

Made for Kids, Priced for Profits:

Apple’s App Store Deception

HEAT INITIATIVE

ParentsTogether ACTION

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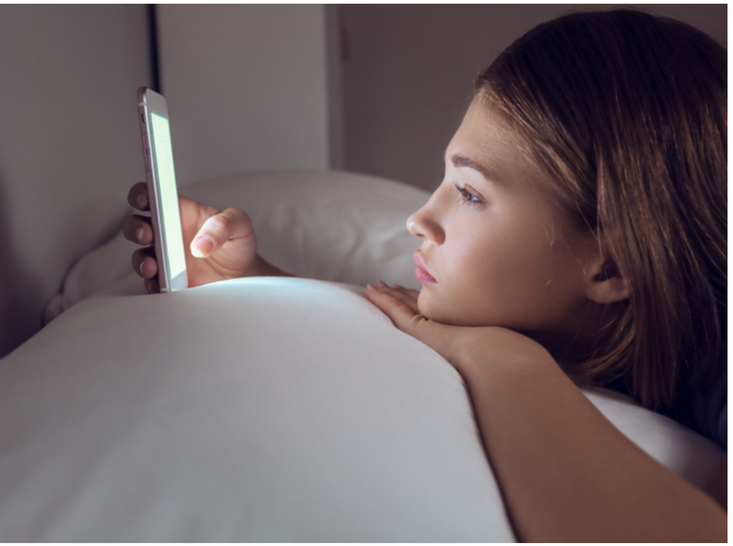
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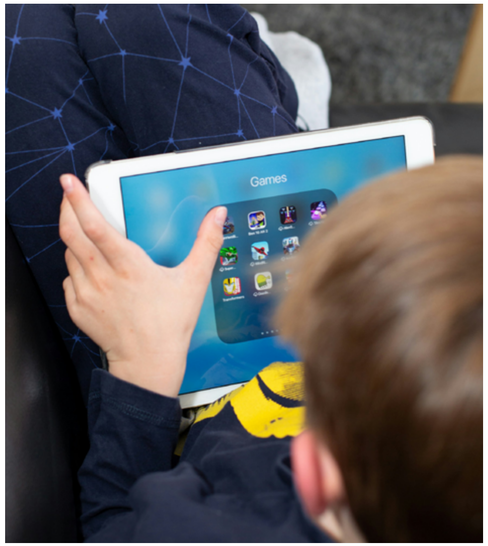
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Executive Summary





Apple devices are embedded into U.S. youth culture, with about **87% of teens owning an iPhone** and roughly 80% of households with children owning a tablet, **often an iPad**.

Despite the prevalence of child users, Apple fails to protect kids from a variety of safety and wellbeing risks in their App Store. Prior research by Heat Initiative and ParentsTogether Action found hundreds of apps rated as suitable for kids as young as 4 that expose them to harmful content or connect them to adult strangers. Other research has found the presence of in-app advertising that includes inappropriate or misleading ads, sometimes so frequent they disrupt basic app functionality, and of hidden fees and exploitative in-app purchases. These combined risks underscore the urgent need for stronger oversight and greater transparency in the App Store ecosystem.

Financial exploitation of App Store customers has been widely documented, particularly through scam apps, dark patterns, and fleeceware. Fleeceware refers to apps that misuse free trial offers or impose excessive subscription fees, often through deceptive design. Building on prior research about weak age ratings and insufficient safeguards for children, Heat Initiative and ParentsTogether Action wanted to understand how common fleeceware tactics show up in App Store apps targeting young children and their parents.

This investigation discovered that deceptive fleeceware apps targeting young children have generated more than $1 billion in App Store revenue from U.S. users. Two-thirds of these were given Apple's "Made for Kids" stamp of approval for ages 0-8 and specifically promoted as great choices for kids and parents.

Apps qualified as fleeceware if they had one of two qualities:

- **Short trial periods followed by high recurring fees**: Apps which lure users with brief free trials, then automatically switch to expensive weekly or annual subscriptions in advance of the end of their free trial and without clear reminders.
- **Unclear subscription terms**: Apps which are advertised as free but then require subscriptions, hide pricing and renewal details, or make it hard for users to understand the fee.

We also reviewed user reviews to understand if users had difficulty canceling, another common fleeceware tactic where apps make cancellation processes intentionally complex or buried, creating barriers for users to stop payments. Overall, this study identified 144 apps aimed at kids 0-8 from 57 developers using these tactics. Collectively, these apps have been downloaded more than 500 million times.

Deceptive fleeceware apps targeting young children have generated more than

$1B

in App Store revenue from U.S. users

Background

History of Fleeceware and the App Store

Fleeceware refers to mobile applications that exploit short free trial periods or impose disproportionately high subscription fees. The term, introduced by Sophos researchers in 2019, describes apps designed primarily to overcharge users for basic functionality readily available in free or low-cost alternatives.[1] These apps often levy substantial weekly, monthly, or annual charges—such as $30 per month or $9 per week—immediately following a brief trial period.[2] Subsequent research in 2020 revealed that fleeceware apps were frequently found in Apple's App Store, where they ranked among the platform's top-grossing applications. Common examples include adult-oriented apps like image editors, horoscope and fortune-telling tools, QR code scanners, and face filter apps.[3]
A 2021 report from Avast found more than 200 fleeceware apps across both the Google and Apple app stores had "over a billion downloads and over $400 million in revenue" in the apps' lifetime.[4] Ninety percent of these apps on Apple's App Store are from U.S. users.[5] The implicated apps "generally have no unique functionality and are merely conduits for fleeceware scams."[6] The researchers found that fleeceware apps often target younger users with playful designs and catchy ads on social media, promising "free installation" or "free to download."[7] Other researchers have found numerous tactics being utilized such as "the lack of explicit indication on buttons about the ongoing subscription action" and "not clearly indicat[ing] whether the subscription will automatically renew."[8]

Multiple studies have found that these apps relied heavily on fake reviews, making it hard to find honest feedback.[9] A 2021 Washington Post investigation of fleeceware found a quick online search uncovered services that sell positive reviews to app stores. They found that "of the 1,000 highest-grossing apps on the App Store, nearly two percent are scams…[and] bilked consumers out of an estimated $48 million during the time they've been on the App Store."[10]

A 2024 academic study on dark patterns in fleeceware analyzed 13,597 apps and found that 75.21% of 589 subscription-based apps exhibited fleeceware characteristics and accounted for roughly 5 billion downloads.[11]

Children frequently make unintended purchases in Apple's App Store, often without understanding the financial implications. A notable case involved a parent reporting over $16,000 in charges made by their 6 year old through in-app purchases.[12] Although Apple offers tools like Screen Time, password requirements, and Family Sharing's "Ask to Buy" feature, many parents are unaware of or struggle to implement these protections effectively.

