



LIQUID&GRIT

CASUAL REPORT

Competitive Research and Actionable Product Recommendations

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Check out our [FAQ](#) for guides on using our tools, understanding our classification system, and contacting support.

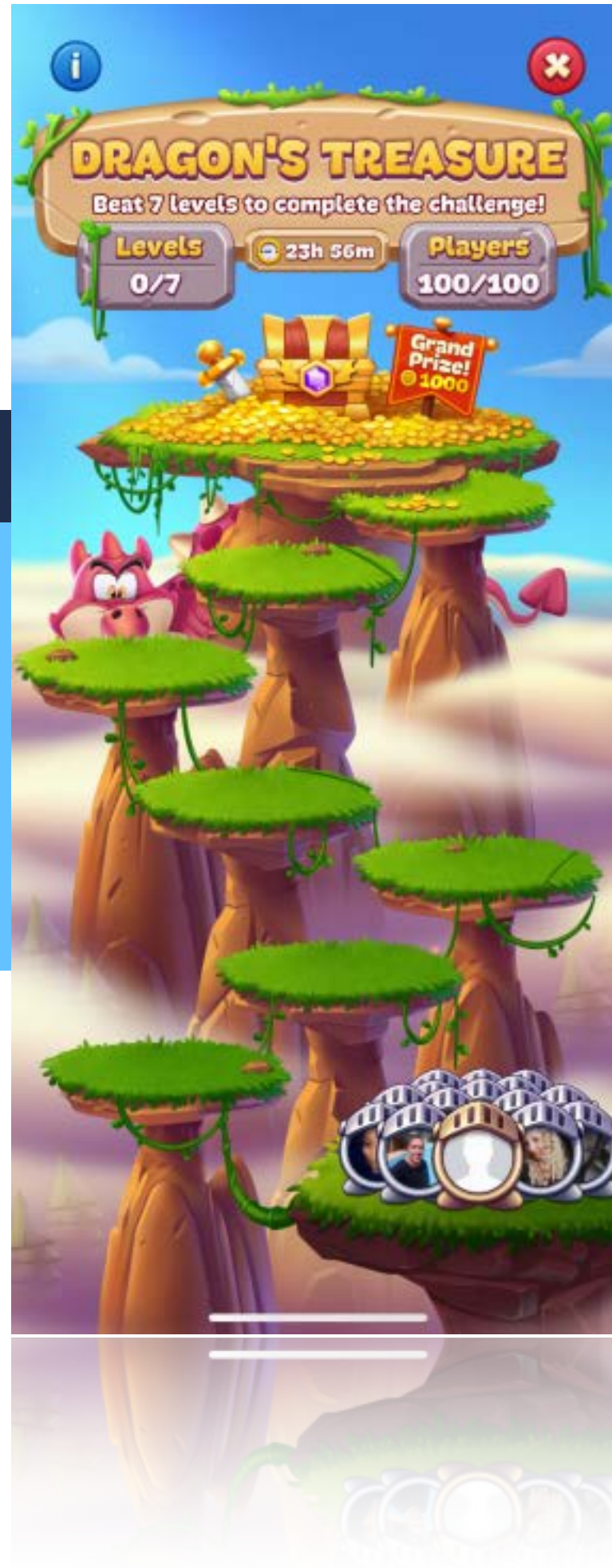
MARCH

2024

MECHANIC INSIGHTS



Features, events, and content that boost revenue, retention, or downloads



CASUAL > FEATURES > QUESTS

Eight Top Puzzle Apps Use Nearly Identical Win Streak Mechanics

Dragon's Treasure in Toon Blast

For more information on how we classify features, events, and content, please refer to the [taxonomy guide](#) within our FAQ.

INTRODUCTION

Toon Blast's [Dragon's Treasure](#) follows a trending win streak feature that's driven major revenue impacts in multiple top puzzle apps in the past eight months.

In this feature, players beat consecutive levels on the first try to advance on a quest map. Losing a level sends players to the start of the map. Players who reach the end of the map share a prize pool with other successful players from that day.

This feature first appeared in [Candy Crush Saga](#) in 2022 but had its greatest success when [Royal Match](#) introduced the feature in 2023—which generated a revenue impact of 38% MoM. After that, the feature exploded across six other top puzzle apps between July 2023 and February 2024. Out of these recent releases, Toon Blast's version generated the strongest revenue impact of 12% MoM.

For teardowns of similar features in Lily's Garden and Harry Potter Puzzle & Spells, check out this month's [Market Watch](#).



