Tampere University of Applied Sciences



Designing a CO-OP Board Game Targeted for Girls

Project Magical Kingdoms

Venla Kähkönen

BACHELOR'S THESIS May 2022

Degree Programme in Media and Arts Interactive Media

ABSTRACT

Tampereen ammattikorkeakoulu Tampere University of Applied Sciences Degree Programme in Media and Arts Interactive Media

VENLA KÄHKÖNEN: Designing a CO-OP Board Game Targeted for Girls Project Magical Kingdoms

Bachelor's thesis 60 pages, appendices 6 pages May 2022

This thesis studies the various aspects of tabletop game creation which should be taken into consideration when designing for children. It highlights some of the phases that occurred during the creation of an early viable product prototype, including game and visual design.

The main goal was to create a compelling board game targeted mainly at girls aged 8-12. The game, a project referred to as the Magical Kingdoms, became an intuitive adventure and role-play-focused CO-OP experience set in a fantasy universe.

The research used in the thesis was conducted by analysing the current tabletop game market, reading published material as well as various online studies and articles. The most utilised tools when creating the 2D visuals and icons of the product were Adobe Photoshop (2020) and Adobe Illustrator (2020). Other meaningful subtasks regarding the project include world-building, character and UX design, choosing and iterating on the gameplay mechanics, creative writing, and hands-on playtesting.

Additionally, the thesis took under examination how the current board game scene represents women. These findings affect crucially some of the game's themes shifting towards inclusivity and empowerment. One of the design goals became to inspire girls to get more involved in the tabletop game industry by creating a title aimed directly at this demographic.

2

CONTENTS

1. INTRODUCTION	6
1.1. Background	6
1.2. Objectives and structure	11
1.3. Limitations	11
2. GAME DESIGN	13
2.1. Conceptualising	13
2.1.1. Target audience	14
2.2. Benchmarking	15
2.3. Core loop	16
2.4. Game mechanics	18
2.4.1. The goal of the game	19
2.4.2. Randomness	21
2.4.3. Movement	25
2.4.4. Encounters, items & portals	26
2.4.5. Combat	29
2.5. World-building	30
2.6. Accessibility	32
2.7. Rulebook	35
3. VISUALS	36
3.1. Target look	36
3.1.1. Colour scheme	37
3.2. Character design	40
3.2.1. Fantasy races	40
3.2.2. Character costumes	47
3.2.3. Representation	48
3.3. Game board design	49
3.4. Iconography	51
4. DISCUSSION	53
4.1. Conclusion	53
4.2. Further development	53
REFERENCES	56
APPENDICES	61
Appendix 1. Rulebook 1 (3)	61
Appendix 1. Rulebook 2 (3)	
Appendix 1. Rulebook 3 (3)	63

Appendix 2. Game board	64
Appendix 3. Item & encounter card types	65
Appendix 4. Player character cards	66

ABBREVIATIONS AND TERMS

2D	Two dimensional	
3D	Three dimensional	
BIPOC	Black, indigenous and people of colour	
Casual game	Game that targets a mass audience usually played in	
	shorter sessions	
CO-OP	A co-operative play style	
D6	A six-sided die	
D20	A twenty-sided die	
Game mechanic	Construct and/or rule of a set game	
Gateway game	A game that can be used to softly introduce a certain	
	game genre to an inexperienced player	
High Fantasy	Sub-genre of fantasy set in a fictional world with an	
	epic theme or setting	
Lore	History and knowledge of a set fantasy realm	
Match 3	A game genre where the player aims to combine	
	similar elements of 3 or more	
One versus many	A play style in which one player has different goals	
	from the rest of the players	
Playtest	Testing a game before its release	
RGP	Role-playing video or tabletop game	
Tabletop Game	Board game involving pieces and a pre-marked board	
UX design	User experience design including usability and	
	function	

1. INTRODUCTION

1.1. Background

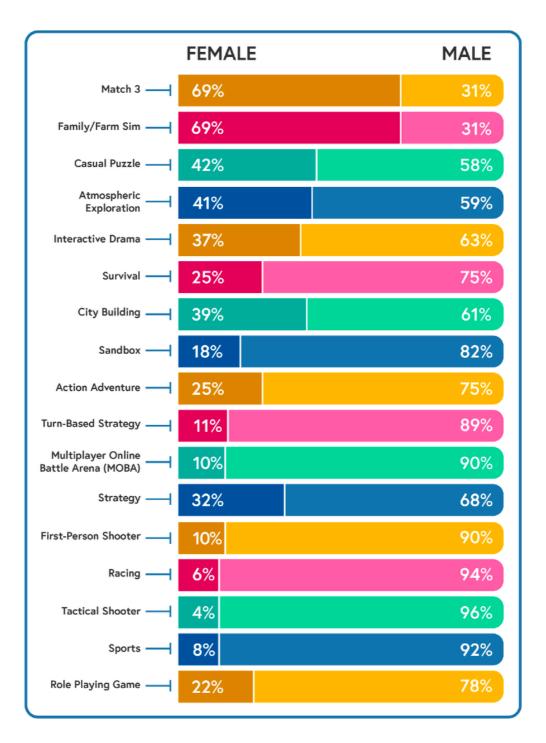
The history of tabletop games dates back thousands of years. Back then these games were not played by, nor made for, children. Adults played early forms of board games to gamble, while the elite also used board games to have fun and to develop their character. These skills for example included discipline and concentration as one of the world's oldest board games called Go—Weiqi in Chinese—suggests. In India as early as 200 BCE games were already used as a learning tool for children and adults alike, exemplified by the ancient game Snakes and Ladders, designed to teach the people about morals and religion. (Mingren 2018; Glimne 2020; Deason 2017.)

Tabletop games became widely accessible for children much later in the 1800s, when people in Europe started to slowly move away from using child labour making children viable consumers for the first time in history as the concept of childhood developed. Some of the most popular commercially available board games during that period were classics we know and love today, like chess, checkers, and dominoes, which were still largely enjoyed by kids and adults alike. (Ortiz-Ospina & Roser 2013; Brown 1996; Lien 2013.)