These incidents are not isolated. The Federal Trade Commission (FTC) received tens of thousands of complaints from parents about unauthorized in-app purchases by children, prompting Apple to settle a case in 2014 by agreeing to refund at least $32.5 million to affected consumers. The FTC found that Apple's billing practices allowed children to make multiple purchases within a 15-minute window after a parent entered a password—without further authorization—leading to significant unintended charges.[13]

App Store Promises to Consumers

Apple calls the App Store a "safe and trusted place…ensuring that the apps we offer are held to the highest standards"[14] and assures Americans that they are "constantly improving its methods for sniffing out scams and usually catches them within a month of when they hit the App Store."[15] A centerpiece of this safety promise for kids and parents is Apple's "Made for Kids" section. This section is prominently featured on the homepage of the "Families" portion of their website. Apple states it "enforces strict standards" for this category of app and only includes "age-appropriate apps held to even higher standards for privacy and safety."[16] Apple's design and marketing language paints a clear picture for parents indicating they can trust the Made for Kids section to include safe, appropriate apps.

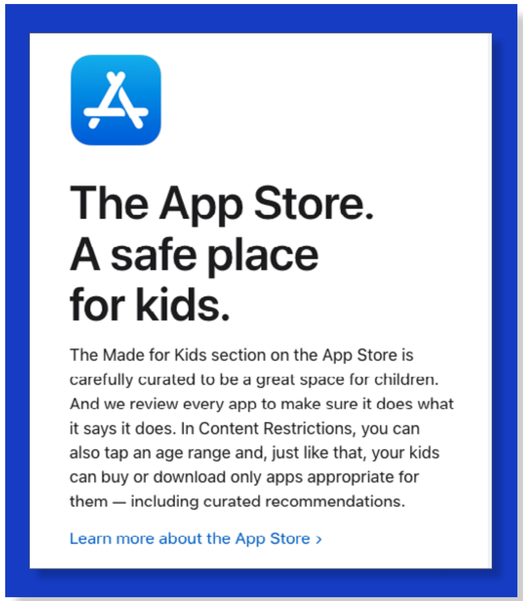
In their developer guidelines, Apple prohibits any attempts to cheat the App Store system, including manipulating reviews, rankings, or pricing, and engaging in fraudulent or misleading practices. However, these guidelines don't appear to be actively monitored or enforced, and developers have found ways to abuse them. For example, Apple allows developers to reset an app's overall rating by releasing a new version. This allows unscrupulous developers to essentially delete bad ratings complaining about fleeceware tactics by releasing a new version of the app.[17] In 2016, Apple removed the 'Report a Problem' option, which allowed users to report inappropriate apps. This removal was flagged by the Washington Post's fleeceware investigation noting "Though the App Store ratings section is filled with customer

1 https://news.sophos.com/en-us/2019/09/25/fleeceware-apps-overcharge-users-for-basic-app-functionality/
2 https://news.sophos.com/en-us/2020/01/14/fleeceware-apps-persist-on-the-play-store/
3 https://news.sophos.com/en-us/2020/04/08/iphone-fleeceware/
4 https://blog.avast.com/fleeceware-apps-on-mobile-app-stores-avast
5 https://blog.avast.com/fleeceware-apps-on-mobile-app-stores-avast: The report does not include a percentage breakdown. Nonetheless, the report states the apps identified in each app store had 500 million downloads yet the App Store apps generated $365 million while Play Store apps only generated $38.5 million. This results in 90.5 percent of the total revenue originating from the App Store.
6 https://blog.avast.com/fleeceware-apps-on-mobile-app-stores-avast
7 https://blog.avast.com/fleeceware-apps-on-mobile-app-stores-avast
8 https://www.usenix.org/system/files/sec24fall-prepub-2543-yue.pdf
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13 https://www.ftc.gov/news-events/news/press-releases/2014/01/apple-inc-will-provide-full-consumer-refunds-least-325-million-settle-ftc-complaint-it-charged-kids
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16 https://www.apple.com/uk/newsroom/2023/02/apple-spotlights-free-resources-to-protect-children-online/
17 https://techcrunch.com/2017/06/07/ios-app-developers-will-be-able-to-keep-app-store-ratings-when-releasing-an-update/; https://developer.apple.com/help/app-store-connect/monitor-ratings-and-reviews/reset-an-app-overview-rating/

complaints referring to apps as scams, there is no way for Apple customers to report this to Apple, other than reaching out to a regular Apple customer service representative."[18]

Apple Profits from Scammy Apps

Fleeceware remains a problem in the App Store because Apple has a strong financial incentive to ignore scammy apps that bring it large amounts of revenue. More than a year after the 2021 Washington Post fleeceware investigation, Apple had still not removed the majority of offending apps it identified.[19] Air Apps, one of the developers the Washington Post exposed as fleeceware, has been allowed to continue operating since 2021 and generated an estimated $80 million from U.S. users. The developer's apps duplicate functionalities that are freely available such as language translation, calculator, and QR code reader while charging high weekly prices with a 3 day free trial, relying on dark paywall patterns and being difficult to cancel. In 2023, Sophos investigated widespread ChatGPT fleeceware, which utilizes the AI service to charge users for something available at no cost.[20] Two of the apps exposed in the study on the App Store remain available, continue to push weekly pricing subscriptions and app reviews show they continue preying on users. According to AppMagic, these two apps have scammed U.S. App Store



Screenshot from Apple's App Store

users out of nearly $25 million through weekly pricing schemes since the investigation was made public.[21]

Apple's failure to enforce fair, transparent pricing standards has created an App Store where weekly pricing now represents "nearly half of all subscriptions." The average weekly subscription has risen from $5.70 to $8.10 since 2022 with 'free' trials generating much of the growth.[22] This demonstrates the extent of the popularity of weekly pricing on the App Store and developers willingness to continuously increase pricing. This shift away from monthly or annual subscriptions to weekly subscriptions, along with the lack of notifications prior to being billed, puts the burden on users to remember to cancel these subscriptions. Fleeceware apps also frequently fail to include instructions on how to cancel and rely on tactics to make it extremely difficult. When a user is unable to cancel a weekly subscription with the U.S. average of $8.10 per week, this would result in charges of $420 over the course of a year.[23]

These apps leverage Apple's longstanding desire to have developers transition to a subscription model. In 2017, Apple held a separate session at its annual developers conference for smaller developers "encouraging them to adopt subscription business models." The same year Apple held an invite-only meeting at their "luxury loft in New York" with over 30 App Store developers for the same purpose.[24] Apple further assisted the shift to subscriptions by expanding the number of subscription price points from fewer than 100 to 900 and removing the need for user consent when increasing the subscription price.[25]

The number of paid subscriptions across Apple's entire services business has grown dramatically since 2017. That year, the figure stood at $150 million increasing to $480 million in 2019 and by 2023 had reached more than $1 billion.[26] In 2023, the company reported that App Store subscriptions contribute significantly to its 900+ million paid subscriptions across all services.[27] In its latest quarterly report, Services generated $28.75 billion—over 25% of Apple's total revenue—with profit margins exceeding 75%. This reflects Apple's long-term strategy to shift investor focus from iPhone sales to recurring revenue streams.[28] Today, the Services Division revenue rivals entire major company revenues like Tesla, Pepsi, and Disney.[29]

