Rubric screenings. I've listed the app title, a short description of the content, a YouTube link to the game play, and a list of ethical content descriptors. Note that apps and app store lists continually change. If you notice errors, please make a notation in the CTREX database.

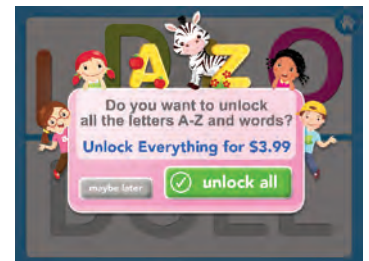
Ethical Practice

First, some good news. There are plenty of ethical apps hidden in the app stores. Over the past two years, 93 titles have received a passing score on the CTREX "Fred" rubric (<https://bitly.com/20XyfeQ>); each flagged with the blue Ethical seal. These are experiences that — at the time of review — respect the "sacred space" (per Fred Rogers) between the child's mind and the media creator. Here's that list, in CTREX <https://bitly.com/3qDFNAI>. In addition, here are three recent updates from Apple's Top Apps list.

Daniel Tiger's Storybooks is not flashy, and the interactive features are limited. Other than requiring you to register with your local PBS station and some contextual advertising (for PBS characters), there is no unethical content. <https://youtu.be/EkwIGXSORps>



Above: CTREX Ethical seal is displayed on products that score above 90% on the Fred Rogers rubric
Below: Presenting a binary choice with one option larger is a form of teasing for a preoperational child.



Nice Skating is a paid app that is free of gender or ethnic stereotypes with no ads or unethical content. <https://youtu.be/DvF14a2toyE>

Sesame Street Family Play is a listing of 130 printed ideas for non-screen-based games, delivered by text. To be clear, the app itself is not the experience— it is merely the delivery mechanism. Many of the games are for one or two players, making this a good source of co-op activities. Content was drawn from Sesame Street’s Caring for Each Other online resources. <https://youtu.be/jFE4PyjQ-E4>

Unethical Practice

These apps scored low on the FRED rubric. They are listed alphabetically, with a video to illustrate how they work, and with their ethical content descriptors

Dave and Ava Learn and Play gives you a sample of each of four activities; and one video. The rest of the content can be unlocked by purchasing a subscription for \$30 per year. In the alphabet activity, you get the first three of 26 letters. <https://youtu.be/EtWH66HBGZc> Teasing, onboarding.



Disney Story Realms is set of "flat" stories with no interactive features; mixed with word searches and connect-the-dot puzzles. While there's a good deal of free content, the app contains large menus of content that can be viewed by children, but do not function unless the app is unlocked for \$60/year. https://youtu.be/a5S_kShMqoY Teasing, contextual ads, intermittent reinforcement.

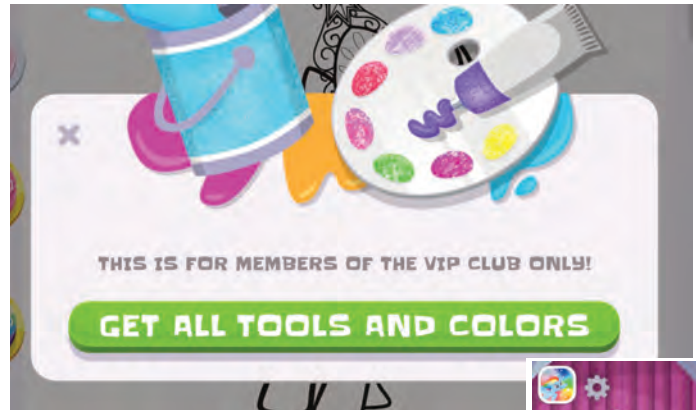


Dino Fun Kids Dinosaur Games is riddled with pop-up subscription prompts, despite advertising that it has “No Ads! No Data collection and share!” <https://youtu.be/NW8HWPTIURM> Ads, teasing.

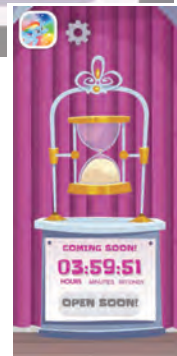
GoNoodle. No longer just for schools, this sponsor-supported service is a good option to have on your child’s tablet. Just note that he/she might see a short promo for a Netflix video (so some videos serve as a gateway to commercial content). <https://youtu.be/gH4kf9NG4AQ>. Behavioral ads.

Kiddopia - ABC Toddler Games offers a responsive design and plenty of content that is not always well integrated, as indicated by some screen rotation issues. Children are teased with tempting items that are locked. According to the app tracking service sensor tower.com Kiddopia was downloaded 300,000 times in February of 2021, generating \$2 million. <https://youtu.be/1952ylerbL4>. Teasing.

My Little Pony Color By Magic is a well crafted case study in unethical children’s design. The app is “free” to download, and the



first levels are fun. There’s an Art Studio that lets you choose your own colors, but offers you items, like glitter, for sale for “VIP members.” You are encouraged to keep playing in order to save progress, using a time pressure technique. The real cost is as much as \$5/month, which auto-renews. <https://youtu.be/AuGkNC-nwAQ>. Teasing, time pressure, contextual ads, auto-renews.