The modern tale of board games however starts as late as the dawn of the 20th century, with the invention of such games as The Landlord's Game in 1903, an early successor to the international success: Monopoly (1935). Steadily as time passed, new games of more varied genres and themes would pop on the market as the demand for entertainment grew. (Brown 1996.)

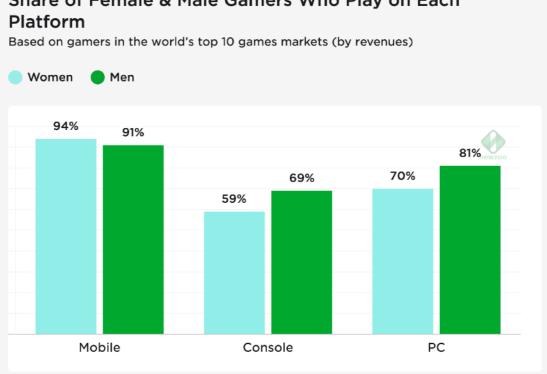
Before the 1980s the games were mainly marketed toward families and only little to few games were targeted at just one gender. A change came to be however when the massive recession of video game sales hit the US, an event commonly referred to as the Video Game Crash of 1983. The cause of the sharp recession was largely believed to be poor quality control of games at the time, but to maximise uncertain profits the demographic of gamers needed to be redefined to ensure maximum future potential. As male gamers were the majority video games started to be marketed mainly just toward a male audience from this point forward. The games were now being placed in the boys' aisles in local stores, creating a new kind of division and an entry barrier for girls. This development eventually also affected the board game market's core demographic as the gaming scene as a whole shifted. (The People History 2022; Lien 2013.)

This shift is still visible when looking at today's market where male players dominate in numbers in almost all game categories, female gamers being the majority only in Match 3 and socially focused simulation games, such as family simulators (Picture 1.). This creates a cycle, in which many new games are initially designed for a male audience in the hopes of reaching the largest possible audience and gaining maximum profit. (Denton 2021; Lien 2013.)



PICTURE 1. Game genre player statistics (Denton 2021)

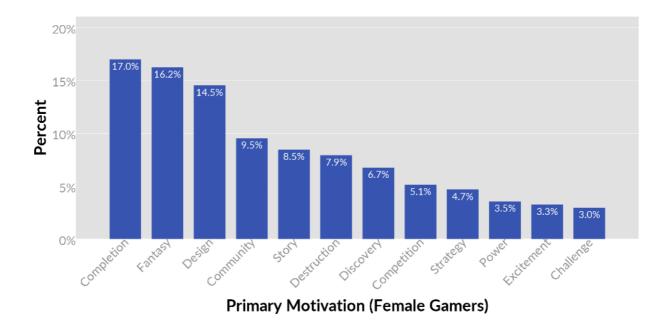
The mobile game market on the other hand, which is now estimated to bring in the most revenue among all other gaming platforms combined, is according to some surveys drawing in more female gamers than other platforms. Women are more likely to play casual—or hyper-casual—free-to-play titles, but also through mobile games venture into more adventurous genres as well, such as puzzle RPGs. This indicates that there is underlying interest and could mean the entry barrier for other role-playing games could be lowered by this method, as the RPGs can be challenging to access for those not already familiar with the genre's rich vocabulary. (Chiovato 2021; Chen 2021.)



Share of Female & Male Gamers Who Play on Each

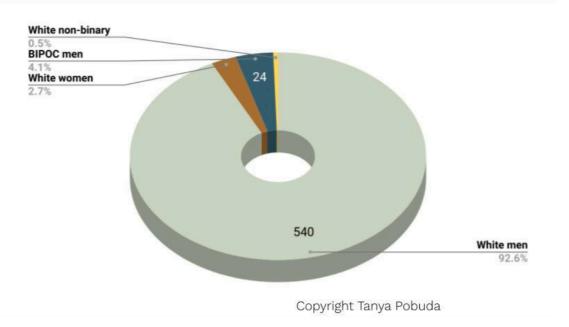
PICTURE 2. Share of All Female and Male Gamers Who Play on Each Platform (Brune 2022)

When looking at the top primary motivations of the female audience they too seem to point at completion, fantasy, and design. Community, while heavily marketed as being the driving motivation to the female audience, is only the 4th most important aspect. This data provides some proof that there would be a market for a new action-oriented role-play experience targeted toward girls as fantasy and story both rank notably high. (Yee 2016.)



PICTURE 3. Primary motivations of female gamers (Yee 2016)

Roleplaying games require and develop creativity significantly more than, for example, the casual Match 3 games that focus more on quick thinking and fast reflexes. Encouraging women and girls to get into more challenging and creatively driven games could eventually help to shift the gender balance of the games industry. When looking at statistics from 2018, women have created or co-created less than 3% of the top 200 board games rated on the Board Game Geek database while white males have designed nearly 93% of these games. (Dufva 2022; Majander 2022; Pobuda 2022.)



PICTURE 4. Top 400 BGG Designers, Breakdown by Gender & Race" (Pobuda 2021)

1.2. Objectives and structure

The goal of this thesis is to produce a visually and conceptually viable CO-OP board game prototype for 8–12-year-olds with the core audience targeting mainly girls. This project is here referred to as Magical Kingdoms.

The thesis consists of two main parts after the introduction: designing the gameplay mechanics and then designing the visuals. These subjects in many parts of the design process overlap, and the fact that related concepts constantly shape each other means that the thesis is not entirely chronological. Chapter four consists of the conclusion and plans for the project.

1.3. Limitations

Due to the COVID-19 pandemic and limited contacts with the chosen target demographic, playtesting could not be conducted with the target audience, despite its obvious benefits and importance to the project. To accomplish this, a bigger team and more suitable connections would have been necessary.

Some of the data presented in this thesis are also either limited in scope or precision due to a limited pool of well-researched data being available on the selected subject. Tabletop games remain a relatively understudied subject compared to for example the video game market, for which recent and large-scale studies are published more widely due to its greater market potential. The video games industry commanded an estimation of a humongous US\$180.3bn in 2021, while the tabletop games industry was only estimated at US\$11.7bn. (Wijman 2021; Jarvis 2021.)