Both app developers and Apple make more money from subscriptions, regardless of whether that pricing model reflects the real value of an app. As a result, Apple has little incentive to crack down on these deceptive billing practices, earning a 30% commission of the revenue these apps generate above $1 million annually.[30] While Apple does not detail the portion of revenue in the services division derived from App Store subscriptions, they boasted in 2024 that developers had over $400 billion in billings and sales, nearly triple that in 2019.[31] A third party estimate from the same year found Apple generated $10 billion in App Store commissions, more than double that in 2020.[32]

18 https://www.washingtonpost.com/technology/2021/06/06/apple-app-store-scams-fraud/

19 https://www.techspot.com/news/95334-app-store-has-fleeceware-problem-affects-millions-ios.html

20 https://appmagic.rocks/publisher/air-apps-systems-unipessoal-lda/2_1316153435; https://news.sophos.com/en-us/2023/05/17/fleecegpt-mobile-apps-target-ai-curious-to-rake-in-cash/

21 https://appmagic.rocks/iphone/chatbot-ai-assistant-genie/1658377526?infoCountry=US; https://appmagic.rocks/iphone/ai-chatbot-ai-chat-smith-5-0/1559479889?infoCountry=US

22 https://uploads.adapty.io/state_of_in_app_subscriptions_2025.pdf

23 https://uploads.adapty.io/state_of_in_app_subscriptions_2025.pdf

24 https://www.businessinsider.com/apple-secret-meeting-developers-new-york-subscriptions-app-store-2018-7

25 https://www.apple.com/newsroom/2021/08/apple-us-developers-agree-to-app-store-updates/; https://www.apple.com/newsroom/2022/12/apple-announces-biggest-upgrade-to-app-store-pricing-adding-700-new-price-points/; https://www.cnet.com/tech/services-and-software/apple-quietly-allows-apps-to-automatically-charge-you-more/; https://developer.apple.com/documentation/advancedcommerceapi/handling-subscription-price-changes#Request-consent-for-price-increases

26 https://www.foxbusiness.com/markets/heres-how-apple-inc-plans-on-doubling-services-revenue-over-4-years; https://www.fool.com/investing/2020/02/04/why-isnt-apples-paid-subscription-growth-accelerat.aspx; https://www.pymnts.com/earnings/2023/apple-tops-1billion-paid-subscriptions-doubling-2020s-levels/

27 https://www.apple.com/newsroom/2023/01/apple-celebrates-a-groundbreaking-year-in-entertainment/

28 https://www.foxbusiness.com/markets/heres-how-apple-inc-plans-on-doubling-services-revenue-over-4-years; https://markets.financialcontent.com/pennwell.pennenergy/article/marketminute-2025-9-17-apple-soars-record-94-billion-q3-2025-revenue-driven-by-iphone-mac-and-services-boom

29 https://www.bgr.com/2010467/apple-services-division-on-track-earn-more-tesla-pepsi-disney/

30 https://www.macrumors.com/2020/11/18/apple-drops-app-store-fees/

31 https://www.apple.com/newsroom/2025/05/app-store-in-the-us-facilitated-406-billion-usd-in-developer-billings-and-sales-in-2024/

32 https://www.pcmag.com/news/apple-reportedly-earned-over-10-billion-from-us-app-store-last-year

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How This Research Was Conducted

Heat Initiative and ParentsTogether Action wanted to understand the scope and severity of fleeceware tactics being used in apps available to children in Apple's App Store. They partnered with a researcher to review apps rated for kids aged 8 and under. The researcher used the App Store rankings for relevant categories such as Kids, Puzzle, Education and Family, along with AppMagic to determine popular apps. AppMagic describes itself as "the ultimate toolkit for extensive mobile app market research."[33]
The researcher then manually reviewed more than 500 popular apps generating substantial revenue to determine the presence of common fleeceware tactics based on their pricing information and an analysis of user reviews. When fleeceware was identified, other apps from the same developers which had a similar age rating were then reviewed. A sample of apps from each of the identified developers were downloaded and analyzed to further assess the paywall screen, subscription language, free trial length and related subscription features. After analyzing the subscription features and pricing, the researcher then looked at user reviews for the apps engaging in fleeceware tactics to understand if users were having trouble canceling or getting charged in ways they were not expecting.
The focus of the analysis was to identify common fleeceware tactics that have been documented by

33 https://appmagic.rocks/about

other researchers and that were easily observable in the subscription user interface. Examples of these tactics include "sneaking" tactics, when subscription details are deliberately hidden and "interface interference" tactics, when the interface highlights the "free trial" while burying payment information in tiny fonts and muted colors.[34]

Specifically, we assessed each app for the presence of one or more of the following fleeceware tactics:

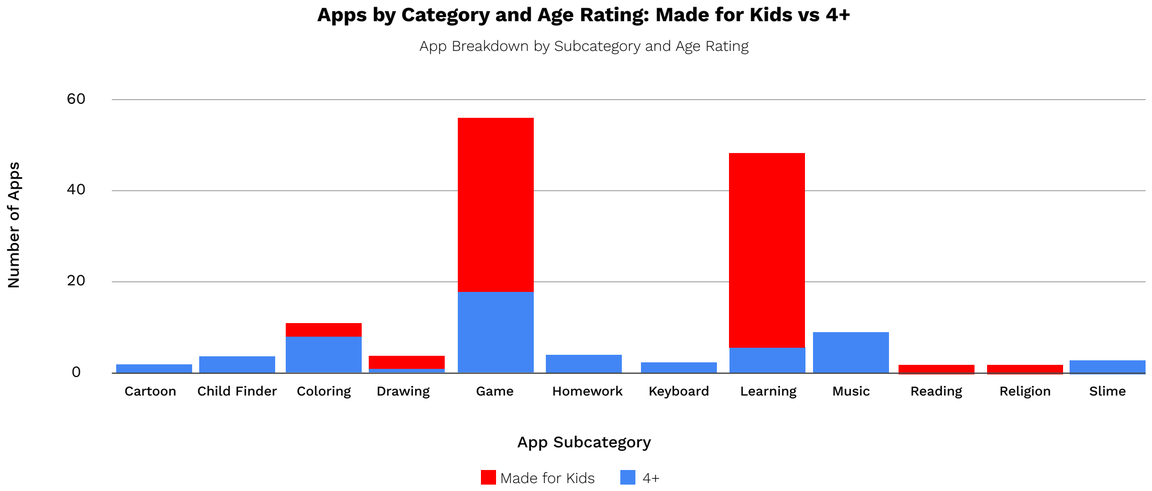
Fleeceware Tactic	Definition	Inclusion Criteria
Short trial periods followed by high recurring fees	Apps which lure users with brief free trials, then automatically switch to expensive weekly or annual subscriptions in advance of the end of their free trial and without clear reminders.	• Trial Period: 3 or 7 days and/or • Weekly Pricing: $4-12
Unclear subscription terms	Apps which are advertised as free but then require subscriptions, hide pricing and renewal details, or make it hard for users to understand the fee.	• Advertised as "Free" prominently, but a subscription is required upon download • Full cost of the app not shown or only shown in fine print • Failure to prominently disclose that charges will occur 24 hours prior to end of free trial