PJ Masks Moonlight contains three fun, addicting and well-designed games that are combined with a store that features additional content. Beside promoting the PJ Masks brand and characters there are no explicit ads, although children have access to additional content offered in a store that is inside the parental gate. Entertainment One (eOne) is a video/app maker owned by Hasbro. <https://youtu.be/QUl6rezkA9Q> Cross promotion, teasing.

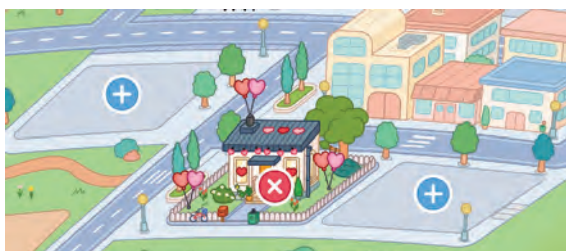


RaceCraft: Build & Race is a noisy, flashy first-person racing game that is free to download, but costs \$7 to unlock. It's a classic teaser. You start by dragging and dropping a starter set of parts onto a building area, and then and "drive" your car on your track in first person. You don't actually steer your car; and the parts snap together automatically so there's not much creativity, skill or problem solving. This app reminds you that there are other live players who want to race with you. But that's only possible if you purchase the \$7 content pack. The app displays the ESRB Certified Kids' Privacy Seal and it contains contextual advertising including the option to watch ads for rewards from Budge Studios. The ads are removed after a purchase. The app contains social media links behind a parental gate. https://youtu.be/VY_gWQ_H2oc. Contextual ads, teasing, onboarding, intermittent reinforcement, peer pressure.



Scooby Doo Mystery Cases is loaded with fun, free content, but it uses intermittent reinforcement to increase engagement. The number of treats you get depends on when you uncover the monster, creating a perfect setting for repeat behavior. You could win a lot of snacks, or just a few. The motive is clearly to encourage children to return each day to perhaps get lucky with a lot of Scooby Snacks. Here's a look at this technique <https://youtu.be/9Vy3fDr8b8s>. Intermittent reinforcement, onboarding, contextual ads.

Toca Life World Build Series combines expert Toca Boca design with teasing, onboarding and intermittent conditioning. If you download the free version, you are shown an entire neighborhood full of empty lots. You get one for free. But if you want to build another (marked with large plus) you can either destroy the house you just built, or you can buy a new plot of land for \$1.99. To remove the teasing you can purchase the "Mega Pack" for \$84.99. The app cleverly calculates the price based on the materials you already purchased, and it's a one-time purchase, with no auto renewals. It's important to note that this app generates huge amounts of money. In one month (February of 2021) it was downloaded 4 million times, generating \$2 million in revenue according



to Sensortower.com. <https://youtu.be/4K4IIYpAh9g>. Teasing, onboarding.

Urban City Stories is a Toca Life-like sandbox style app, with city/urban themed items that can be moved around. The cost is reasonable -- just \$5 to unlock all the areas; with no subscription needed. The trouble with this app is that you don't know if a door is locked until you go through it. The ethical option would be to have the lock visible on the door in advance, perhaps along with the word "preview." <https://youtu.be/X8kJSpx2oi8>

Conclusion

Considering how easily millions of adults are fooled by offers of free credit reports, spam calls and "order before midnight" commercials, we think it is irresponsible to subject children to these same hard sell behavioral tactics. Publishers and resellers of children's apps should make design changes necessary to eliminate manipulative tactics for profit.

To parents — If you're not comfortable inviting pushy, manipulative salesperson into your child's playroom be wary of the apps that Apple recommends. These apps can take your money; but they also take something irreplaceable — your child's time. In addition, according app tracking services like Sensortower.com, "Free" apps with behavioral engineering generate far more revenue than paid apps. That money comes from somewhere. Free is not free.

Publishers of children's interactive content need to be reminded they are dealing with a special audience that thinks differently than adults because of their developmental level. Resellers of children's apps, especially Apple, Google and Amazon should improve labelling at the point of sale, and do more to help ethical publishers compete on the same level.

A sign of a civilized society is the way it treats its young, and that includes a child's app time. There's more at stake here than more profit.

See also: Advertising in Young Children's Apps: A Content Analysis

Last fall a group of researchers from the University of Michigan looked at 135 children's apps, classifying ads. 129 (95%) contained at least one type of advertising. These included use of commercial characters (42%); full-app teasers (46%); advertising videos interrupting play (e.g., pop-ups [35%] or to unlock play items [16%]); in-app purchases (30%); prompts to rate the app (28%) or share on social media (14%); distracting ads such as banners across the screen (17%) or hidden ads with misleading symbols such as "\$" or camouflaged as gameplay items (7%). Advertising was significantly more prevalent in free apps (100% vs 88% of paid apps), but occurred at similar rates in apps labeled as "educational" versus other categories. The paper concludes that there are "high rates of mobile advertising through manipulative and disruptive methods. These results have implications for advertising regulation, parent media choices, and apps' educational value."

Meyer, Marisa; Adkins, Victoria MSW; Yuan, Nalingna MS; Weeks, Heidi M. PhD; Chang, Yung-Ju PhD; Radesky, Jenny MD Advertising in Young Children's Apps: A Content Analysis, Journal of Developmental & Behavioral Pediatrics: January 2019 - Volume 40 - Issue 1 - p 32-39

Help For the Pandemic Slide

Ten Apps That Can Turn Your iPad into a Personalized Summer Math Tutor by Warren Buckleitner

Every teacher knows about the summer slide. It could also be called the “blank stares of September” — and it happens most frequently with fact and skill laden subjects like the Three R’s (reading, writing and arithmetic). That’s because these subjects benefit most from practice, repetition and coaching — things that aren’t compatible with days at the beach, or a year of remote home learning.