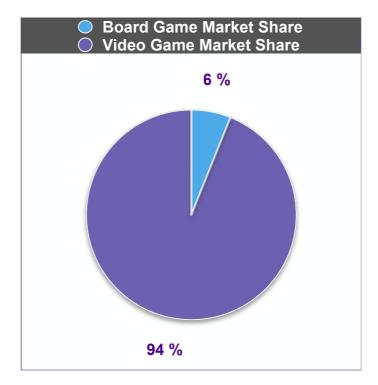


CHART 1. Comparison of tabletop and video game market shares in 2021

2. GAME DESIGN

2.1. Conceptualising

When designing a new game, it is important to take the target audience, theme, setting, accessibility, and accurate representation into consideration. Ideally, all of these factors are accounted for at the very start of the design process to avoid complications later. (Fullerton, Swain & Hoffman 2004.)

As the initial research suggested, a game targeted mainly at girls including elements of role-play and adventure could have an untapped marketing potential while also serving as a gateway game for the young audience to later move onto more grand titles. Therefore, other starting parameters included a classic high fantasy setting for the game, with a lot of the subject matter taken from fables, which would softly introduce the players to this popular genre and yet be familiar enough to be comfortable around. A common narrative theme that matches these parameters would be the classic good vs. evil trope, as it can be twisted and turned in many interesting ways while enabling much creative freedom around it. This good versus evil trope is well exemplified in the Lord of the Rings (1954–1955) trilogy, where Sauron represent pure evil might that the main heroes are rising to challenge. (Saari 2018; Glatch 2021; Marshall 2017)

Game mechanics selected for the core of the gameplay were co-operation and character development, as these commonly are at the core of any role-playing experience as popularised by the fifth edition of the role-playing game Dungeons & Dragons (Wizards of the Coast 2014). Abilities, items, and equipment support these goals and were thus included, as well as combat and other threats that serve both as a balancing force and as a way to create conflict in the game. Conflict is almost always necessary in some form as it drives all action forward and as such this benefits both the game's narrative and gameplay. (Saari 2018; Stern 1991.)

2.1.1. Target audience

As the game attempts to serve as a gateway title, it needs to be rather simple by comparison to many other tabletop games on the market. These games can take hours to learn and many more to play in one or multiple sessions, and the rulebooks can be as lengthy as 20 pages. (Lee 2021.)

As the game would be difficult to market and target solely adults looking for simpler role-playing adventures, children were selected as the primary demographic early on. A simple ruleset would suit this audience well and this limitation would keep the game from growing too complex by default. Eight to twelve-year-olds were selected as the primary target age group, as they most likely have both the linguistic and conceptual understanding to be able to play the game independently without any adult supervision. At this age, the kids can also handle possible defeat better and even enjoy the challenge, as long as the game steadily rewards the players and offers a sense of accomplishment in the end. On this spectrum, there already are kids who might be searching for their identity, in which case having multiple different and varied player characters would suit the design well. (Lehtinen, Kuusinen & Vauras 2007; Wheeler 2018.)

Girls and women on the other hand were chosen as the primary target audience as there is a lack of board games targeted at this group and a need to increase female representation in board games in general. Yet ideally the game would be enjoyed by all genders, as well as kids and adults alike. The main feature that draws in girls should come mainly from the characters and visuals but the chosen game mechanics should suit everyone. The system would ideally be both easy to pick up yet complex enough to be able to offer a varied experience each time that it is played.

Once the main age and gender demographics were settled upon, the theme of the game came to form. The game's fantasy setting was merged with magic and princesses—thematically lining with the popular Magical Girl genre—and the project was promptly titled 'Magical Kingdoms'. (Collins 2017.)

2.2. Benchmarking

The benchmarking phase of the process was kicked off by researching local game shops and online sources to find similar titles to compile an understanding of the usual and popular gameplay mechanics. Using various references is crucial to avoid falling into common design pitfalls, and also to see what the current theme, genre, and visual trends are like.



PICTURE 5. Selection of tabletop games at the local toy shop (Tampereen Pieni Lelukauppa 2022)

It was early on concluded that there are no identical or nearly identical games to what Magical Kingdoms was aiming to be. Many of the games looked into had similar elements like incorporating co-operation, adventure, and roleplaying, but these games then did not match the selected theme. A game called The Big Book of Madness (IELLO 2015) was objectively the closest title, matching the general playstyle and setting, but was aimed at +12-year-olds with a gloomier visual style than intended at this point. Many of these games had a playtime of around 60 to 90 minutes, which became the target for Magical Kingdoms as well.

This meant that both the theme and game genre were popular enough within the scene, but never combined in the way intended to be done here. As it seemed there was no direct competition it was time to move on to the project's plan and iteration phase.



PICTURE 6. Disney Villainous (Ravensburger & Wonder Forge 2018) and Outfoxed! (Gamewright 2014) both present similar qualities to Magical Kingdoms, the first one in theme and art and the second in terms of gameplay

2.3. Core loop

One of the first things needed to be able to start the prototyping process is figuring out the core loop of the game, which may involve game board movement and in-game actions. As players, 8 to 12-year-olds are a demanding audience, who still long to be in a group but are currently forming their identity and independence as well. A game designed for them needs to take several playthroughs to master, as well as allow multiple gameplay styles and creative tactics to beat. The game must balance between complexity and simplicity as the rules cannot be excessive in length either, and all of this must be taken into consideration when moving forward with the prototype. (Wheeler 2018.)

For the narrative and role-playing aspects of the project, while a little unintuitive,

the game Betrayal at House on the Hill (Avalon Hill Games, Inc. & Wizards of the Coast 2004) was chosen as the main source of inspiration. Even though this is an adventure horror title aimed at young adults, which is a very different demographic from the target group, its way of telling short stories through different encounter cards was something both interesting, intuitive, and a great way to include easy world-building into the mix. Some of these cards pose challenges, some threats, and others items to strengthen the character and increase their chances of survival. A similar mechanic was also used in a game called Stuffed Fables (Plaid Hat Games 2018), which is an action-oriented tabletop game with role-play elements that coincidentally is also aimed at +8year-olds.