We conducted additional analysis on a subset of user reviews to understand if users had difficulty canceling, another common fleeceware tactic where apps make cancellation processes intentionally complex or buried, creating barriers for users to stop payments. The researcher looked at the reviews manually and then partnered with Rescue Lab of University of Massachusetts Amherst to collect reviews from identified apps that had over 50 reviews. The team at UMass then conducted key word analysis of these reviews and compared them with the reviews of 19 other children's apps that were not using fleeceware tactics.[35]

34 https://www.usenix.org/system/files/sec24fall-prepub-2543-yue.pdf
35 https://app-danger.org

Research Findings

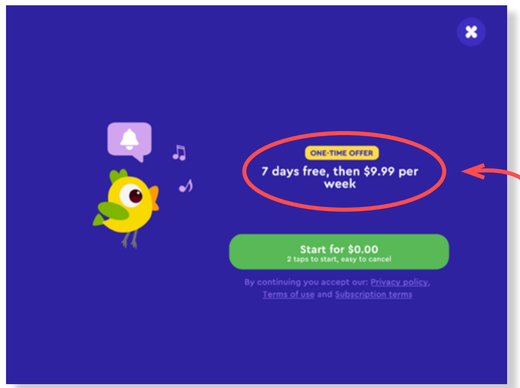
Fleeceware tactics are common among popular kids' apps in the Apple App store, including apps featured in the **Made for Kids** section that claims to require additional vetting. We reviewed more than 500 popular apps, out of which we identified 144 apps from 57 developers engaging in common fleeceware tactics on the App Store. The majority of these have been approved for 0-5 or 6-8 year olds in the "Made for Kids" category.



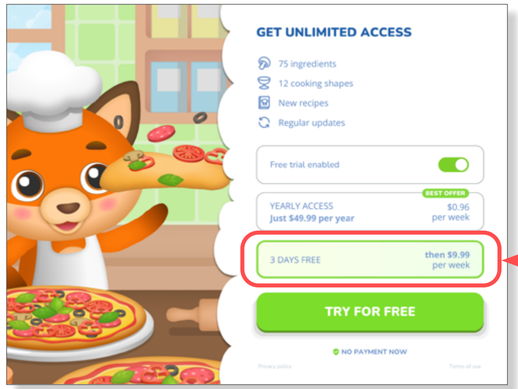
In total, these apps are estimated to have generated more than $1 billion in App Store revenue from U.S. users over their lifetime. These apps span numerous categories such as coloring, learning, music and kids games and have been downloaded more than 500 million times on the App Store in the U.S.

Short trial periods followed by high recurring fees

Nearly all of these developers rely on short free trials to draw users in, either a 3 or 7 day trial, with nearly two thirds of the developers identified having 3 day trials. **Apple has a policy that requires users to cancel a free trial at least 24 hours prior to it expiring for all apps in its ecosystem - making these 2 or 6 day trials instead.** Despite this universal rule, most apps in this category never disclose this early charging to users, even in the fine print.

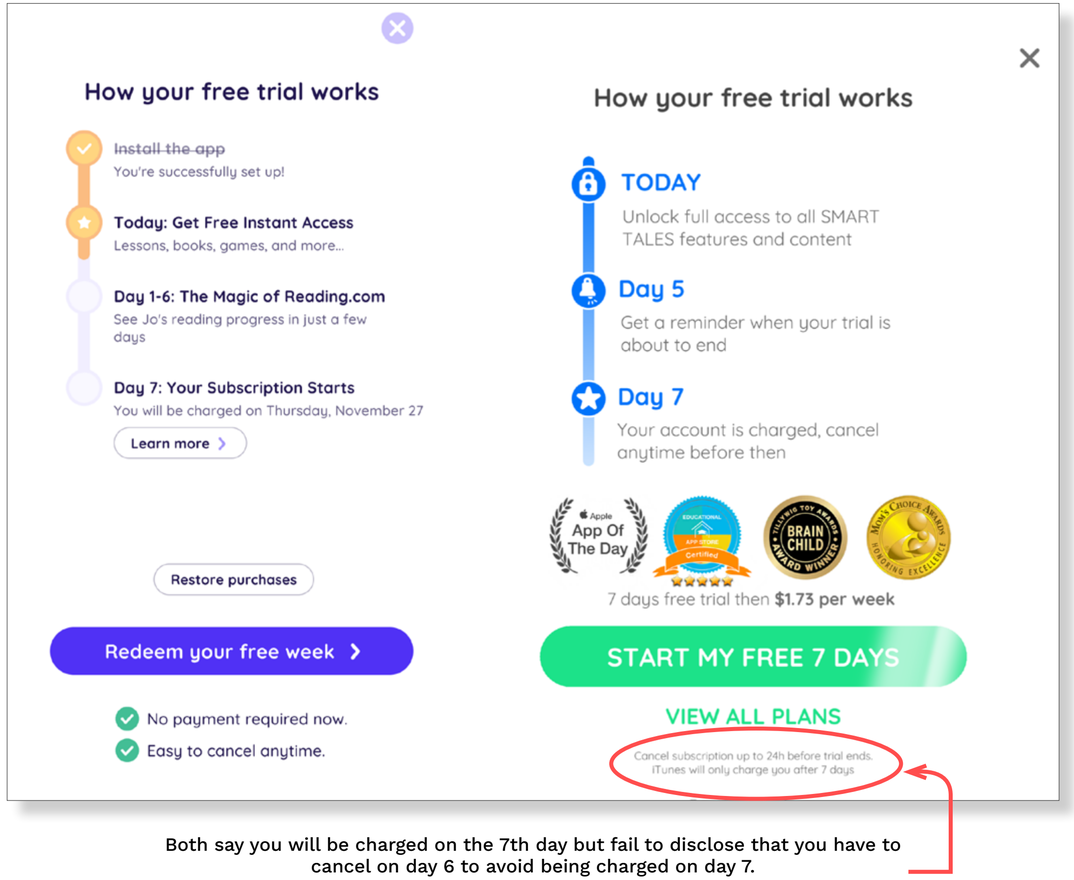


7 day free trial followed by high weekly subscription



3 day free trial followed by high weekly subscription.