As a normal school year starts to look more like a reality next fall, many parents might feel as if their children might have slipped. Rather than hire an expensive math tutor, a more affordable option is to turn your tablet into one. Here’s a collection of affordable, ethical apps for math skills that include with grade-level features. First some tips:

- 1. Just because a child isn’t being educated doesn’t mean they are not learning.** Make every day a learning experience by asking children to write, read and talk. The libraries are open; so get books to keep them reading.
- 2. Get some Apps.** There are hundreds of good, ethical choices in CTREX. Be sure to download them first and start up each app before handing the tablet to your child. That’s because many apps can be customized to your child’s level.
- 3. Hide the distractions.** Put icons video players (especially YouTube, Disney+ and so on) out of site.

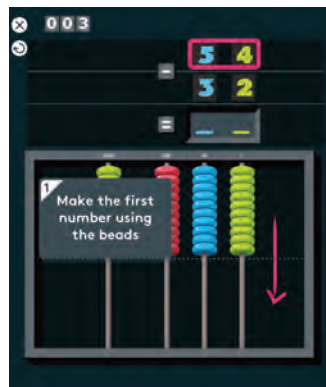
PRE-K AND KINDERGARTEN

Khan Academy Kids. Free, easy-to-use, comprehensive and able to track multiple children; this complete curriculum contains approximately 775 leveled early reading, math and logic activities; including videos and ebooks; plus a drawing/coloring space. It’s easy to make your child a profile so that progress is saved.

By the Khan Academy, www.khanacademy.org, (\$free on iPad, iPhone <https://itunes.apple.com/us/app/khan-kids/id1378467217?ls=1&mt=8> <https://play.google.com/store/apps/details?id=org.khankids.android> <https://www.amazon.com/gp/mas/dl/android?p=org.khankids.android>), for Preschool and Kindergarten.

Montessori Numbers: Learn to Count from 1 to 1000 is an elegant early math sandbox will let your child freely tinker with early mathematical relationships. You can freely drag-and-drop blocks to build the numbers in order. When your set is complete, you are rewarded with a set of unit blocks for free building, and further informal exploration of math concepts. Because there are different challenges — up to 999, there’s something for every young mathematician. If you like this app, you’ll also like **Math Wizard for Kids** by the same publisher

By L’Escapadou, www.lescapadou.com, (\$2.99 on iPad, <http://bit.ly/montessorinumbers>), for preschool through second grade.



Montessori Numbers: Learn to Count from 1 to 1000

GRADES K - 3

Bugs and Beyond contains 18 activities for Pre-K and early elementary age children. You can hunt for a matching bug in a jungle, program a robot to navigate through a maze, or feed realistic looking kitten. As with previous “bugs” apps, the illustrations are realistic when keeps things interesting.

Little Bit Studio, LLC, www.littlebitstudio.com, (\$1.99 on iPad, iPhone <https://apps.apple.com/us/app/bugs-and-beyond/id1393702002>), for grades K - 4.

DragonBox Big Numbers takes a more indirect route, providing children with opportunities to explore number relationships. The setting is a lush jungle world full of “nooms” (unit block creatures), and things to collect. The more items you collect, combine and count, the more parts of your world you unlock. This is a wonderful way for children to informally discover the amazing relationships that reside in numbers.

By WeWantToKnow AS, <http://www.wanttoknow.com/>, (\$7.99 on iPad, Android <https://itunes.apple.com/us/app/dragonbox-big-numbers/id1161717622?mt=8> <https://play.google.com/store/apps/details?id=com.wewanttoknow.BigNumbers>), for grades K - 5.

Math Tango. Explore a playful, animated island that is home to a family of friendly musical monsters. Your objective is to earn money and monster crystals by solving well designed addition and subtraction puzzles. The coins are used to purchase items for your island. Content includes 25 monsters, 24 missions and 50 store items. There’s a nice variety of math problems, making it harder for more than one child to play. The challenge increases with correct answers.

By Originator, www.originatorkids.com, (\$free with IAP of \$12 on iPad, iPhone <https://itunes.apple.com/us/app/id1234698308?mt=8&ign-mpt=uo%3D4>), for grades 1 through 4.

UPPER ELEMENTARY

Fiete Math Climber. Looking for a fun, well designed math facts drill experience? This app is all about math facts, starting with simple addition and going up to multiplication with carrying of tens. After you create an account for your child by entering your child’s name and grade, it’s very easy to get started. The app does all the hard work — with auto leveling, and automatic bookmarking — so your child’s progress is saved (locally).

Ahoiii Entertainment UG, www.fiete-app.com, (\$2.99 on iPad, iPhone, Android <https://itunes.apple.com/us/app/fiete-math-climber/id1271712039?l=de&ls=1&mt=8> <https://play.google.com/store/apps/details?id=com.ahoiii.FieteMathClimber>), for grades K - 5.

Teachley: Fractions Boost. Hands on math pedagogy comes to the racetrack. You drive by tilting your screen like a steering wheel, to try to drive your car through a gate, using a fraction clue as your key. For example, if you are given a target fraction of 1/2, you must hit the gate in the center. If you miss, you are given a set of well designed tutorials that illustrate how fractions work. This app is especially good for fraction drill. It is backed by intelligent pedagogy that quickly rewards mastery, and supports the building of understanding.