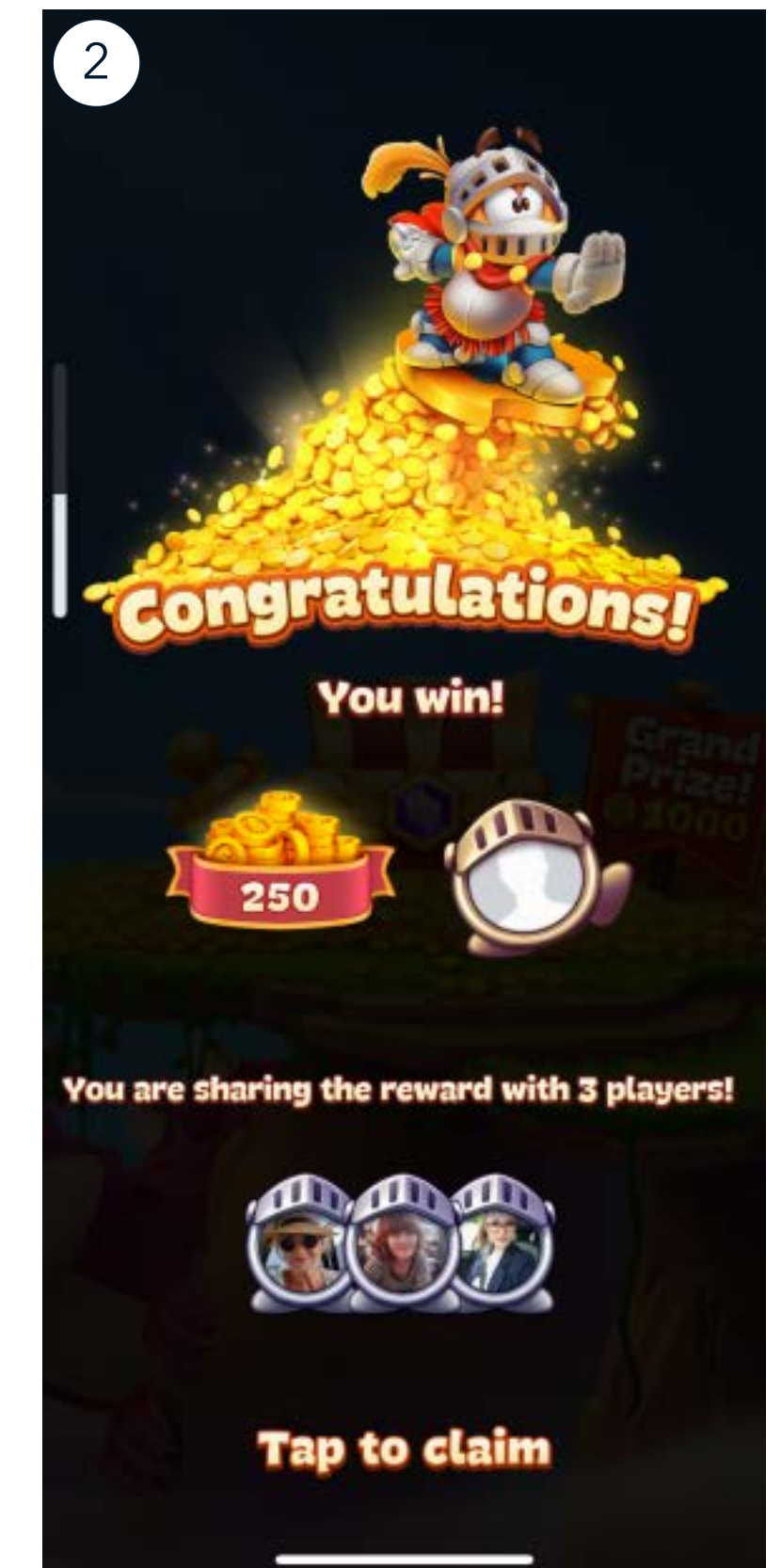
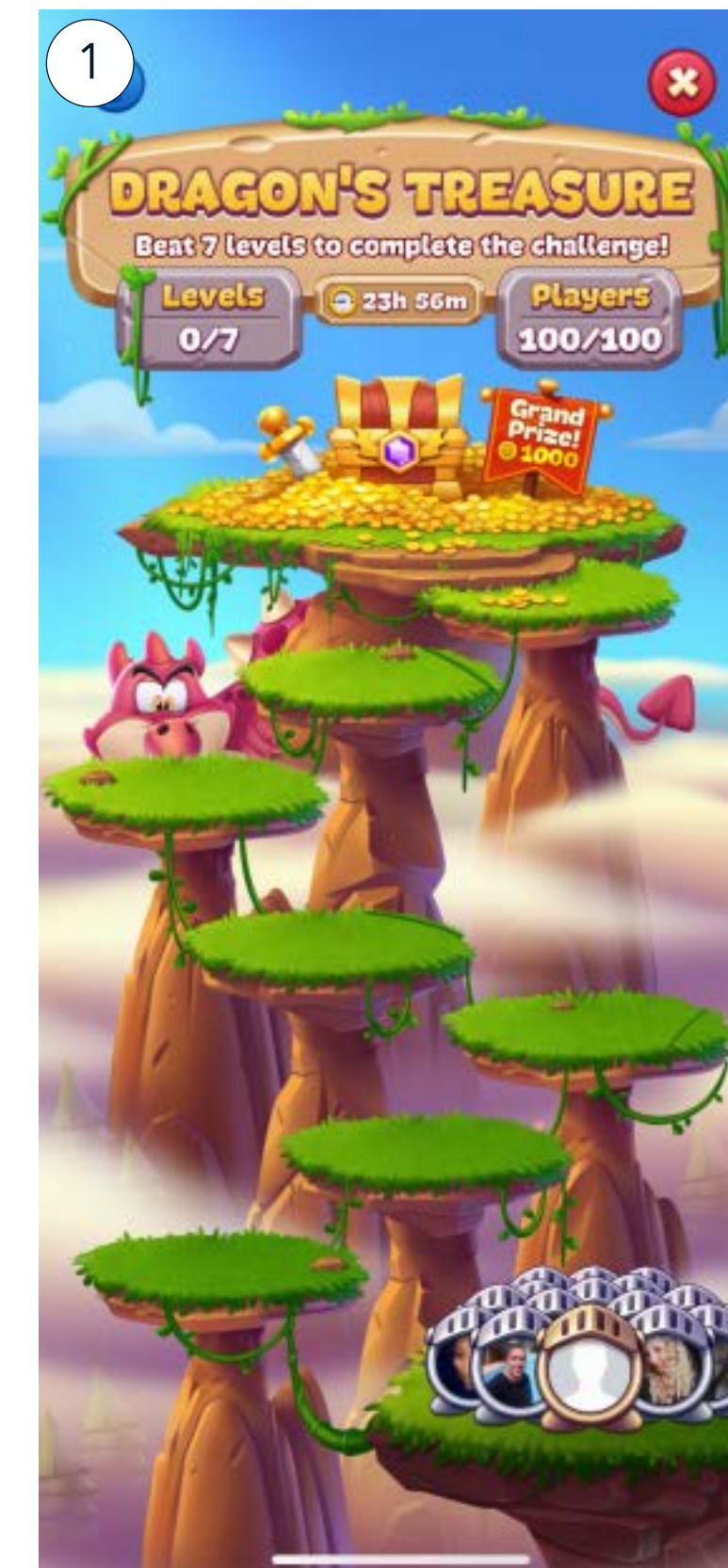
DRAGON'S TREASURE

Feature Teardown

In a quest feature, players are placed into groups of 100 players at similar base game levels (1). Beating base game levels on the first try advances players on a map with seven spaces. Failing a level knocks players off the map and resets their streak. Each time players advance, icons for other players advance to that stage or fall off based on those players' performances. If players fail a level, they can attempt another streak after a 30-minute cooldown.

All players in the group who reach the end of the map within 24 hours split a currency prize (2).

See the [Dragon's Treasure](#) gallery for more images and videos.



PRODUCT INSIGHTS

Dragon's Treasure uses prerecorded competitors and cooldowns to boost engagement.

Toon Blast's Dragon's Treasure is one of six community-based win streak features released by top puzzle apps between July 2023 and February 2024—all of which use nearly identical mechanics. All of these features group 100 players together, and all but one require them to beat seven levels consecutively within 24 hours to earn a share of a currency prize. All features also use a map progression that shows players' avatars falling off the map at the level in which they fail.

In just eight months, [Bubble Pop Origin!](#), [Matchington Mansion](#), [Two Dots](#), [Lily's Garden](#), and [Harry Potter Puzzle & Spells](#) have released their own versions of this feature (in addition to Toon Blast's feature). See this month's [Market Watch](#) for teardowns of the two most recent implementations, and see the chart in the following section for a comparison of these features.

Dragon's Treasure appears to use prerecorded competitors to give players instant feedback on their performance.

Because each player competes against the past attempts of others, Dragon's Treasure can show competitors' avatars advancing or falling off the map in response to the player's own progress. This simulates a live competition and further motivates players since witnessing others drop off the map increases their own potential rewards.

Furthermore, this enables Dragon's Treasure to provide an immediate sense of accomplishment by instantly granting players their share of the prize upon reaching the end of the map.

To make the feature feel more social, Dragon's Treasure uses real player photos as game pieces on the map. While similar features use profile icons to display players on the map, Dragon's Treasure is among just a few that use real photos (1). This helps players feel like they're competing against actual people, which makes the competition feel more personal and socially engaging.

Product Insights are continued on the [next page](#). ➡



PRODUCT INSIGHTS (CONT'D)

Dragon's Treasure and Two Dots' Marlene's Lair inform players they can restart their streak attempt if they fail a level, which reduces player frustration and encourages re-engagement. Dragon's Treasure tells players they can restart each time they fail a level, while Marlene's Lair mentions it in the tutorial (1).

Players can also restart their streak attempt in other apps' versions of the feature, but only Dragon's Treasure and Marlene's Lair explicitly tell them so. Apps should consider using both features' strategies as informing players up front sets up clear expectations, and reminding players after a setback encourages them to persevere.