86 apps (60% of the fleeceware apps) rely on weekly pricing ranging from $4 to $12 per week. This includes dozens of Made for Kids apps, rated for 0-5 year olds. Many of these apps charge $10 per week or $520 per year and are explicitly aimed at children as young as 2. In some cases the pricing rises even higher to $624 per year. Other popular apps like Spotify and Netflix are monthly subscriptions and are $144 and $216 a year respectively.



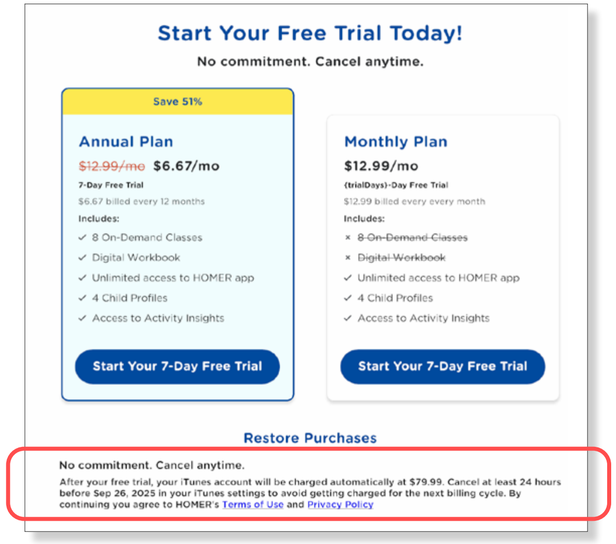
Both say you will be charged on the 7th day but fail to disclose that you have to cancel on day 6 to avoid being charged on day 7.

These weekly subscription models can result in outsized revenue for apps with relatively limited functionality compared to reputable, mainstream apps. For example, according to AppMagic, the highest grossing app identified, Colorfy: Coloring Book Games, has generated more lifetime revenue in the U.S. App Store than popular apps such as Zoom, Adobe Photoshop, and The Economist combined.

Confusing Subscription Terms

Fleeceware developers also use “sneaking” or “interface interference” to hide key pricing information in tiny fonts or muted colors. Examples include the actual cost in greyed out text colors or only listing the cost in the fine print at the bottom of the screen. A subset of the identified apps failed to disclose the actual cost at any point during the sign up process.

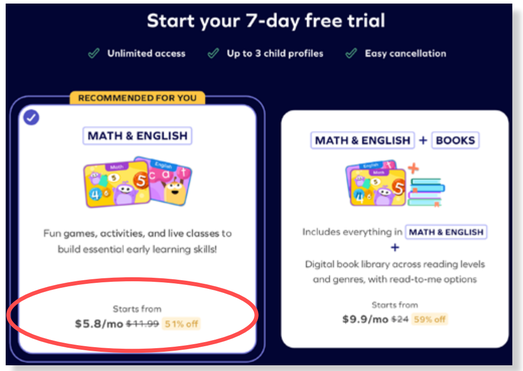
In one prominent example, HOMER, a popular app aimed at kids ages 2-8, is rated by Apple as Made for Kids 5 and under. The app’s payment screen requires a user to read the fine print to realize that they will be charged the full annual price of $79.99 at the end of the trial period instead of $6.67 per month. They are also given the impression that they can cancel anytime. HOMER has generated more than $50 million in the US.



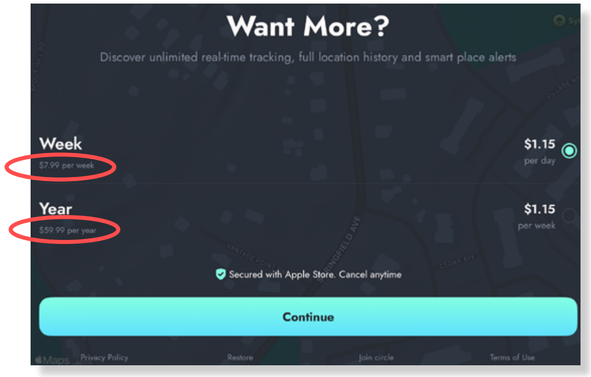
Full annual price only noted in fine print

We identified nine apps that received Editor’s Choice awards from Apple. Homer is one of them.. This award displays praising text from Apple on the App Store page. Apple states they reserve this award to “the very best apps and games—handpicked by App Store Editors.”[36]

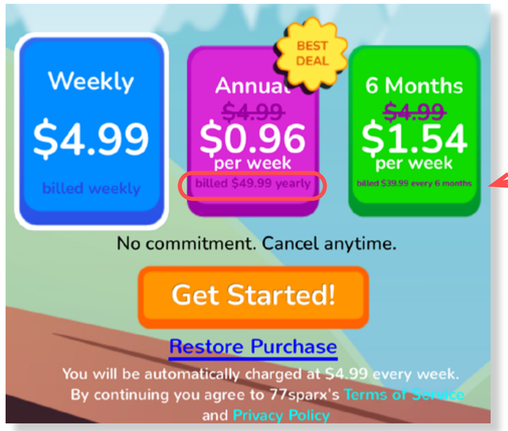
36 https://developer.apple.com/app-store/getting-featured/



Unclear that the one on the left is charged annually when the price is only listed monthly.



Small, light-colored fonts showing annual price which is what will be charged at the end of the free trial.



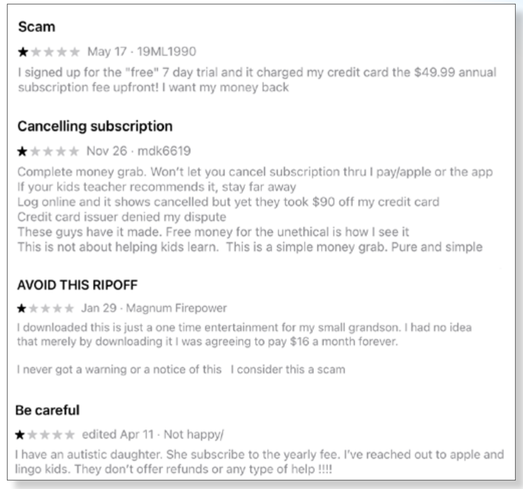
Small, light-colored fonts showing annual price which is what will be charged at the end of the free trial.

Difficulty Cancelling

For those apps which engaged in the prior fleeceware tactics, we analyzed a subset of apps to understand if users had difficulty canceling. This is another common fleeceware tactic where apps make cancellation processes intentionally complex or buried, creating barriers for users to stop payments. Our analysis of customer reviews found frequent complaints about the difficulty of cancelling the subscription once activated. Many apps provided no in-app instructions for cancellation, and users reported that customer support was either unavailable or unable to help. Others stated they received confirmation the app was cancelled but still incurred unexpected charges.

Users also complained about the lack of notification before being charged. In fact, Apple does not require apps to include instructions on how to cancel the subscription, unless an app is relying on Apple Pay for the subscription.[37] As noted below, Apple doesn't offer such a service themselves, only notifying users when a subscription charge has been incurred.