Teachley, LLC, www.teachley.com, (\$3.99 on iPad, iPhone <https://itunes.apple.com/us/app/teachley-fractions-boost/id1245167060?mt=8>), for grades 3 through 5.

Slice Fractions 2. One hundred playful puzzles start easy and get progressively more challenging as they introduce core fraction concepts. We liked how well the problems match your ability.

Ululab Inc., <http://ululab.com>, (\$3.99 on iPad, iPhone <https://itunes.apple.com/us/app/slice-fractions-2/id1313342412?at=101PQn&ct=press-kit>), for grades 1 through 6.

NumberGym’s TableTrainer turns your iPad into a customizable set of timed times tables drills. You drag the short math equation toward the answers, which are arranged in a circle. Because there are up to ten answers, you are forced to solve the equation rather than take a guess. Your progress is saved to a classroom control panel.

By NumberGym Software, www.numbergym.co.uk, (\$1.99 for iPad <https://itunes.apple.com/us/app/numbergym-tabletrainer/id913546512?mt=8> and Android <https://play.google.com/store/apps/details?id=air.uk.co.numbergym.TT40>), for grades 3 - 6.



Feature Reviews and New Releases

SPRING 2021

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

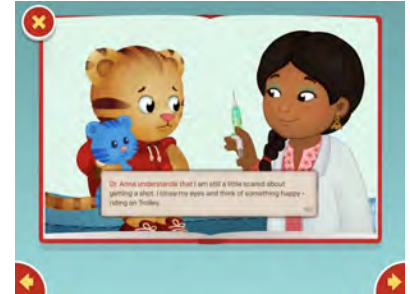
Daniel Tiger's Storybooks (update)

A small collection of six short stories narrated by Daniel Tiger about life's lessons. These include going to the Doctor, sharing, babysitters, making a present for dad and so on.

While the stories are good, and the text is highlighted the first time it is read, there are some limitations. From an interactive point of view, there's very few features. You can tap on the screen to launch a generic motion; but few of the items do anything. This is not a "Living Book" loaded with hot spots. In addition, the text is small. Features include the ability to control the downloads (Wi-Fi is required do download content) and you can toggle between English and Spanish. Each book includes a familiar song and a short matching game drawn from the theme

Stories include Big Brother Daniel, Daniel Shares His Tigertastic Car, Daniel and His Friends, Daniel's Babysitter, Neighborhood Clean Up, and Something Special For Dad. There are two reading modes: With the narration on, Daniel Tiger reads the books. Learn more at pbskids.org/daniel

Details: PBS Kids, www.pbskids.org. Price: \$2.99. Ages: 3-up. Platform: iPad, iPhone, Android. Teaches/Purpose: Reading. Rating (1 to 5 stars): 3.9 stars. Entry date: 12/6/2020. []



Ease of Use	9	78 %
Educational	7	
Entertaining	7	
Design Features	6	
Good Value	10	

Dave and Ava Learn and Play

The animated nursery rhymes are the best part of this app, which starts with a clever spinning menu. The free version of the app gives you a taste of each of the four activities; and one video. The rest of the content can be unlocked by purchasing a subscription for \$30 per year. In the alphabet activity, you first listen to a song about a letter-related object (Apple for A) and then fill in a picture of the object. You can download the app for free to get 3 letters. The additional purchase will be applied to access all the letters of the English Alphabet.

There's no third-party advertising, and there's no need for an internet connection. But there's not much content given the price. Note that you can watch all Dave and Ava videos for free on YouTube, at www.youtube.com/daveandava, The app was made in Saudi Arabia.

Details: Dave and Ava Ltd, daveandava.com. Price: \$30/year. Ages: 3-6. Platform: . Teaches/Purpose: letters, numbers, music. Rating (1 to 5 stars): 3.5 stars. Entry date: 1/28/2021. []



Ease of Use	7	70 %
Educational	8	
Entertaining	9	
Design Features	6	
Good Value	5	

Dino Fun Kids Dinosaur Games

Clunky but playable, this is a collection of tried-and-true games with a Barney-like dinosaur theme. Most involve matching or jigsaw puzzles with drag-and-drop parts. The leveling is all over the place, and the free version is riddled with pop-up subscription prompts. We only played 12 of the games (see the video) but the app description lists 38, as follows: Icecream making, Cooking, Flapping, Math learning, Coloring, Jigsaw puzzles, Dino fly, Brush teeth, Brainteaser, Memory match, Pet care, Tie shoes, Eyesight check, Bath, Nail salon, Washing hands, Potty training, Dress up, Math games for kids K to grade 5, clock learning, coin games and alphabet tracing. We noticed some grammatical errors; and the graphics are haphazard. A child who downloads the free version will find a few fun games (we liked the candy-crush game) but will have to navigate through dozens of subscription prompts, even without tapping one of the locks.