In Betrayal at Baldur's Gate (Avalon Hill Games, Inc. & Wizards of the Coast 2017), a title strongly based on Betrayal at House on the Hill, more role-play elements were included, such as individual character abilities. These help in establishing the characters more and add a small new strategy element. These two games also have a good combat system already implemented, which proved to be a good basis for the project as well.

On the other side of things, a classic childhood Finnish game called Afrikan Tähti (Peliko 1951) was used as the starting point for the movement system. Although this is not a very popular title among many older players due to its very luck-based system, this game's intuitive movement mechanic combined with the element of luck and surprise when turning over the game pieces to find good, neutral, or bad outcomes is such a memorable concept that it has managed to stay as a Finnish family favourite for over 70 years. The system also provided a great way to easily vary the playing experience each time that it is played, as the game pieces are in different locations each playthrough. On top of all this, turning the game pieces over became an easy way to include the aforementioned encounters cards into the core loop of the game, making this an easy choice.

These choices meant that the general gameplay loop goes as follows: A player first moves to figure out whether or not they can pick an encounter or threat card. The card is then resolved by one or multiple players, after which the

player can still use their possible items or abilities. Once all the player has done all that they want or can, the turn passes on to the next player. One turn should therefore be anywhere from 10 seconds to a few minutes.

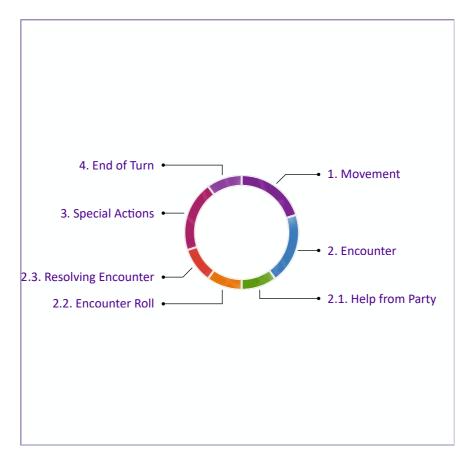


CHART 1. The general gameplay loop of the game

2.4. Game mechanics

Although Magical Kingdoms is a game that emphasises various aspects of roleplay, it is fundamentally an action-oriented game where all the players are equal with no game-master affecting or regulating the gameplay. This decision was made to keep the game rules simple and the concept easy enough to grasp for everyone without the need for one person to invest more time and effort into learning the rules and concepts of this game.

The goal of the game is for the players to protect the kingdom, which is represented by the game board, by defeating four great monsters before they reach the main castle. Narratively this would be presented to the players as a call to: "Adventure through the magical kingdoms with your allies, encounter new people, avoid traps and fend off evil forces trying to take over the land." How to implement this idea into concrete mechanics was in the end tricky despite the relatively simple concept.

In this document, each separate mechanic's development has been divided into its own section. The full rules of the game can be found at the end of this document. For reference, a general flowchart of all the selected gameplay elements can be seen below.

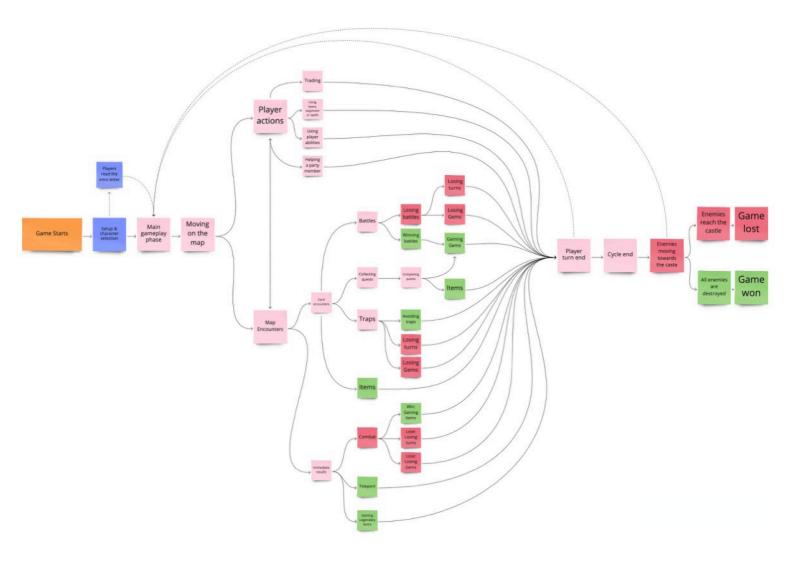


IMAGE 7: General flowchart of the game

2.4.1. The goal of the game

Deciding upon the goal of the game was not an easy task and was altered a few times during the design process. In the early stages, the goal was to find up to 5 specific legendary item cards from the deck by exploring the map, which then prompted the players to return to the starting point to fight one last enemy. This did not pan out, however, as the chances of pulling these 3 cards were too random as proven by some early playtesting sessions.



PICTURE 8. Playtesting session in progress

The design was then changed to searching for these legendary items as tokens on the board instead. These item tokens were shaped distinguishably to both give the player an idea of where to go, and also make these legendary items always available for the players to collect without having to go through possibly over 70 cards.

However, this was not the solution either as it introduced a whole new set of issues. If the players knew exactly where to proceed, they would not ever stop for other encounters and all the other game elements became essentially pointless. Even regardless of this fundamental flaw, the game pace was still too random and was subjectively quite uninteresting to play with little investment happening. There still was no pressure for the players to complete the game because there was no sense of urgency, as the end of the game was also up to the random card encounters which could tick down too slowly.

A key part of game design is conducting frequent playtesting sessions to find out flaws and iterate early on to find possible game-breakers and also to see if the players can have fun with the product in the intended or unintended ways. These sessions helped in forming a sensible game goal, which removed the focus from the legendary items and put it back where it should have been from the start, conflict and therefore combat. (Gerad 2021; Fullerton, Swain & Hoffman 2004.)