In addition to complaints about scams and difficulty canceling, some reviews from parents discussed their child being upset, crushed, crying, and having a meltdown due to their experience with the app. Strangely, despite these negative reviews from actual users, across all these apps the average rating was 4.4 out of 5 stars with only 3 of the 144 having a rating below 4 stars.



This type of valuable user feedback was further obfuscated when Apple introduced AI-generated review summaries earlier this year.[38] Thirty nine of the apps we identified received such summaries, none of which reflected user complaints about fleeceware tactics. Instead, they portrayed the apps as "great for kids" or "a great resource for preschoolers," with only three summaries mentioning minor negatives like "a few users are frustrated that the math problems are too easy."[39]

For example, Toca Boca Jr, an app in the Made for Kids category with a 0-5 age rating, is listed

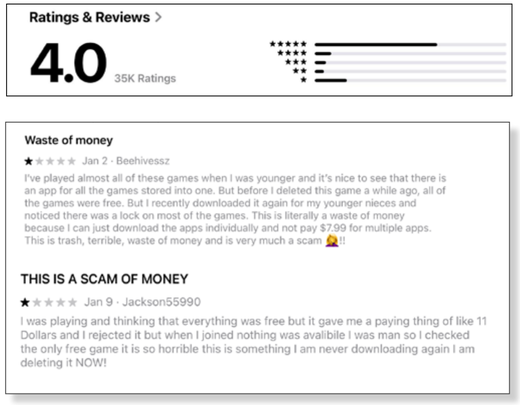
37 https://developer.apple.com/app-store/review/guidelines/#design

38 https://machinelearning.apple.com/research/app-store-review

39 https://apps.apple.com/us/app/kids-drawing-games-for-girls/id1260895318

HEAT INITIATIVE

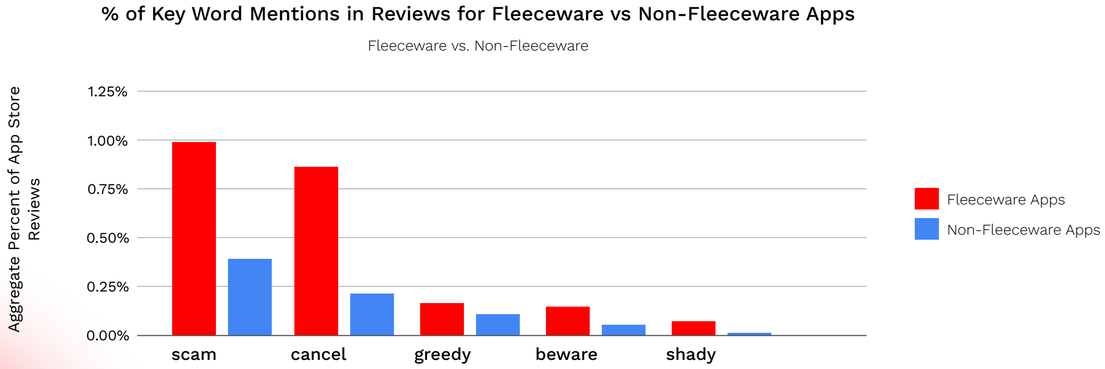
ParentsTogether ACTION



by Apple as an Editor's Choice and includes an AI review summary stating "Users say the game is great for kids. They find it entertaining and appreciate its educational value. Some users enjoy playing it with their children." Yet looking at the breakdown of reviews, one quickly sees that despite the 4.0 rating the majority of reviews that are not five stars are one star.[40]

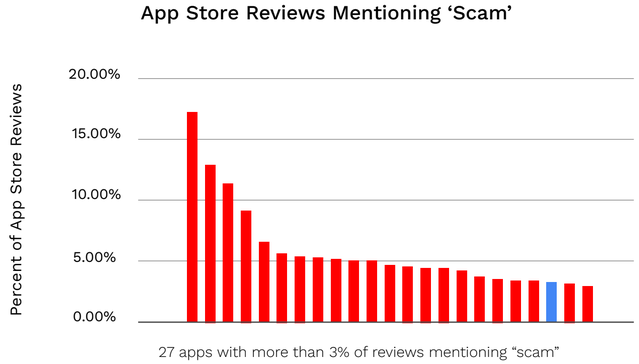
These one star reviews mention terms like scam and greedy, yet they are not mentioned at all in the AI summary provided by Apple.

To further assess the user reviews, 130 of the identified apps were analyzed by researchers at the Rescue Lab of University of Massachusetts - Amherst. They utilized tools available through their App Danger Project to collect reviews on the subset of apps that had more than 50 reviews. The reviews of these apps were compared with the reviews of 19 other children's apps that were not using fleeceware tactics.[41] More than 350,000 reviews were analyzed in total using a variety of terms associated with these practices such as scam, cancel and greedy. These terms were significantly more prevalent in the apps identified as fleeceware than the non-fleeceware apps, as demonstrated below.

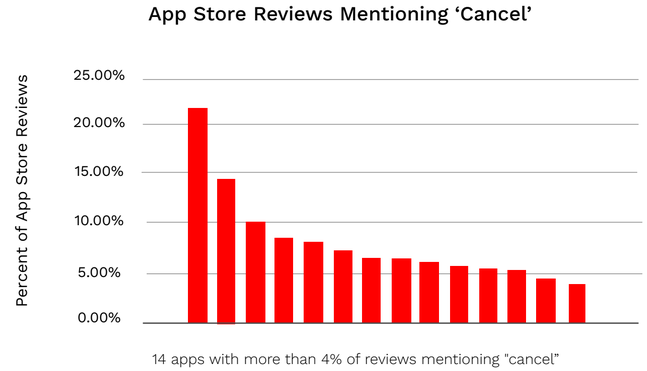


40 https://apps.apple.com/us/app/toca-boca-jr/id943869618
41 https://app-danger.org

Of the 27 apps with more than three percent of reviews mentioning scam only one was not fleeceware. This was Buddy.ai, a voice-based AI teacher.[42] For Famio: Connect With Family app, more than 17% of the reviews had the term scam included.



This app also had 15% of the reviews mentioning 'cancel'. For another identified app, Family Friend Locator: Carpin, 22% of the reviews included this term. None of the non-fleeceware apps had more than four percent of reviews mention this term while 14 fleeceware apps did.