Details: Avocado Mobile Inc., <http://joypreschoolgame.com/main/>. Price: free, \$40/year. Ages: 5-12. Platform: iPad, iPhone, Android. Teaches/Purpose: early learning, classification, logic, letters, colors, numerals, tracing. Rating (1 to 5 stars): 3.2 stars. Entry date: 2/23/2021. []



Ease of Use	7	64 %
Educational	6	
Entertaining	7	
Design Features	6	
Good Value	6	



Disney Story Realms

Excellent Disney illustrations, music and themes from Frozen, Toy Story 4, Moana, the Lion King -- are poured into a freemium shell that features ten "realms," each with collections of activities. These include a multi-level jigsaw puzzle, a dress up activity, a coloring area, dot-to-dot puzzles, and word searches. None of the games offer much that hasn't been found in thousands of other apps, but the Disney music and art gives this app some spark. The main menu also offers a collection of books are added according to seasonal themes. These books are not interactive. While there's a good deal of free content, the app contains large menus of content that can be viewed by children, but do not function unless the app is unlocked for \$60/year.

Details: Kuato Games, <https://www.kuatostudios.com/>. Price: \$5/month. Ages: 4-9. Platform: . Teaches/Purpose: reading, spelling. Entry date: 2/7/2021.

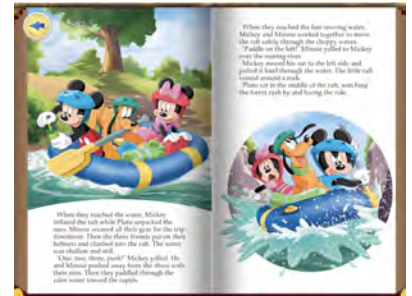


Exhibit Explorations

A series of four "virtual field trip experiences" for grades 3–12 that might be good for remote elementary curricula. Content is derived directly from Carnegie's Science Center exhibits that include demonstrations, exhibit tours, and live instruction from the CSC staff. Content is designed for (grades 3–5, 6–8 and 9–12). Themes include Engineering and Robotics (explore the robots in roboworld and investigating how they accomplish tasks. Then, visit educators in BNY Mellon Fab Lab Carnegie Science Center as they use a 3D printer and laser cutter to prototype a flying machine.

Animals and Aquaria: Understand how organisms interact with other living components of an ecosystem and how water quality affects populations. Featuring video interactions with the swimming, hopping, and slithering animals in the H2Oh! Field Station.

Space and Astronomy: Explore the relationship between the Earth, Sun, and other celestial bodies with out-of-this-world interactions in Buhl Planetarium and SpacePlace. End with a bang as the Theaters team demonstrates rocket propulsion using an alcohol-powered rocket.

Health and The Human Body: Observe how systems of the body behave and how external factors affect our overall health with a tour of BodyWorks. Then, visit the Works Theater for a demonstration of how the human body turns food into energy.

Fee: \$250 per classroom of up to 35 students

Details: Carnegie Science Center, <https://carnegiesciencecenter.org>. Price: \$250. Ages: 8-12. Platform: Windows, Mac OSX. Teaches/Purpose: science, STEM, technology. Entry date: 1/14/2021.



Family Feud

It's now been 20 years since we first reviewed a Family Feud trivia game -- the last was also by Ubisoft in 2010. This decade's version once again brings a version of the famous trivia game into your living room, by way of a game console (PlayStation 4, Xbox One and Nintendo Switch and Stadia). Content is drawn from a database of 1,500 surveys taken from the show. This is a multiplayer game, with up to ten players on two teams that can play either online and through local multiplayer.

There are four modes of play:

Classic (players compete with up to five others, against an AI family, with three levels of difficulty).

Party Battle (play group versus group using a local multiplayer feature).

Couch vs. Couch (players feud with players around the world in online multiplayer).

Live Show (broadcast your game on using Twitch or YouTube Live. Viewers guess the answers and earn virtual currency for in-game items).

Features include the ability to choose characters and unlock customization items, experience points, and special titles by playing more games.

Details: Ubisoft, www.ubisoft.com. Price: \$30. Ages: 10-up. Platform: Nintendo Switch, PlayStation, Switch, Xbox. Teaches/Purpose: trivia, logic, socialization. Entry date: 12/7/2020.





Fuser

A competitive DJ game, where you mix popular songs. The tools let you layer the tracks over one another, just as a real DJ would do. The audience reacts to your selections. You can share your mixes with the Fuser online community. You can play by yourself to go for a high rating, or you can invite a friend who also owns the game, to go head to head in a DJ battle. Here's the IGN demo that nicely illustrates the gameplay <https://youtu.be/Ojnt7Pe7C3c>

Note that the base pack comes with 25 songs. The VIP package costs a lot more, and give you access to hundreds of popular songs.

Details: Harmonix Music Systems, Inc., <https://www.harmonixmusic.com/>. Price: \$70. Ages: 10-up. Platform: Windows, Nintendo Switch, Xbox, PlayStation, Switch. Teaches/Purpose: music, rhythm. Entry date: 12/5/2020.



GoNoodle

Update 1/20/2021 No longer just for schools, this free, sponsor-supported service is a good option to have on your child's tablet. Just note that he/she might see a short promo for a Netflix video (so some videos serve as a gateway to highly commercial content). It is no longer subscription based.

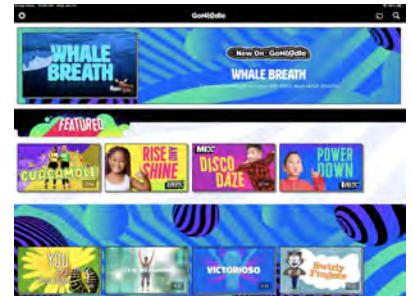
[Original review from 2015] This subscription-based video streaming service designed primarily for schools. First you search (by browsing or by keyword) for a short video from a variety of sources. Each is designed to get kids out of their seats and moving. The three-to-five minute movement videos are ideal for a teacher with a few minutes to kill between classes or before the announcements.