The cooldown timer in Dragon's Treasure heightens the stakes of each attempt while maintaining the event's forgiving nature. After failing a level, players must wait before they can retry the win streak challenge—but the waiting period is only 30 minutes. This downtime also builds anticipation for their next opportunity and may encourage players to log in later in the day, leading to multiple sessions per day.

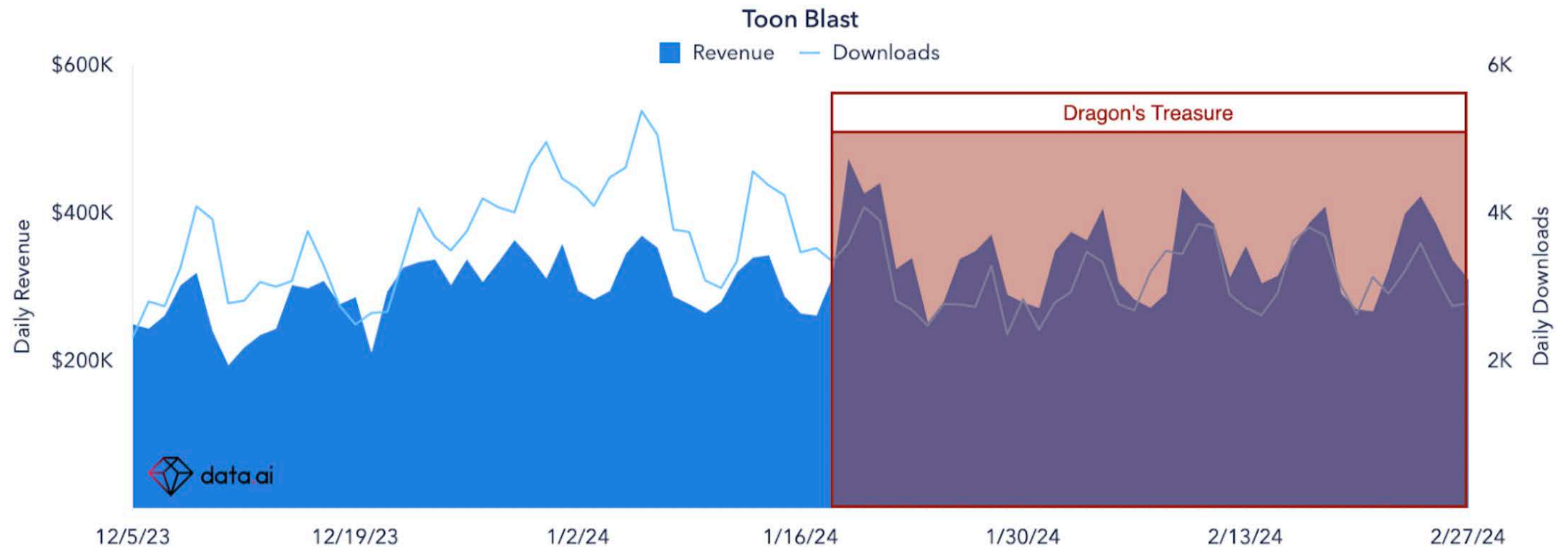


FEATURES SIMILAR TO DRAGON'S TREASURE IN TOP PUZZLE APPS

Release Date	Release	App	Revenue Impact	Feature Teardown	# of Players in Group; # of Levels Required for Win Streak
1/27/22	Candy Royale	Candy Crush Saga	-3.1% MoM	March '22 Report	100 players; 5- 21 levels
3/14/23	Lava Quest	Royal Match	37.7% MoM	April '23 Report	100; 7
7/6/23	Temple of Gold	Bubble Pop Origin!	11.5% MoM	N/A	100; 7
11/27/23	Treasure Hunter	Matchington Mansion	0.6% MoM	N/A	100; 9
12/1/23	Marlene's Lair	Two Dots	9.3% MoM	January '24 Market Watch	100; 7
1/18/24	Dragon's Treasure	Toon Blast	11.6% MoM	March '24 Mechanic Insights	100; 7
2/1	Piranha Rush	Lily's Garden	-11.9% MoM	March '24 Market Watch	100; 7
2/6/24-2/8/24	Gringotts Treasure	Harry Potter Puzzles & Spells	-9.7% 3Do3D	March '24 Market Watch	100; 7

DRAGON'S TREASURE HELPED BOOST REVENUE 11.6%

After the release of Dragon's Treasure, Toon Blast's revenue increased by 11.6% MoM. During this period, Toon Blast also released another new win streak-based feature along with several older events, which may have contributed to this impact.



Data is iOS, U.S. only.

ADJACENT RELEASES

Four days after the release of Dragon's Treasure, Toon Blast released a win streak-based reward feature, [Crown Rush](#). In this feature, players beat up to three consecutive base game levels in a row to earn an increasing number of boosts at the start of levels. While this release is new to the app as a permanent feature, it originally appeared as a limited-time event in 2017.

Toon Blast also released several old or reskinned events during the month after launching Dragon's Treasure, including four competitions, two club events, two purchase events, a mini-game, a collection, and a battle pass season. Because of the old age and high frequency of most of these releases, they likely didn't contribute significantly to the revenue impact.

Release Date	Release	Release Type	Original Release Date
1/1/24-1/31/24; 2/1-2/29	Toon Pass	Mission season	2/10/22
1/15-1/18; 1/22-1/25; 1/29-2/1	Team Chest	Club event	2/16/18
1/15-1/18; 1/22-1/25; 1/29-2/1	Toon Race	Competition event	5/22/23
1/18; 1/19; 1/25; 1/26	Disco Fever	Competition event	10/10/20
1/18-Ongoing	Dragon's Treasure	Quest event	New
1/19-1/22; 1/26-1/29	Adventure Island	Collection event	12/7/18
1/19-1/22; 1/26-1/29	Shield Clash	Competition event	7/28/23
1/19-1/22; 1/26-1/29	Team Tournament	Club event	7/6/18
1/19-1/22; 1/26-1/29	Team Pack	Purchase event	1/5/22
1/19-1/29	Renovation (Garage)	Mission event	5/13/22 (Reskin)
1/20; 1/21; 1/27; 1/28	Cooper's Rally	Competition event	10/10/20
1/22-Ongoing	Crown Rush	Reward feature	New
1/22-1/24; 1/29-1/31	Magic Hats	Mini-game event	3/21/22
1/26-1/31	Progress Pack	Purchase event	11/25/23

RELEASE TRENDS



Trends for feature and event releases

Includes data from more than 35 top-grossing apps in the casino market

CASUAL FEATURE IMPACTS

Quests, which involve completing tasks to advance on a map, are a very strong feature type in the casual market and consist almost entirely of win streak mechanics like those in *Dragon's Treasure*. They have a solid median and average revenue impact as well as a low standard deviation. Only one quest feature released in the past year did not use a win streak mechanic (Match Masters' *Adventures*, which underperformed the average).

It's worth noting that challenges, which also tend to focus on completing base game levels, are the top-performing feature type in the casual market and the puzzle genre by far. Given the success of win streak-based quest features, apps should consider designing similar features based on challenges rather than quests. In these features, groups of 100 players could compete to complete several win streak-related challenges in a day, and players who complete the challenges could share a prize pool.