A few roaming monsters were added, their maximum number varying based on the player amount, which would march towards the castle in the centre of the board as the game proceeds. If the players manage to defeat all these enemies before any of them reach the castle, they win. If not, all the players lose and need to start again. Forcing combat and bringing the focus to it also strengthened the CO-OP element of the game, as to defeat strong monsters on the board the players would greatly benefit from moving together, as opposed to each player going on their separate ways.

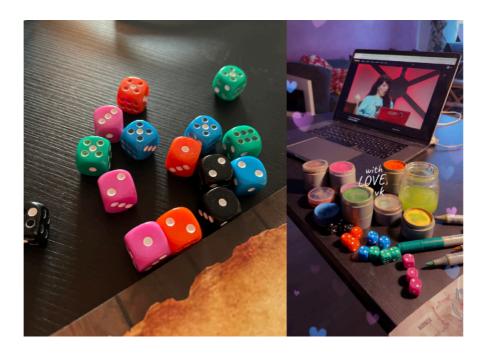
2.4.2. Randomness

Rather than using static values to resolve encounters and movement, throwing dice gives the player an action to do each turn, while introducing an element of luck and excitement to the gameplay loop. Additionally, altering the probabilities with other game mechanics is a key feature of the experience.

For the dice, standard D6 were selected for their low manufacturing cost and their familiarity with most players. The dice in specific terms are 16mm in dimension with rounded corners and bright colours matching the chosen palette as close as possible. To make the gameplay move along smoothly, each player should have their own dice sets, which meant 3 dice per player and 15 dice in total to accustom all maximum of 5 players.

Further customising was done to the dice however to work with a lower set of numbers to keep the calculations as accessible as possible for the youngest of players. The numbers chosen were: 0, 1, 1, 2, 2, and 3. These were selected

especially to make mediocre scores more probable, with highs and lows occurring less frequently. Failing or succeeding massively is a great chance to allow the players to make up their narrative and make lasting memories, as well as being more manageable than the standard dice while the heroes power up.



PICTURE 9. Altering standard D6s' with soluble paint to match the wanted design

Including a 0 in the dice caused some backlash in the first player testing session, as throwing nothing can feel extremely punishing. However, to drive players to move together as a team when they have a much higher chance of succeeding in their throws, which requires a chance to fail critically to work. All players might not understand this message at first, which can indeed be a cause of anger and frustration and can take a few rounds to comprehend.



PICTURE 10. Dice concepts for the final product

As this particular dice design is my own, I had to make a custom chart to track down the score probabilities. The basic calculations with one die are easy to conceptualise, 0 and a 3 both have a chance of 1/6 at landing, while 1 and 2 both have a chance of 1/3. When throwing multiple dice, however, the extremes become increasingly harder to hit. Moreover, these numbers are not readily available in common databases as the dice are so unique, which makes calculating the score chances hard even for the experienced tabletop player.

Total Score Probability	1 die	2 dice	3 dice	Numbers Thrown
0 (MIN)	1/6	1/36	1/216	0+0+0
	16,67%	2,78%	0,4%	
1	1/3	1/9	1/36	0+0+1
	33,33%	11,11%	2,78%	
2	1/3	2/9	1/9	1+1+0 / 2+0+0
	33,33%	22,22%	11,11%	
3	1/6	5/18	35/216	3+0+0 / 2+1+0 /
	16,67%	27,77%	16,20%	1+1+1
4	-	2/9	7/36	2+2+0 / 3+1+0 /
		22,22%	19,44%	2+1+1
5	-	1/9	7/36	3+2+0 / 3+1+1 /
		11,11%	19,44%	2+2+1
6	-	1/36	35/216	3+3+0 / 3+2+1 /
		2,78%	16,20%	2+2+2
7	-	-	1/9	3+2+2 / 3+3+1
			11,11%	
8	-	-	1/36	3+3+2
			2,78%	
9 (MAX)	-	-	1/216	3+3+3
			0,4%	

TABLE 1. Probabilities of different dice throw

To trifle with the odds even more the players can also spend the in-game currency, gems, to throw some additional dice. Gems are given to each player from the start of the game according to their character card. They can also be collected by defeating enemies and completing quests. These dice can be bought and used at any point, including encounters, help, and movement, which adds a new layer of strategy into the game, while still being an entirely optional feature.

2.4.3. Movement

To do a basic move on the board, the players need to throw as many dice as their speed skill—stated on their selected character card—allows them to. The players will advance each turn, moving their character figures to reach encounter spaces, enemies, or other players. The players travel along twisting and turning paths that often intersect, allowing for variety and strategic options.

As stated earlier, the movement in Magical Kingdoms is based on the game African Tähti, but it took some iterating to come to this conclusion. First, a tilebased system was explored like in The Settlers of Catan (Teuber 1995) or Carcassonne (Hans im Glück 2000), where the map itself would provide some replay value as it would be crafted and shaped differently each playthrough. In the end, this solution did not work well together with the other game elements and was thus scrapped to find a more eloquently simple solution.



PICTURE 11. Early stages of planning to test the players' movement

A twist in this rather basic movement system however comes from the ability to move together as a party with other players. The players can interlock their characters from the start, or when moving past or landing in the same space with another player. When moving together, all players continue to take their turns individually as normal but they can receive help from the other party members to move which can take place in various encounters.



PICTURE 12. From the early player figure stacking concept (upper left) to a playable prototype (below)

2.4.4. Encounters, items & portals

Encounters in this context mean both quests and threat cards. Encounter spaces are special spaces on the board that the players try to move toward in the course of the game to gain items and abilities. Both of these revolve around giving the player a challenge, in which the outcome depends on if they succeed or fail a dice roll. This then prompts a reward or penalty of some sort which can be anything from losing a turn to receiving a free item, spell, or equipment card.



PICTURE 13. Example of an item card

Item cards can only be used once, equipment cards are permanent unless damaged and spell cards can be used only a certain amount of times before being discarded. All specialities and descriptions are always written directly on the card, so the players would have to refer to the manual as little as possible. These cards' effects can include advantages to a certain challenge, teleportation, extra movement or damage, and faster trading with other players.