Some videos incorporate math, language arts and science; and they can work at home, too. You can run with an Olympian, have a dance party with Zumba Kids, get silly with Koo Koo Kanga Roo, or take a moment to reflect with Flow. There's running, jumping, dancing, stretching, and practicing mindfulness.

The videos are paid for by sponsors which include Children's Health, Blue Cross Blue Shield of Tennessee and Passport Health Plan.

GoNoodle launched in 2013. An Apple TV version was released in the Fall of 2015.

Details: GoNoodle, www.gonoodle.com. Price: \$10/month. Ages: 5-up. Platform: Apple TV, Windows, Mac OSX, Chrome, Internet Site, iPad, iPhone. Teaches/Purpose: videos, physical education, movement, gross motor. Entry date: 12/17/2015.



I Expect You To Die 2: The Spy and the Liar

Coming in 2021, the encore to I Expect You To Die. It comes with the promise of more content and new missions. In the story, you try spoil a bad guy's plans for you to die by solving timed puzzles. This is a one person game that is fun to play as a group. As with the first version, you use your hands to manipulate items in space. The exact hardware requirements are not yet known. Expect new locations and puzzles. Learn more at <https://iexpectyoutodie.schellgames.com/>

Details: Schell Games, <http://schellgames.com>. Price: \$call. Ages: 8-up. Platform: Oculus. Teaches/Purpose: language, problem solving, logic, following directions, socialization. Entry date: 1/28/2021.





Kiddopia - ABC Toddler Games

12/6/2020 Update some unethical use of in app purchases were noted. Children are frequently teased attractive items that must be unlocked. Better to pass on this app.

You get a lot of activities designed around basic school readiness content, in this subscription service specifically designed for preschool and kindergarten-aged children. We reviewed the Kindergarten level, and found 14 clusters of leveled activities or videos, many times starting easy and getting harder. Mostly take the form of interactive workbook pages, starting easy and getting harder. Testers noted that the music and graphics felt busy, although you can silence the repeating music and children are never trapped in any activity. The screen rotation is not integrated across the activities, and there is some sloppy pedagogical design. For example in one counting game, children are shown bunches of bananas and asked to count each bunch as a single banana. All in all, there's a lot of content to explore.

Details: Paper Boat Apps, www.curiousfingers.com. Price: \$6/month, \$45/year. Ages: 3-5. Platform: iPad, iPhone, Android. Teaches/Purpose: reading, math, school readiness, handwriting, letters, upper case, lower case. Rating (1 to 5 stars): 3.7 stars. Entry date: 7/24/2018. []



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

Logical Journey of the Zoombinis

Designed for schools (and school budgets) this relaunch of the 1997 game Logical Journey of the Zoombinis runs from your browser (using Unity). And it looks and plays the same way (point and click).

You start on Zoombini Isle where you must help its cute little round inhabitants escape. To find a new land on which to build their homes, the Zoombinis take a boat to a mysterious island. The story element is described by a dramatic sounding narrator, which adds to the fun. There they encounter pizza-eating trolls, hazardous bridges and other obstacles. The levels include Pizza Pass, Titanic Tattooed Toads, and Mudball Wall. Although they may sometimes need a little help, kids will enjoy solving the numerous logic puzzles to help the Zoombinis find their freedom.

The puzzles require some real problem solving. Children have to figure out which Zoombini characteristics such as eyes, noses, hair and feet allow them to cross the bridges at Allergy Cliffs– the cliffs "sneeze" creatures with incorrect features off of the bridge! In another puzzle, children must identify a particular pattern to create an electrical surge. There are 12 progressively more challenging puzzles to solve, each one providing hands-on practice with sorting, classifying, graphing and deductive reasoning.

This new web-based classroom version also features additional educator materials and guides, as well as tracking that allows educators to collect data and identify when students demonstrate the fundamental practices of Computational Thinking.

If you register, you can play a game for free. The annual classroom license (40 Seats) is \$200. A school license is \$750. The game was originally created by TERC. Learn more at <https://zoombinis.fablevisiongames.com/zoombinis/>

Details: Fablevision, Inc., www.fablevision.com. Price: \$200-up. Ages: 8-up. Platform: Windows, Mac OSX, Chrome, Internet Site. Teaches/Purpose: logic, problem solving, math, classification, attributes. Entry date: 12/14/2020.





My Little Pony Color By Magic

Well crafted but unethical, this is an auto-fill coloring experience featuring My Little Pony characters. The app is free to download, and the first levels are fun. You start in a museum that is in disrepair. Your job is to tap blank parts of a black line drawing to fill them in with color. This process is fun, but there's no creativity, and you can't go outside the lines. In addition your work is not saved. There's an Art Studio that lets you choose your own colors, but offers you items, like glitter, for sale for "VIP members. You are encouraged to keep playing in order to save progress (time pressure). The app is free to play, but can cost as much as \$5/month, which is automatically billed to your account unless you cancel. This cost is \$5/month. The fine print reminds you that this app may offer monthly and yearly subscriptions and that payment will be charged to your Apple ID Account at confirmation of purchase. The subscription automatically renews unless auto-renew is turned off at least 24-hours before the end of the current period.