Feature Type	Median Revenue MoM	Average Revenue MoM	Standard Deviation	Release Count
Challenges	9.0%	4.8%	9.9%	10
Competitions	5.5%	12.3%	17.0%	5
Quests	4.4%	3.2%	9.3%	6
Levels	2.2%	4.7%	8.7%	7
Rewards	2.1%	1.5%	18.0%	11
Notices	1.2%	0.2%	27.2%	20
Flows	0.3%	1.0%	17.7%	16
Cosmetics	-0.1%	0.7%	11.2%	10
Bonuses	-0.2%	-2.7%	17.5%	6
Mini-Games	-3.9%	-5.0%	7.1%	5
Expansions	-4.0	-13.5%	26.2%	8

Data includes feature types with five or more releases by tracked casual apps between 2/1/23-2/1/24. MoM = Month over the preceding month. For definitions of all event types, see our [Taxonomy](#). For a full list of tracked apps, refer to our [Master Tracked Apps List](#).

MARKET WATCH



New apps and notable releases from established competitors

BREAKOUT APP

Wood Nuts & Bolts Puzzle is the new leader in an emerging subgenre.

Wood Nuts & Bolts Puzzle entered the top 40 casual apps in mid-January, just two and a half months after its launch. The app's puzzles involve moving screws between holes to detach planks from a wall.

Puzzles involving screws and planks are trending in the casual market. A similar app published by Take-Two Interactive, Screw Jam, launched in December and entered the top 100 puzzle apps in mid-February.

Wood Nuts & Bolts Puzzle was developed by ABI Games Studio and published by OneSoft. It launched worldwide on 11/3/23 and was the 30th top-grossing casual app on the U.S. iPhone as of 2/28/24. See it on the [App Store](#) and in our [gallery](#).



Breakout app coverage is continued on the [next page](#). ➡

BREAKOUT APP (CONT'D)

Players manipulate screws to solve physics-based puzzles.

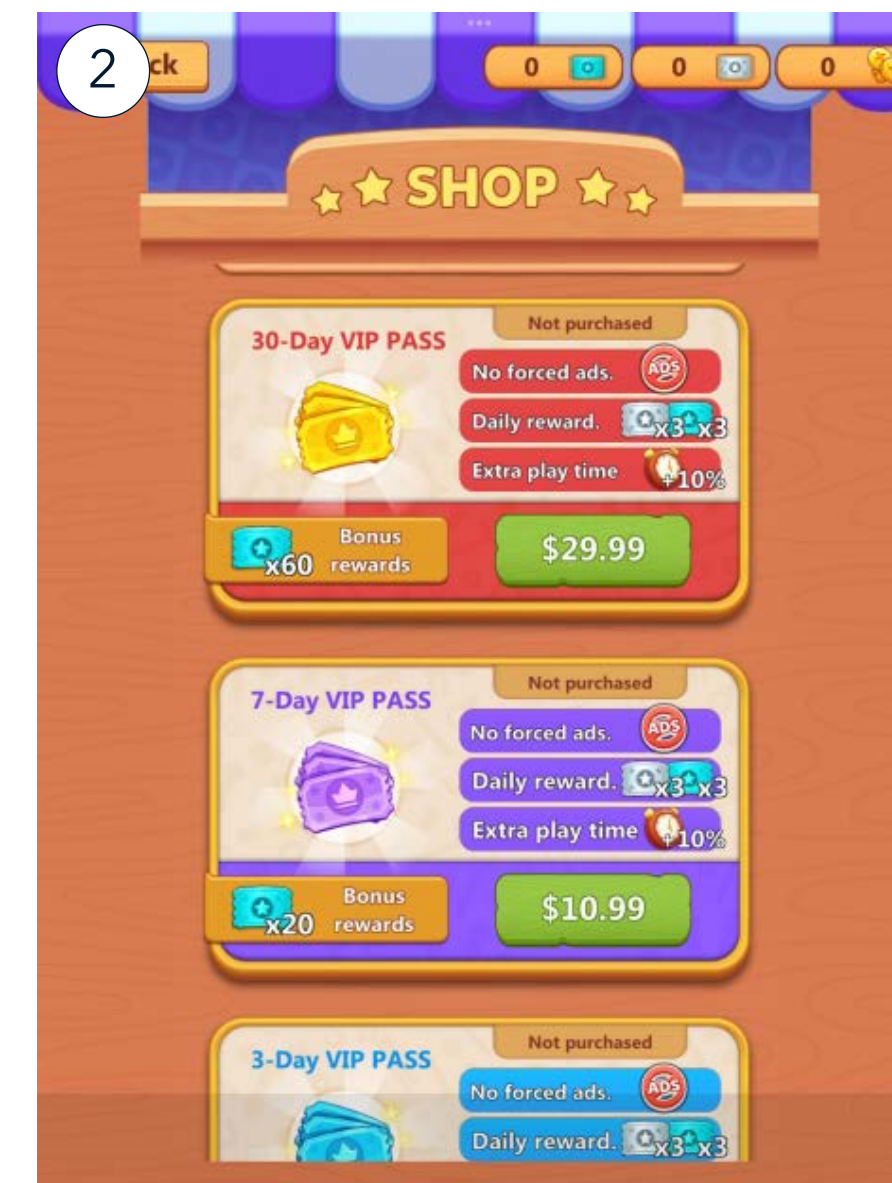
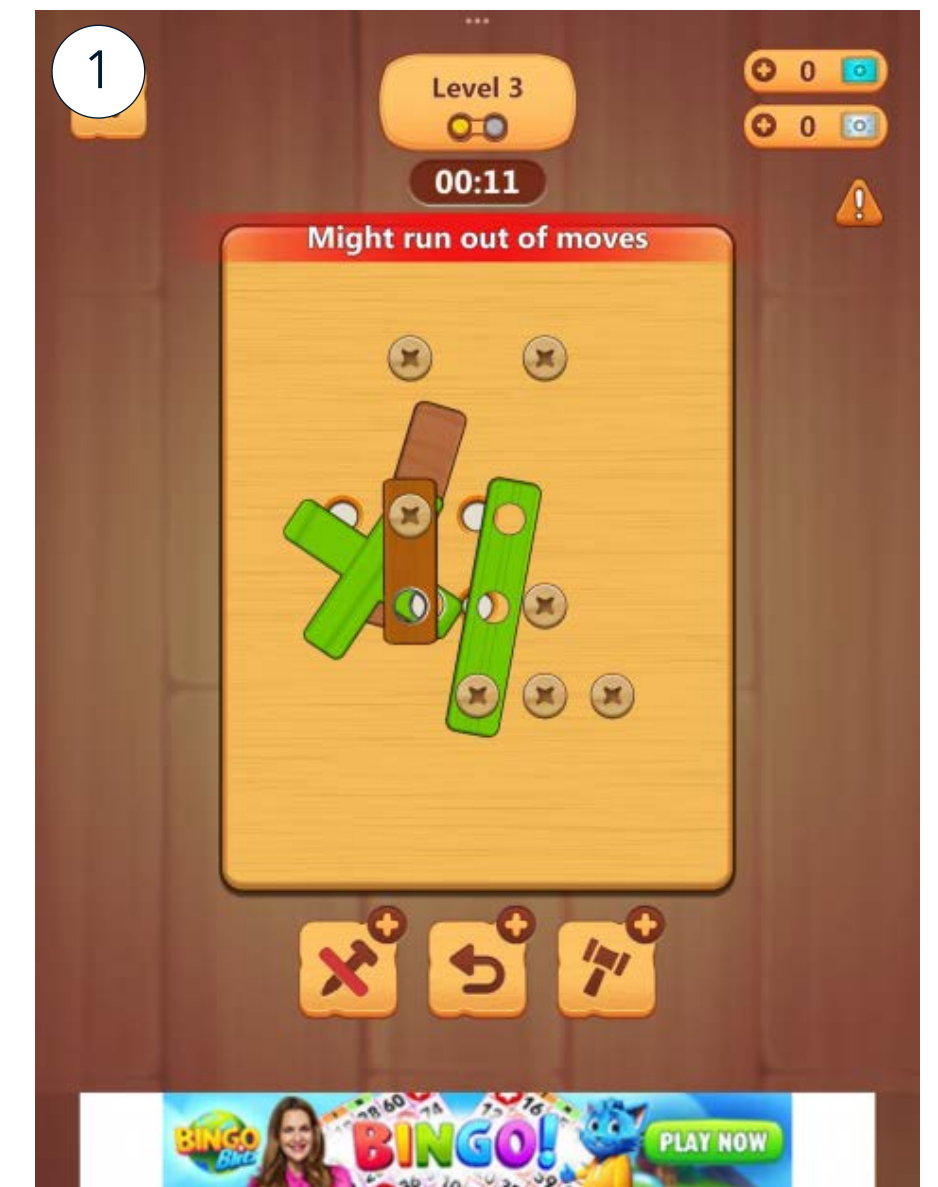
During puzzles, players move screws between available holes to detach planks from a wall. Removing all screws from a plank causes it to fall offscreen unless other planks block it. Dropping all the planks off the screen completes the puzzle.