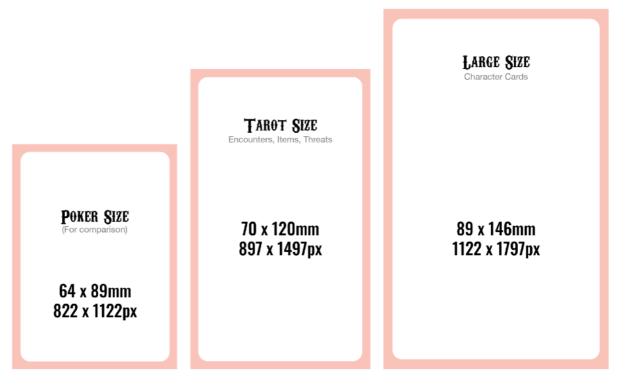
Some cards can grant an extra boost to only a specific character card or must be combined with other pieces to unlock their full potential. This is to encourage players to work together, trade these cards with each other and try to maximise their chances to win the game. To avoid the number of cards players have to manage at once from getting too large, the default player hand size has been limited to 7.

Portal tokens on the other hand are a rare thing to discover in an encounter space. Once discovered, the portals allow the players to move rapidly between other opened portal spaces on the map. By uncovering as many spaces as possible, the players can create a network to allow themselves to move swiftly through the board when nearing the endgame.



PICTURE 14. Encounter pieces' front and back designs intended for the different areas of the map

For the regular decks' card size I chose 70 x 120mm as it is large enough for the text and illustration to fit while still being common enough that the project would not later run into production issues. The size is commonly used for tarot cards which means it is widely available. The player character cards use the large size instead, as they have even more data that needs to fit comfortably



PICTURE 15. Standard playing card sizes

2.4.5. Combat

Players can encounter combat by coming across combat cards in the encounter spaces, or by directly moving toward the prepositioned monster figures which are required to be beaten to win the game. These enemies move towards the castle each time the turn order passes by the player who started the game and holds the first player token. Some abilities and spells can stop the enemies from moving, as well as being in active combat.

Narratively, the beings attacking the heroines are not evil by nature but twisted to do nasty things by the antagonist turning these beings against the kingdom. By knocking some sense into them, the curse can be lifted and the beings return to their peaceful activities. This is something that is commonly done in children's TV series to justify the violence and send an appropriate message, as seen in the adventure title Digimon Adventure (Toei Animation 1999).



PICTURE 16. Combat card design process, new design with more appropriate texts and intimidating colours on the right

To win the players need to reduce the enemy's hearts within combat. The player(s) need to throw a dice score that is at least one higher than the enemy's score to do damage. Both the player and the enemy throw dice the amount that equals their might skill, which is written on their corresponding card, and each

party member can help in the combat by throwing one additional die. During one turn, the dice are rerolled only in the case if both parties throw an equal dice score.

Combat's length took a lot of testing back and forth as well, meaning whether the combat should always be resolved in one turn, or possibly take multiple to complete. The latter was in the end chosen to strengthen the CO-OP mechanic, as this way other players would have the chance to move and join and help other players in trouble between the turns.

What happens to the player once their hearts have been depleted was a difficult question to solve that took multiple iterations to find a satisfying answer to. The player could be made to lose their gems, items, or turns, but none of these options ultimately made the game any more fun, rather seemed to make the pace drag and frustrate the players. In the world of video games, the concept of lives and having the player restart and lose progress has been deemed old-fashioned for some time now, as it serves no purpose and can be seen as a modern relic of the arcades monetisation tactic to maximise playtime with as little content as possible. (Mullins 2019.)

Yet the players should somehow be discouraged from taking on the bigger enemies before gathering some necessary items and equipment. If the game was not designed this way, the winning tactic could simply be to ram into these main enemies and throw dice until the players win by pure luck. This was solved by giving the players an option to refill their hearts by spending 1 gem or be transported back to the closest starting area, where they would need to spend their next turn to return to full health. This also adds strategy, as players need to balance between spending the gems and keeping some in an emergency stack.

2.5. World-building

To create a world that is easy for the players to be immersed in, the first bit of context needs to be introduced as early as possible at the beginning of the game. Contextualising what has happened before helps the players to understand the setting and therefore be more involved in the action that follows. (Stenros & Montola 2008.)

In many games, this is done through a short extract in the manual that describes the setting and goal in a narrative sense. In the tabletop game Legacy of Dragonholt (2017), this was done with a letter that directly inspired the letter included in Magical Kingdoms as well. The letter included with Magical Kingdoms is from the in-game king, explaining to the young heroines that the realm is in danger and only they can save it by defeating the enemies that threaten it. The letter also gives guidance on the first actions the players need to do and prompts a short role-playing section where the player characters first introduce themselves to each other. This is a step that can be skipped if the players are not into it, and it has no consequence on the rest of the gameplay.

Another early piece of world-building comes from the character cards that the players receive at the start of the game, each containing some facts about the character and their circumstances. The names of the characters can be chosen by the players themselves and ideally the material of the cards would be such that the names could be rewritten each playthrough with a non-waterproof marker. Giving the player the ability to write their own backstories for the characters was as well contemplated, but in the end, decided against. Instead, in the box, there are a few empty cards included for players to fill out to let their imagination loose based on the example cards once they are more familiar with the game and its concepts.

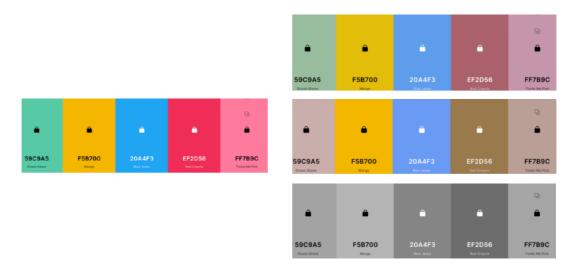
Yet the greatest and most important part of world-building comes from the various encounter, combat, and item cards, which all include at least a bit of creative writing. These cards highlight the small and large issues of the kingdoms, ranging from helping a giant find its magical bean, to dealing with evil beings terrorising a neighbourhood. Most of these cards are lighthearted in nature, drawing inspiration from multiple sources of fiction.