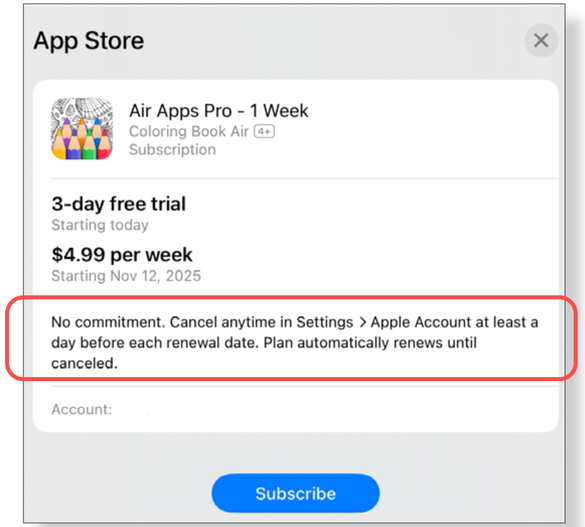
42 https://apps.apple.com/us/app/buddy-ai-kids-learning-games/id1255783056

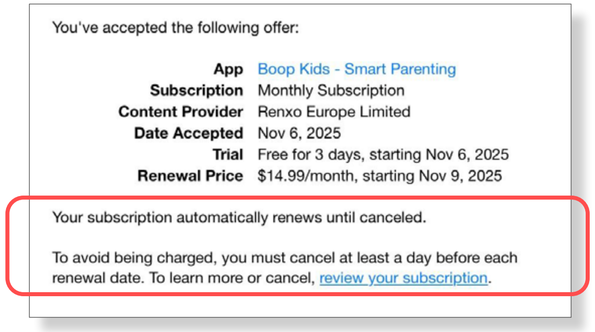
Apple's Deceptive Free Trial Period

Apple's policies require users to cancel a free trial at least 24 hours prior to it expiring for all apps in its ecosystem. This goes beyond failing to effectively police the App Store for fleeceware and institutes a store-wide deceptive pricing process. The policy effectively ensures all users are charged in advance of the end of any and all advertised free trial periods. Very few of the apps identified disclose this anywhere, even buried in the fine print, and those that did so, concealed the actual price. For all the rest, users could only rely on Apple's subscription screen when they were promoted for payment for more information. At right is an example of what this looks like.

Here Apple prominently displays that the app has a 3-day free trial and the $4.99 won't be incurred until November 12th. The company then states "No commitment. Cancel anytime in Settings > Apple Account at least a day before each renewal date." By stating a user needs to cancel 'a day before' suggests it can be done the night before yet it must be 24 hours. Furthermore, 24 hours on a 3-day free trial is a third of the total. Even if a user opens the confirmation email from Apple after signing up for the free trial, they are met with the following information:

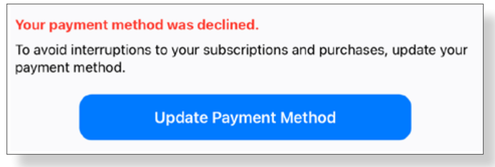
Apple states the app is "Free for 3 days" when in fact a user will be charged if they do not cancel in 48 hours and once again use the "at least a day before" language at the bottom. Even if a user signs up for Apple's "Renewal receipt emails" through the App Store, a reminder is only sent





when the subscription renews rather before a user is charged for the initial subscription and the free trial can still be cancelled. This leaves users lacking in key information about how long the free trial actually is. The only place this information appears to exist is buried in a support page on the Apple website that a user must seek out on their own. At the very bottom of this webpage, Apple states ""If you signed up for a free or discounted trial subscription and you don't want to renew it, cancel it at least 24 hours before the trial ends."[43]

Some users learn this when they go to cancel the free trial the day before it expires but not 24 hours before. When they realize they can only cancel the renewal subscription, some users wisely lock their credit card to prevent the transaction. Yet, Apple's response is to lock the user's App Store account, preventing them from downloading any other apps or using their existing subscriptions until updated payment information is provided and the subscription billed for in full.[44]



43 https://support.apple.com/en-gb/118428
44 https://support.apple.com/en-us/118284

RESEARCH FINDINGS

Developers' History of Exploitative Practices

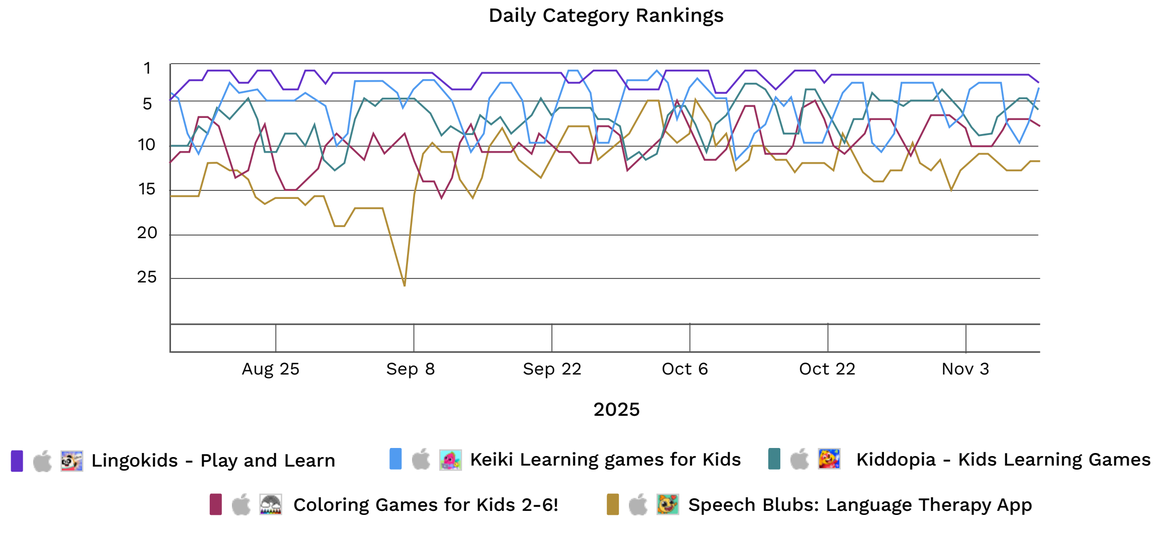
Some of the developers behind these apps have already been the target of government enforcement and legal action yet they remain available on the App Store for young children. For instance, Tilting Point, a developer featuring beloved children's character SpongeBob and with more than $100 million in U.S. revenue, was targeted by the Children's Advertising Review Unit of the Better Business Bureau in 2024. The Unit found that Tilting Point was violating COPPA for failing to get parental consent prior to data collection in the app. In addition, the Unit found "ads that used deceptive tactics such as having unclear methods to exit the ads, blurred lines between advertising and gameplay, and caused the download of unnecessary apps; and displayed some ads that were age-inappropriate for children, such as for a gambling app and a game about growing marijuana."[45]

As a result of these findings, the California Attorney General brought a suit against the company. The company subsequently settled in mid 2024 for $500,000 as result of "Illegally Collecting and Sharing Children's Data."[46] Around the same time, a class action lawsuit was filed against the company alleging that their apps are "full-length advertisements disguised as children's games" and "a near constant barrage

45 https://oag.ca.gov/system/files/attachments/press-docs/Complaint%20People%20v%20Tilting%20Point%20Media%20LLC%20%28filed%29.pdf
46 https://oag.ca.gov/news/press-releases/attorney-general-bonta-la-city-attorney-feldstein-soto-announce-500000

of stealth marketing and dark patterns, largely in the form of their favorite characters guilting and coercing them."[47]