Each level consists of an easy and a hard puzzle, and solving both puzzles completes the level. Players fail a level if time runs out but can retry unlimited times ([1](#) and [video](#)).

Players use two premium currencies to buy boosts, which undo actions, remove screws, or unlock additional screw holes. IAPs award premium currency and unlock 3, 7, or 30 days of VIP benefits, which include ad removal, daily rewards, and a 10% increase for level timers ([2](#)).

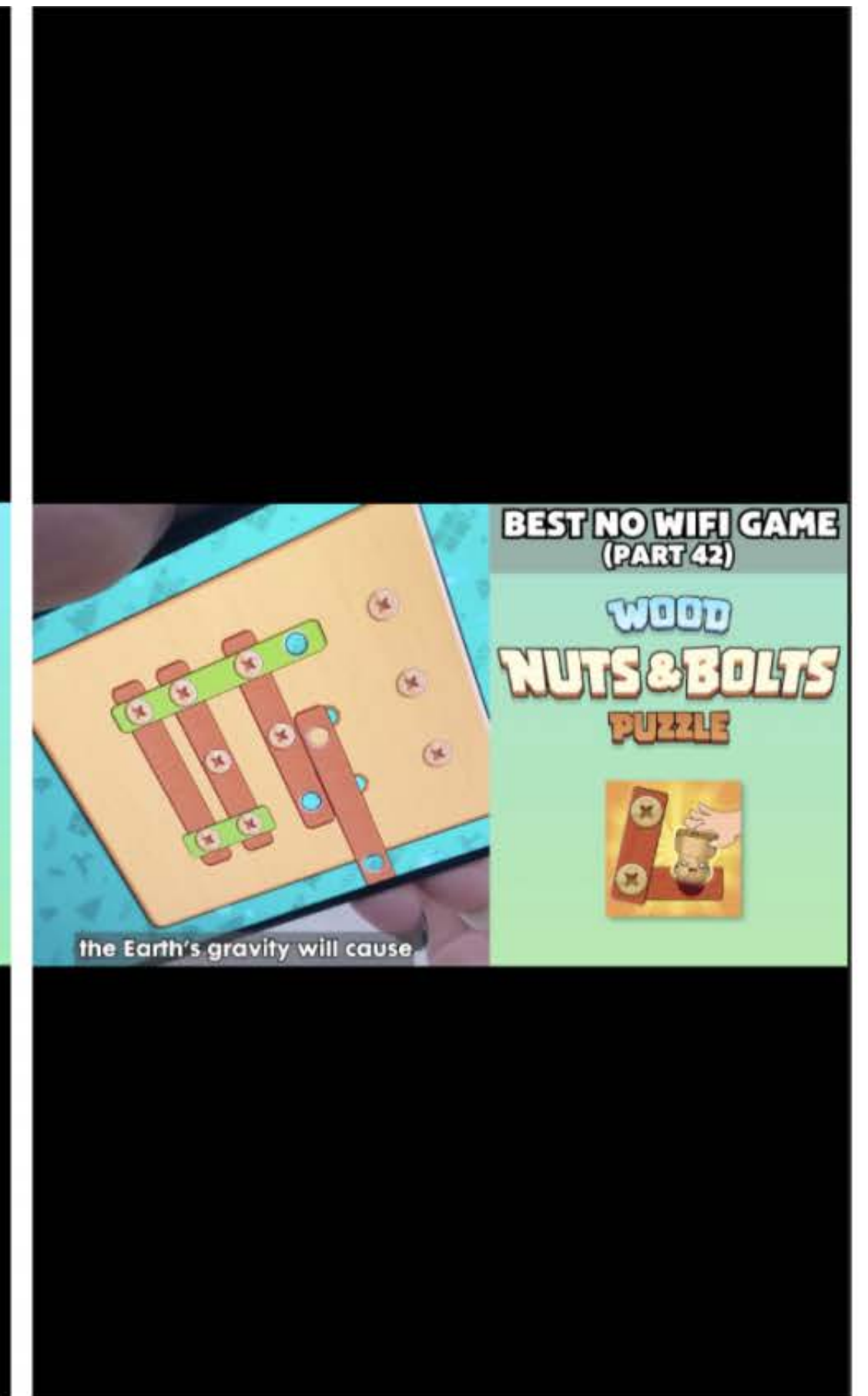
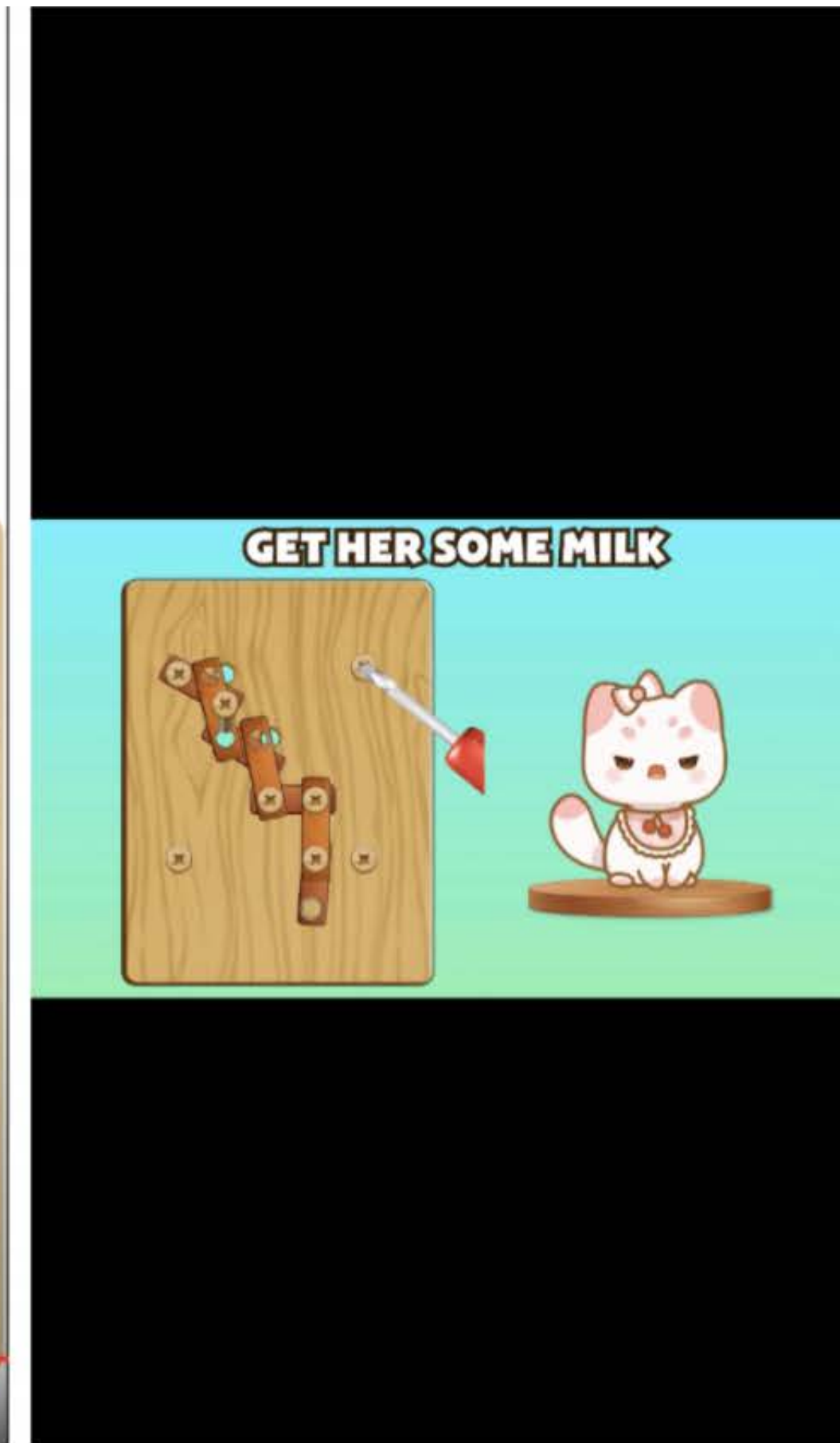
Other features include a battle pass, cosmetic customization, W2E ads, and a leaderboard that ranks countries ([3](#)).