To collect ideas for the various side characters, monsters, and villagers, a large number of sources were used to design over 70 different cards, each with its own story. These sources included the Dungeons & Dragons Monster Manual (Wizards of the Coast 2018), Breverton's Phantasmagoria a Compendium of Monsters, Myths and Legends (Breverton 2011), Fantastic Beasts and Where to Find Them (Rowling 2017), Monsterbestiarium (Eriksson, Blixt 2018) and the \equiv ノ国。マギっクマスター (Ni No Kuni. The Wizards' Companion). While some common beings not protected by copyright laws in Magical Kingdoms were straight from the sources, some were created and only inspired by these references, as some of the monsters presented had different copyright laws associated with them than others. Some of the many mythical beings that ended up being collaborated into the design include pixies, elf cats, serpentine, trash dragon, jackalope, axolotls, a chamrosh, faerie dragons, and fish folk.

2.6. Accessibility

Accessibility in gaming means taking people with various disabilities, both cognitive and physical, into consideration. When designing mainly for children, it is especially important to keep the used vocabulary and the number of rules limited to ensure the ease of understanding the flow of the game. Yet oversimplification should also be avoided in order not to underestimate the players' capabilities. (Edwards 2018.)

The colour palette used in Magical Kingdoms was tested in a free online tool called Coblis — Color Blindness Simulator, a test that can visualise an image for several types of colour blindnesses, before being settled upon. This was to pick colours that would be the easiest to differentiate even with compromised vision. The chosen palette for example uses both red and green, and as colour blindnesses' associated with red and green are the most common, the pink (FF7B9C) and light green (59C9A5) shades become very difficult to differentiate as seen in the following image.



PICTURE 17. The regular colour palette of the game (left) and how it could be seen by someone with colour blindness (right)

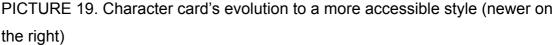
Characters, items, and their types must also be distinguished by the text and/or icons so that the colour is never the only differentiating factor. Icons are present in many cases to visualise and allow the players to quickly process the meaning behind certain sections, which gives context and can also be especially helpful to dyslexic people. (British Dyslexia Association 2022.)



PICTURE 18. Icons and colours can be used to identify cards from both the back and front sides of a card

The text itself is designed to be simple, short and the cards are rather large to allow for greater font size to ensure they can be read by most players. All the fonts have also been chosen to keep legibility in mind and are not overly decorative but rather standard. They are widely spaced and include only necessary bolding, underlining, or cursive. Writing in all capital letters has also been used as little as possible, although one of the chosen fonts has a very similar look to both the upper and lower case letters. (Edwards 2018.)





While the game is unfortunately not designed to accommodate blind people, the character cards have been designed so that in their final cardboard versions there would be holes in the places where ability tokens, gems, and hearts are placed, making handling them easier kinetically. This also makes the game easier to be handled by anyone, as the tokens are less likely to spread everywhere if someone bumps the table for example. In future iterations, braille could also be implemented to the cards, board and rulebook.

2.7. Rulebook

Conveying the game rules to the players as efficiently as possible is of paramount importance to ensure the players understand the game and its goals. Writing the rules down frequently is also a good design practice as it keeps everyone working on the project up to date with the most recent changes and can help to highlight problematic sections in one or multiple features of the design. The full rulebook can be found at the end of the document.

The rulebook features a breakthrough of all the game elements included in the box to allow the player to check they are not missing any pieces, normal and advanced game setups, rule and turn breakdowns, and step-by-step introductions on how to get the game started. An easy-to-use handbook describing the legendary items can be found at the back of the booklet to be as easy to find and keep visible during the game as possible. Visually rulebook uses the same language as the rest of the game from the fonts to the colour scheme to keep the player engaged and to avoid any distractions from the main action.

Something to note is that as a European game everything included in Magical Kingdoms is written solely in British English. This means that were the game to be imported to other regions like the USA or Canada, a reprint with new localisations might be necessary.

3. VISUALS

3.1. Target look

The visual language used in products for children should generally be clean, bright, and round rather than sharp to convey a friendly message. However, it is advised to steer away from the overly quote-on-quote childish look, as this may repel some children aged 8-12, who often at this point start to distance themselves from that sort of content to fit in with their social group. (Naranjo-Bock 2012.)

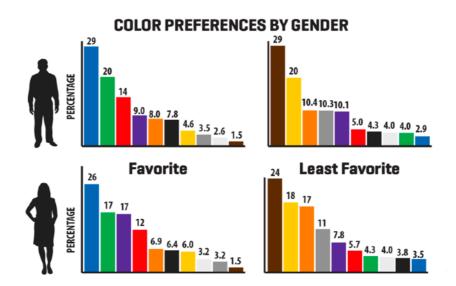


PICTURE 20. Sources of inspiration (Hilda 2018 (upper left), Ralph Breaks the Internet 2019, Little Witch Academia 2017 (right))

To create a pretty yet simple look by using only flat colours and textures meant some references were necessary to continue. Little Witch Academia (Trigger 2017) was a source of inspiration for the characters and encounter illustrations because of their expressivity, Disney Princesses as seen in the film Ralph Breaks the Internet (Walt Disney Animation Studios 2019) offered a lot in terms of inspiring the costume designs and Hilda's (Netflix 2018–2019) art style was a source for the board design as its colour and mood match the target. All of these references' source material also correspond to the target audience in gender, age, and even theme in broad terms. This means that they share some thematic elements but range from straight-up fairytales to magical realism. (Glatch 2021.)