Details: Budge Studios, www.budgetstudios.ca. Price: \$5/month or \$60/year. Ages: 3-8. Platform: iPad, Android. Teaches/Purpose: my little pony, coloring. Rating (1 to 5 stars): 2.9 stars. Entry date: 1/20/2021. []



Ease of Use	9	68 %
Educational	7	
Entertaining	9	
Design Features	8	
Good Value	1	

Nice Skating

It's OK to fall in this zany ice skating experience. Control the moves of your skater by tracing a path on the ice. As the music plays you can choose which routine he or she does. There are four skaters, each with an original musical selection.

After you pick your skater, you mix and match wardrobe elements (hats, shirts, pants and skates) before you sketch your pattern on the ice. As the music plays and skater moves, you can fool around choose moves, to try to earn applause and a bonus move. When all the skaters have finished their routines, you award medals. This app is free of gender or ethnic stereotypes. There are no losers. The music adapts dynamically to each stunt. No internet connection is required. Created by Flying Beast Labs and Biff Niff, featuring the work of Jens Peter de Pedro, a former designer for Toca Boca.

Details: Fox and Sheep GmbH, www.foxandsheep.com. Price: \$3.99. Ages: 3-up. Platform: . Teaches/Purpose: skating, creativity. Rating (1 to 5 stars): 4.5 stars. Entry date: 1/12/2021. []



Ease of Use	9	90 %
Educational	8	
Entertaining	9	
Design Features	9	
Good Value	10	

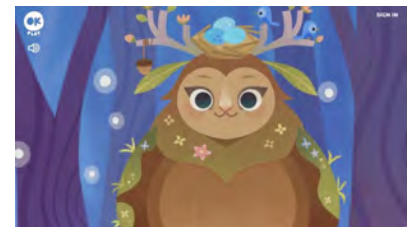
OK Play

A subscription-based app containing activities specifically for young children. There's a scavenger hunt for emotions, a cooking show, a dance-related emergency and a meditation game. Themes include getting along with others, solving difficult conflicts, expressing emotions, sharing and following directions. Each activity results in a personalized video that can be saved to a device or stored within the Moments section of the OK Play app. Content is updated.

As of January 2021, the chapters include:

- Spreading kindness
- Happy 101
- In someone else's shoes
- My emotions now
- Turn-taking
- Anger 101
- Seeing things in new ways
- Controlling impulses
- Meditation for kids

Details: OKCo Inc., <https://okplay.co/>. Price: \$40/year. Ages: 3-6. Platform: . Teaches/Purpose: logic, sharing, social emotional development. Entry date: 1/28/2021.





PJ Masks Moonlight Heros

Three fun, addicting and well designed games are combined with a store featuring additional content. You get a good deal of playtime for free, delivered through three side-scrolling maze games where you navigate through increasingly difficult challenges as you try to collect stars. The free levels feature PJ Mask characters -- each with a different ability.

Catboy has jumping abilities, Owlette can see hidden orbs, and Gekko can smash through obstacles. Beside promoting the brand and characters there are no explicit ads although children have access to additional content offered in a store that is inside the parental gate.

Entertainment One (eOne) is a video/app maker that is owned by Hasbro. The app is free to play, but it contains items that can be purchased for real money.

Details: Entertainment One, <https://www.entertainmentone.com/>. Price: \$IAP. Ages: 4-8. Platform: iPad, iPhone, Android, Kindle. Teaches/Purpose: timing, logic, problem solving. Rating (1 to 5 stars): 4.6 stars. Entry date: 1/20/2021. []



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

RaceCraft: Build & Race

This noisy, flashy first-person racing game is free to download, but costs \$7 to unlock most of the additional content. It's a classic teaser experience. You start by dragging and dropping a starter set of parts onto a building area, and then "drive" your car on your track in first person. You don't actually steer your car; and the parts snap together automatically so there's not much creativity, skill or problem solving. It's possible to race other players, if you purchase the \$7 content pack. To go faster, you tap a green acceleration icon. You can turn off the music in the Settings and Info menu. There are jumps, loops and rattling rails, along with slippery water splashes, bubbling lava or mud. As you race you collect "sparks" to unlock rewards. The app starts in 1-player by default, and offers you a 2-Player that leads to a locked icon. You discover this after you make the selection, which wastes children's time.

The app displays the ESRB Certified Kids' Privacy Seal. Children are reminded that In-app purchases cost real money. The app also contains contextual advertising including the option to watch ads for rewards from Budge Studios. The ads are removed after a purchase. The app contains social media links behind a parental gate.

Details: Budge Studios, www.budgetstudios.ca. Price: Free with IAP \$6.99 to unlock parts. Ages: 3-12. Platform: iPad, iPhone, Android. Teaches/Purpose: racing, bulding tracks. Rating (1 to 5 stars): 3.7 stars. Entry date: 2/5/2021. []



Ease of Use	8	74 %
Educational	7	
Entertaining	9	
Design Features	8	
Good Value	5	

Scooby Doo Mystery Cases

Free, fun and a little buggy, this is a collection of Scooby Doo-themed puzzles and cartoons. Most of the mysteries are nothing more than "find the hidden object" although there are some comics and dress up play sprinkled into the mix. It's not clear what content is free and what's not, because some of the icons in the free iOS version of this app don't work. As you play, you earn Scooby snacks which you can use to purchase costumes. Additional content includes videos and character bios. The app encourages you to play every day by offering daily snacks. The snacks are hidden behind a set of doors, arranged in a grid. Behind one of the doors is a hidden monster. The number of treats you get depends on when you uncover the monster, creating a perfect setting for intermittent reinforcement. The motive is clearly to encourage children to return each day to perhaps get lucky with a lot of scooby snacks. Here's a look at this technique <https://youtu.be/9Vy3fDr8b8s>

The bottom line? If you like hidden object puzzles, this is a good app for you. Just be award of the motivation traps.