Breakout app coverage is continued on the [next page](#). ➡



BREAKOUT APP (CONT'D)

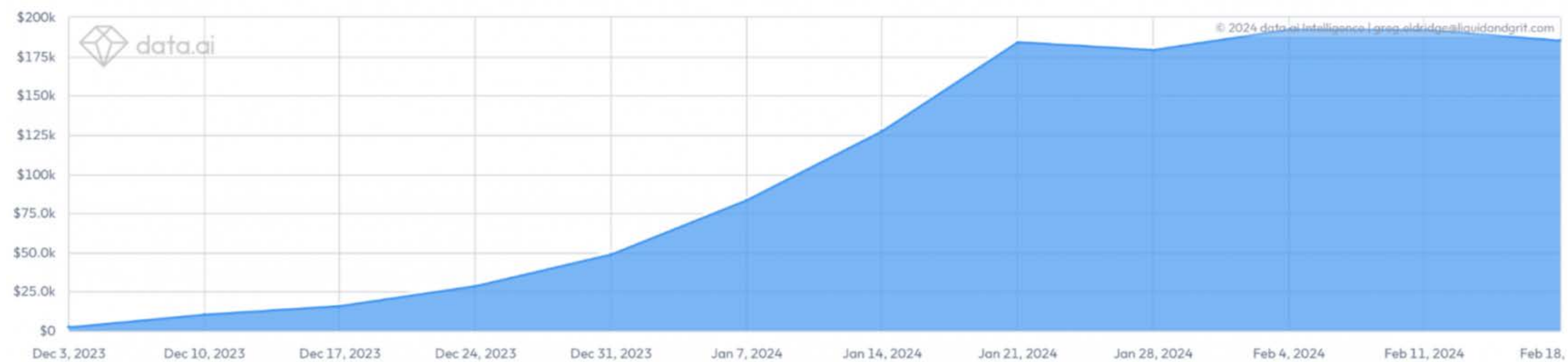
The ads showcase the puzzles alongside a **challenge or motivation**. Wood Nuts & Bolts Puzzle runs 30-second YouTube advertisements that showcase the app's puzzle gameplay. These ads present challenges, like "[No one can pass level 2](#)," or motivations for completing puzzles, such as [obtaining milk for an animated kitten](#). Additionally, some ads depict [players tilting their phone](#) to make loose brackets fall offscreen, a mechanic not present in the app's actual gameplay.



Breakout app coverage is continued on the [next page](#). ➡

BREAKOUT APP (CONT'D)

Revenue accelerated for two months, then stabilized. Wood Nuts & Bolts Puzzle's revenue experienced accelerated growth from early December to late January, then stabilized at about \$186K per week through February.



Downloads rose steadily through January, then declined in February. Downloads reached their peak during the week of January 28th at 402K, then decreased to an average of 316K per week in February.



Graph data is iOS, U.S. only.

SOFT LAUNCH APP

EA soft launches Plants vs. Zombies 3—for the fifth time in four years.

Plants vs. Zombies 3 distinguishes itself from its two predecessors by introducing a more prominent storyline, enhanced graphics, shorter levels, and a custom design progression reminiscent of Gardenscapes. Notably, it also removes players' ability to choose which plants to use in levels. Meanwhile, Plants vs. Zombies 2 still hovers within the top 150 strategy apps.

Plants vs. Zombies 3 was soft launched by EA in the Philippines, the United Kingdom, Australia, the Netherlands, and Ireland on 1/17/24. This marks the app's fifth soft launch since its initial release in February 2020. Check out the app on the [App Store](#) and in our [gallery](#).