Even a developer that was exposed as fleeceware by researchers years ago continues to operate. Gismart Limited, which offers music apps that are age rated 4+, was included in a 2021 fleeceware report from Avast.[48] Multiple apps highlighted in this report as utilizing fleeceware tactics such as Piano - Music Keyboard & Tiles and Karaoke Songs - Voice Singing have continued operating. The developer has generated more than $20 million in the U.S. App Store since the report was released. These deceptive and exploitative billing practices have garnered them more than 100 reviews on TrustPilot with an average rating of 1.3 yet Apple has allowed the developer to continue to operate.[49]



Many of the identified apps are heavily downloaded on the App Store. This is in part thanks to more than half of the identified developers advertising on the App Store, where ads have an average conversion rate of more than 67%.[50] Some of the apps are consistently ranked within the top 100 most popular apps in their particular category for the U.S. For instance, five of the apps routinely sit within the top 20 apps in the Made for Kids Ages 5 and under category.[51]

Of the total revenue these apps generated across both app stores, less than 10% was generated on the Play Store, despite making up a third of all downloads.

In carrying out this research, it was clear that a variety of other fleeceware tactics are being employed. These include apps with extremely limited functionality requiring a subscription, removing apps previously paid for to force a subscription, preventing access once a subscription is canceled even if it's well before the paid period ends, and non-functional family sharing necessitating a subscription for every child's device. While some of these tactics have been highlighted by previous research, apps engaging in these practices are not included.[52] This comes despite the fact that they violate numerous developer guidelines engaging in these practices.[53]

47 https://www.classaction.org/news/developer-of-paw-patrol-bluey-apps-facing-class-action-suit-over-allegedly-deceptive-in-game-marketing-tactics

48 https://blog.avast.com/fleeceware-apps-on-mobile-app-stores-avast

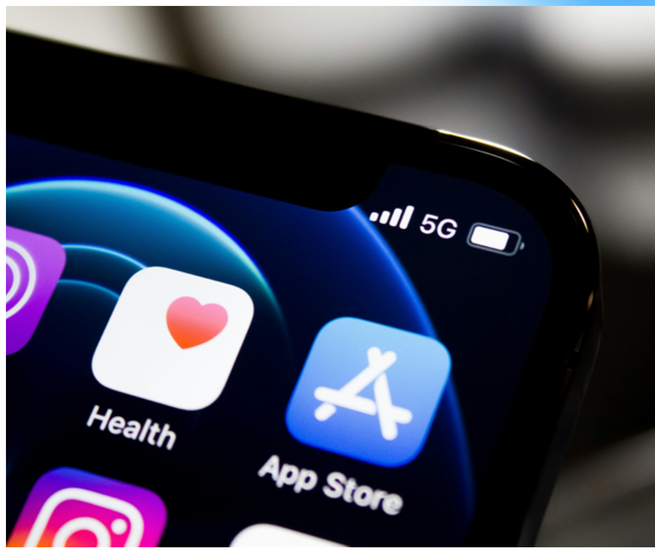
49 https://www.trustpilot.com/review/www.gismart.com

50 https://splitmetrics.com/blog/apple-search-ads-cost/

51 https://app.sensortower.com/app-analysis/category-rankings?os=ios&start_date=2025-08-14&end_date=2025-11-11&edit=1&granularity=daily&breakdown_attribute=appId&metricType=absolute&time_period=day&measure=revenue&rolling_days=0&selected_tab=0&session_count=sessionCount&time_spent=timeSpent&install_base_measure=installBase&retention_measure=retentionD1&retention_chart_type=curve&impression_share_metric_option=all&chart_plotting_type=line&ssia=1508098273&duration=P90D&country=US&category=10000&category=0&device=iphone&device=ipad&chart_type=free&chart_type=grossing&chart_type=paid&sia=1002043426&sia=1223397201&sia=1239522573&sia=1508098273&sia=451719402

52 https://blog.avast.com/fleeceware-apps-on-mobile-app-stores-avast

53 https://developer.apple.com/app-store/review/guidelines/#subscriptions





Recommendations

To mitigate the risks identified in this report and strengthen consumer protections within Apple's App Store ecosystem, the following measures are recommended:

1. **Extend and Clarify Cancellation Windows**
   Apple should revise its current 24-hour cancellation policy for subscription free trials. Consumers should be allowed to cancel for the full duration of the free trial period until the point of renewal. This change would reduce inadvertent financial commitments and align with best practices for informed consent.

2. **Enforce Robust Standards for Child-Oriented Apps**
   Apple must implement stricter compliance checks for apps marketed to children, including transparent disclosure of subscription terms, pricing structures, and renewal conditions. Enforcement should include periodic audits and penalties for developers who fail to meet these standards.

3. **Address Developer Evasion Tactics**
   Developers frequently release new versions of fleeceware apps to reset ratings. Apple should reconsider this practice to ensure accountability across all published products.

4. **Restrict Weekly Subscription Models**
   Weekly billing cycles disproportionately exploit families by masking high cumulative costs. Apple should ban or severely limit weekly subscription options for apps in child-focused categories, requiring monthly or annual billing with clear cost disclosures.

5. **Improve AI-Generated Summaries of App Reviews**
   Current AI-generated summaries in the App Store appear to present an overly positive view without reflecting consumer concerns. Apple should ensure that these summaries include verified negative feedback and highlight recurring issues such as billing confusion or cancellation difficulties.

Conclusion

This investigation underscores the significant risks parents face when seeking digital tools to support their children's growth and learning. Despite Apple's public assurances of safeguarding young users, our findings reveal that financially exploitative practices, such as opaque subscription models, aggressive billing schemes, and deceptive design, are pervasive across apps marketed to children. These tactics not only erode consumer trust but also place undue financial strain on families, particularly those with limited resources.

Apple's decision to permit and in some cases deploy policies that encourage these practices reflects a prioritization of profit over the protection of its most vulnerable users. By enabling developers to deploy fleeceware strategies within child-focused categories, Apple has created an ecosystem where exploitation is normalized rather than prevented.

It is critical to note that this analysis examined only a fraction of the apps employing these tactics. Prior research indicates that fleeceware is widespread across the broader App Store, suggesting that the scope of harm is far greater than what is documented here. Without decisive intervention, both from Apple and regulatory bodies, the cycle of exploitation will persist, undermining the integrity of digital marketplaces and the safety of children online.

About the Authors

HEAT INITIATIVE exists because the world's most valuable and powerful tech companies have failed to protect kids online. Learn more at HeatInitiative.org

PARENTSTOGETHER ACTION, a nonprofit parent and family advocacy group that represents more than three million families, brings parents together to make a difference on the issues that matter most to our kids and families — things like family leave, childcare, keeping our kids safe online, and quality education.