Details: Warner Brothers Interactive Entertainment, Inc., www.warnerbros.com. Price: \$free. Ages: 6-up. Platform: . Teaches/Purpose: classification, logic, language, reading, comics. Rating (1 to 5 stars): 3.9 stars. Entry date: 2/9/2021. []



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



Sesame Street Family Play

Over 130 simple ideas for games are delivered by text (reading required). There are three categories: Keep Busy, Move Your Body, and Calm Down. Many of the games are for one or two players, making this a good co-op game, or one that a parent can share with a child. The games are designed for families staying at home and they'll work inside or outside. There are two language options -- Spanish and English, and reading is required. Content was drawn from Sesame Street's Caring for Each Other online resources.

Details: Sesame Workshop, www.sesameworkshop.org. Price: . Ages: 4-up. Platform: . Teaches/Purpose: socialization, interpersonal skills, language, reading. Rating (1 to 5 stars): 4.6 stars. Entry date: 2/9/2021. []

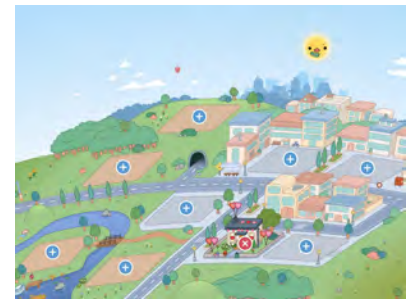


Ease of Use	10	92.5 %	
Educational	9		
Entertaining	N		
Design Features	8		
Good Value	10		

Toca Life World Build Stories

This is very well designed, pay-as-you-go microworld creator; with all the previous Toca Life content automatically inside. When you install the app, you are given credit for any previous Toca Life content you already may have purchased. You can then build one house for free, using a new building feature -- sort of like SimTown on a touch screen. Building and creating is a lot of fun and you work is saved automatically. But you quickly start bumping into various types of paywalls. See that vacant lot next to the house you just built? Give it a tap to learn that you can't build there, because you've already constructed your free house. You can buy the parts for the new house for \$1.99 however. As you might expect, there's a lot of tempting content hidden behind the locks; and special tempting offers on the main menu. The "Megapack" -- with all the content unlocked, costs \$85. Because children are shown this content but can't access it without paying, this app falls into the teasing category. The purchasing system seems more fair, because you "own" the content forever, and are given credit for past Toca Life content you might already have on your iTunes account. The free download includes 8 of the 78 locations and 39 of the 429 characters. In addition, new gifts are added each week "check back every week and discover exclusive surprise gifts!"

Details: Toca Boca, <http://tocaboca.com/>. Price: \$free with IAP as much as \$85. Ages: 3-12. Platform: iPad, iPhone, Android. Teaches/Purpose: language, logic, creativity. Rating (1 to 5 stars): 4.2 stars. Entry date: 2/15/2021. []



Ease of Use	9	90 %	
Educational	9		
Entertaining	9		
Design Features	10		
Good Value	8		

Urban City Stories

This is a Toca Life-like sandbox style app, featuring city/urban themed items that can be moved around. You can also snap still photos at any time.

The design is excellent, but not as well crafted as Toca Life. Some items don't interact in a fluid way with other items. The trash won't fall easily into the trash can, and characters can't be moved through doors (you have to use the character tray on the bottom of the screen). The free version of the app teases you by letting you go through a fun looking door that leads to a dead end -- you can see the dimmed out content, but it's behind a lock that leads to a purchase screen. The cost is reasonable -- just \$5 to unlock all the areas; with no subscription needed. This method could waste a child's time and energy. The ethical option would be to have the lock visible on the door in advance, perhaps along with the word "preview."

Testers also noted that the background music is loud but can be silenced in the parent options. All in all, this is a well designed experience with a good content set, but it's not as well designed as the original series that inspired it -- Toca Life.

Details: PlayToddlers, <http://www.playtoddlers.com/>. Price: \$5 to unlock the app. Ages: 3-8. Platform: . Teaches/Purpose: creativity, language. Rating (1 to 5 stars): 4 stars. Entry date: 1/28/2021. []



Educational	9	86 %	
Educational	8		
Entertaining	9		
Design Features	8		
Good Value	9		



We Read Too

A curated catalog of picture, chapter, middle grade and young adult books written by authors of color featuring main characters of color. The app links to existing bookstores, and is funded through affiliate links. There is no actually reading content in the app. The database makes it easy to browse and search, and lists details about each book.

Details: Kaya Thomas, <https://kaya.dev/>. Price: \$free. Ages: 5-15. Platform: iPad, Android. Teaches/Purpose: reading, ethnic diversity, Black authors, culture. Entry date: 2/15/2021.