Soft launch app coverage is continued on the [next page](#) ➡

SOFT LAUNCH APP (CONT'D)

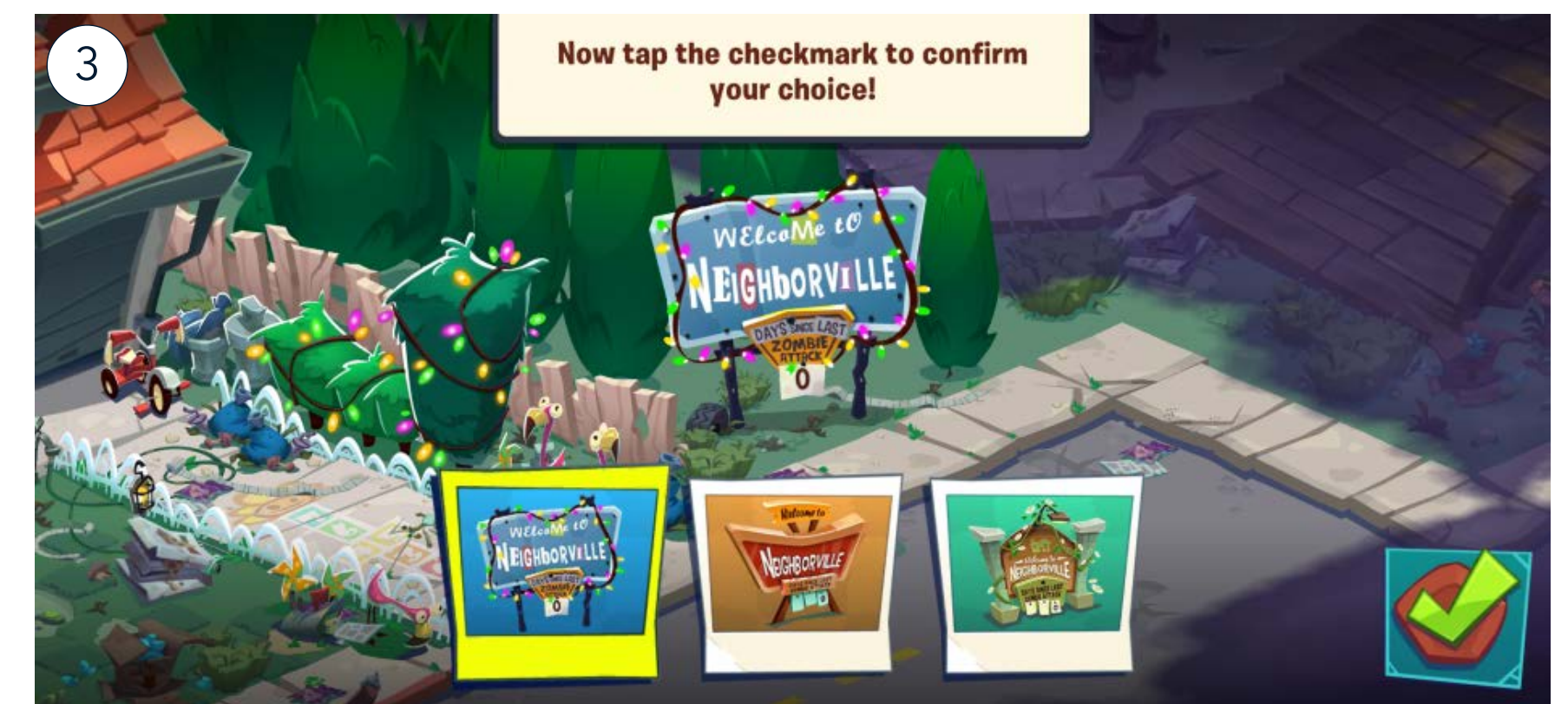
Players place plants to defend against zombies. Players defend against zombies that move across one to five lanes toward the player's base. Players spend resources to place plants that attack and hinder the zombies (1).

Defeating zombies fills a meter that randomly scatters landmines on the lanes when complete. Certain plants generate collectible resources that players spend to buy more plants, but each level only allows the player to use specific plants. A shovel mechanic allows players to remove plants to make room for different ones.

The first time a zombie reaches the base, a defensive character kills all the zombies in that lane. Players lose if a second zombie reaches the base, though players may spend currency to continue the level.

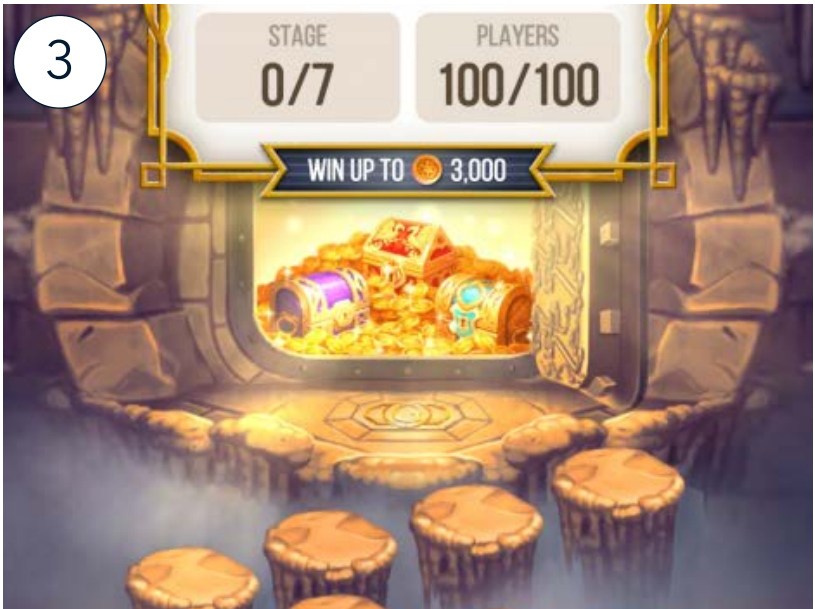
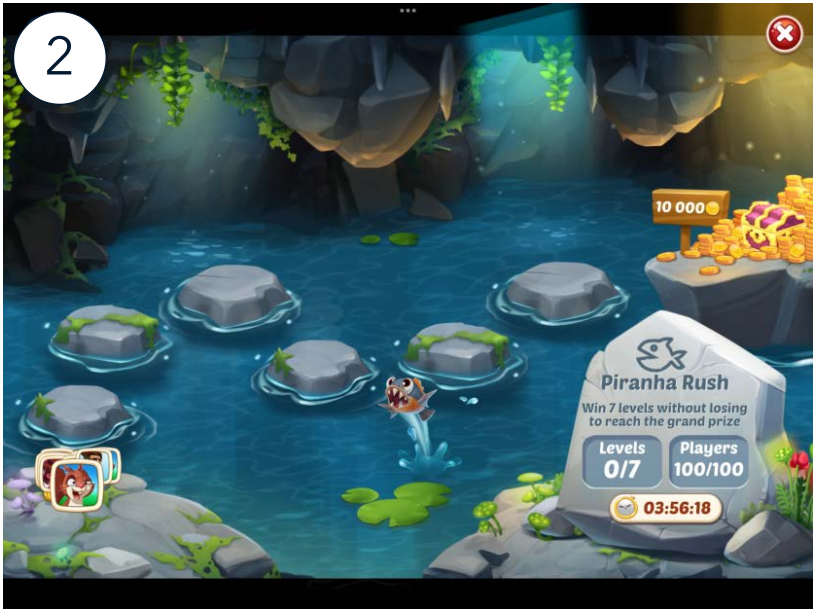
Players complete levels by defeating a certain number of zombies. Completing levels awards tokens that advance a story (2). In the story, players help characters rebuild a town. Some renovations include custom design options (3).

Players earn boosts during gameplay or through IAPs. They can choose up to three boosts for each level, which inflict damage or increase resources.



FEATURE AND EVENT RELEASES I

App	Release	Description
Lily's Garden	Piranha Rush quest feature	<p>Players are placed into groups of 100. Completing base game levels on the first try advances players on a map with seven spaces. Failing a level knocks players off the map and resets their streak.</p> <p>All players who reach the end of the map within 24 hours earn an equal share of a currency prize (1, 2, and video).</p>
Harry Potter Puzzles & Spells	Gringotts Treasure quest event	<p>In a three-day event, players are placed into groups of 100. Completing base game levels on the first try advances players on the map. Failing a level knocks players off the map and resets their streak.</p> <p>All players who reach the end of the map within 24 hours earn an equal share of a currency prize (3 and video).</p>
Royal Match	Archery Arena competition event	<p>Players complete base game levels to earn tokens. Win streaks of up to five levels add multipliers to the number of tokens awarded by each level, up to 100x. Tokens fill a series of meters that award prizes when completed (4).</p> <p>A leaderboard ranks players based on tokens earned, and the top 10 players earn prizes at the end of the event (video).</p> <p>Similar releases: Shield Clash in Toon Blast (7/28/23) and Toy Pass in Toy Blast (12/1/23)</p>



FEATURE AND EVENT RELEASES II

App	Release	Description
Solitaire Cruise Tripeaks	Cruiser's Club reward feature	<p>Players join a rewards program by providing their phone number and enabling texts. Players receive news, discounts on IAPs, prizes, and exclusive items via text messages (1). Signing up also enables cross-play across multiple devices.</p> <p>Similar release: Fan Club in Match 3D (1/22/24)</p>
Angry Birds Dream Blast	Piggyball Slam mission event	<p>Completing base game levels awards points, and losing a level removes all points. At any time, players can spend their points to submit a score in a tennis mini-game against an NPC opponent (2). The NPC's score increases over 24 hours.</p> <p>At the end of each day, if the player scores higher than the NPC, the player earns prizes and advances to the next stage; otherwise, players retry the stage (video).</p>
Candy Crush Saga	Piñata Party mini-game event	<p>Completing three base game levels awards one token. Players spend tokens to play a mini-game in which players tap a piñata repeatedly for five seconds (3). Tapping the piñata damages and eventually breaks it, which awards prizes (video).</p>
Match Masters	Premium Pass purchase feature	<p>Buying an IAP unlocks premium features for seven days, including exclusive solo challenges and daily game modes, ad skips for W2E offers, and an extra item slot when trading collection items with friends (4 and video).</p>

Quickly review all features and events

Filter the [Database Tool](#) by month and year to see all new releases.



CONTENT RELEASES

App	Release	Description
Animal Crossing: Pocket Camp	Cheery Snowfamily custom design	For a limited time, players can spend premium currency on an interactive snowman-themed decoration (1 and video).
Matchington Mansion	Valentine Vogue skin	A battle pass milestone awards a Valentine’s Day-themed outfit (2 and video).
	Secret Admirer Set custom design	Players use premium currency to buy items from a romance-themed design set. Each purchase fills a meter that awards prizes at milestones and an exclusive decoration when completed (3 and video).
Match Masters	Mixy Meow accelerator	Players match certain colored pieces to unlock a boost. Triggering the boost highlights two sections on the board and transforms all pieces in each section into a single color (4 and video).



APPENDIX



TRACKED CASUAL APPS

Tracked Puzzle Apps

Angry Birds 2, Angry Birds Dream Blast, Angry Birds Friends, Best Fiends, Bubble Pop Origin!, Bubble Shooter - Pop Bubbles, Bubble Witch 3 Saga, Bubbles Empire Champions, Candy Crush Saga, Candy Crush Soda Saga, Clockmaker, Elevate, Evermerge, Farm Heroes Saga, Fishdom, Gardenscapes, Gummy Drop, Harry Potter Puzzles & Spells, Hidden City, Homescapes, Jeopardy! Trivia Quiz Game, June's Journey, Lily's Garden, Match 3D, Matchington Mansion, Merge Dragons!, Merge Magic!, Panda Pop, Project Makeover, Royal Match, Seekers Notes Hidden Mystery, Toon Blast, Toy Blast, Traffic Puzzle, Trivia Crack, Trivia Star, Two Dots, Wheel of Fortune: Show Puzzles, Who Wants to Be a Millionaire?, Word Collect, Word Crush, Words With Friends 2, Wordscapes, and World of Peppa Pig

Tracked Simulation Apps

Animal Crossing: Pocket Camp, Cooking Diary, Cooking Fever, Cooking Madness-Kitchen Frenzy, Diner DASH Adventures, Disney Magic Kingdoms, Dragon City Mobile, Family Island, Grand Hotel Mania, Harry Potter: Hogwarts Mystery, Hay Day, Klondike Adventures, Monster Legends, My Singing Monsters, Roblox, The Grand Mafia, The Sims FreePlay, and Township

Tracked Lifestyle Apps

Chapters: Interactive Stories, Choices: Stories You Play, Covet Fashion, Design Home, Episode - Choose Your Story, Obey Me!, Redecor, and Time Princess

Tracked Tabletop Apps

Board Kings, Mahjong Jigsaw Puzzle Game, Phase 10: World Tour, Solitaire Cruise Tripeaks, Solitaire Grand Harvest, Solitaire TriPeaks, Spades Plus - Card Game, UNO!, Yahtzee with Buddies Dice, and Yalla Ludo

PREMIUM PARTNERSHIPS

Liquid & Grit partners with Sensor Tower to infuse our reports with industry-leading data and statistics.

Sensor Tower is relied upon by financial analysts, VCs, and publishers who need to leverage data to identify the fastest-growing apps, emerging markets, and more.

Clients harness Sensor Tower's suite of app intelligence tools to:

- Evaluate app economies and app vitality.
- Drive organic growth with the leading App Store optimization platform.
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- Discover top creatives and better shape user acquisition strategy.



For more information, visit [Sensor Tower's website](#).

CASUAL MECHANICS TAXONOMY

Mechanic	Definition
Accelerators	Increases in the power, impact, or efficiency of play
Banks	Features that save a percentage of spend to be unlocked later
Bonuses	Free bonuses given to players (e.g., retention or W2E)
Challenges	Goal-oriented tasks for players to complete
Clubs	Groups that accomplish goals or compete with other groups
Collections	Sets of items that players collect (often for a completion prize)
Competitions	Features where players compete against other players
Cosmetics	Improvements or updates to the app or features
Currencies	Changes to currencies, economies, stores, and items
Custom Design	Options for cosmetic customization
Exchanges	Shops that allow players to trade items or resources
Expansions	Additional rooms, worlds, play modes, VIP lounges, etc.
Flows	Specific flows, like the NUX, ratings, and surveys

Mechanic	Definition
Hazards	Level elements/blockers that increase difficulty
Interactions	Social features with direct or indirect interaction
Leaderboards	Stand-alone leaderboards
Levels	Anything to do with leveling
Mini-Games	Smaller, shorter games within games (e.g., scratch cards)
Missions	Linear sets of tasks that players must accomplish
Notices	Feature or product announcements
Other	Miscellaneous features and outliers
Profiles	Features related to a player's settings, profile, and controls
Purchases	Anything to do with purchases
Quests	Tasks that advance players along a map-like feature
Rewards	Rewards players receive for engagement or spend

"Profound belief in something allows every individual to find an immense inner force, and to overcome his or her failings."

– Soichiro Honda

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