3.1.1. Colour scheme

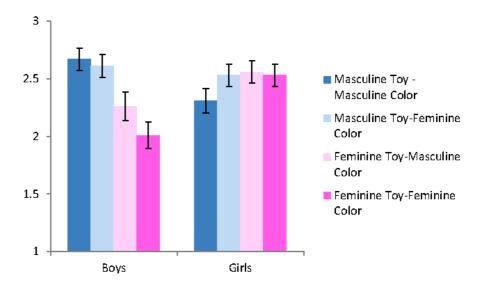
To figure out which colours children prefer some recent studies were first observed, rather than automatically succumbing to the old stereotype of blue being for boys and pink for girls. As most data shows, blue is the most popular colour among genders and age groups, however, it was excruciatingly difficult to gather any data regarding pink.



PICTURE 21. Colour preferences by gender (Scott 2017)

For example, the wide study published by Scott Design Inc. while otherwise being a reliable source has the issue that is that there is no pink that was provided as an option for the participants. This forces the people whose favourite colour is pink to choose either red or purple instead or go straight for their secondary favourite, whatever that might be. (Scott 2017.)

Even though there are studies that show genders view colours differently, for example, men have much higher rates of colour blindness than women, many preferences also come from the cultural norms and what is viewed as acceptable. When creating a product that might have the potential of being sold commercially, something to take into consideration is the social aspect of pink. In our culture pink toys and games have been heavily targeted toward girls, even so much so that this guides both kids' and adults' purchasing habits. Pink permits girls to indulge in a toy, but it also heavily drives away boys. Although this has been changing recently, some of its effects may remain. (Weisgram, Fulcher & Dinella 2014.)



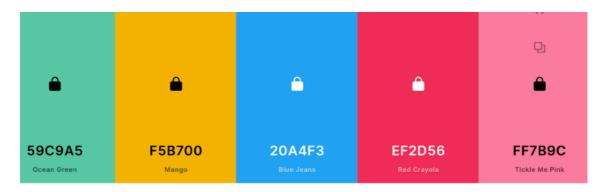
PICTURE 22: How colour in toys affects children's personal interest (Weisgram, Fulcher & Dinella 2014)

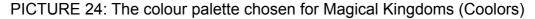
Colour also carries meaning, and the meaning can widely differentiate between different regions and cultures. In the game, each corner of the map is represented with its colour which meant a difficult palette consisting of at least 5 colours was needed. All of the picks need to carry an appropriate message based on their themes while being different enough from each other. (London Image Institute 2020.)



PICTURE 23: Some positive meanings commonly associated with colours in the western market (London Image Institute 2020)

Taking all this data into consideration, blue, red, pink, green, and yellow were chosen to represent the game board's areas and the characters accordingly. Despite its popularity purple was left out entirely, as the colour is reserved for the future additional content part of the game. As the chosen colours create a rather difficult tetradic colour scheme, to decide upon the specifics a free web tool Coolors had to be used for accuracy. With the help of this tool, it was easier to avoid accidentally creating a visually straining mess combining tones and hues incompatible with each other. The final colours chosen became 59C9A5 for green, F5B700 for yellow, 20A4F3 for blue, EF2D56 for red, and FF7B9C for pink.





3.2. Character design

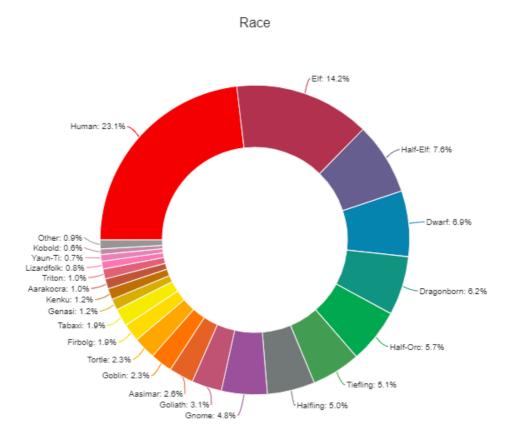
In Magical Kingdoms, the player characters are the gateway into the world and possibly the most important factor in whether or not the player will innately be interested in exploring the world and playing the game or not. Electing the player characters to be royalty came from the idea that they would all feel powerful and equal, and princesses have been popular through the ages among the target audience in films while being comparatively underused in tabletop games. (Johnson 2020.)

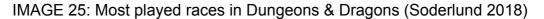
To match the picked colour palette and the areas of the game board five different characters needed to be created, each with their specialities, personalities, and sources of power. This choice also defined the number of playable characters to 2–5, a rare occasion where visuals directly affected the gameplay.

These characters needed to especially speak to the target demographic so that the players could on some level identify with them. In terms of age, most of the characters could range from 10–15 as children often project themselves onto characters that are 2 to 5 years older than themselves. A cute animal mascot character would most likely also do well as many sorts of baby characters often are popular in similarly-themed titles, plus it can be a great player option for those who might not want to play as a princess or a humanoid.

3.2.1. Fantasy races

Rather than solely focusing on the most common fantasy tropes, it was decided to rather create a magical world combining modern and classic elements for the magical young girls whose characters were inspired by Frozen's (Disney 2013) enormously popular character Elsa, and the classic magical girl groups, such as in the Sailor Moon TV-series (Toei Animation 1992) or Winx Club (Rainbow 2004) whose likes are rarely seen in tabletop games. The playable characters needed to be distinguished from each other by nature, as well as colour scheme, size, and abilities.





The first thing to consider was figuring out which kinds of fantasy races would fit into this world. A study with analysed player character choices in the 5th edition of Dungeons & Dragons (Wizards of the Coast 2014) gave some insight into what kind of tropes were currently popular among role-players. Even though the choices presented here are limited, they gave some insight into the minds of the players. (Soderlund 2018.)

As elves appeared undeniably popular they were selected at first. This however was later altered to make way for fairies to make all the player characters more distinctive in size and abilities. In a narrative sense, this first character became the classic kind-hearted princess, visually drawing inspiration from sources such as Disney's Tinker Bell (Walt Disney Pictures 2008) and the elven princess Zelda from the game series of the same name: Legend of the Zelda (1986 – present).

The resulting design however seemed a bit basic, but by twisting the narrative

so that these would be fairies living in a colder area having to fend for themselves, and not only with magic but also with steel weapons, created a typing which immediately made the character much more interesting and fresh. The character from the earliest design combined pink and blue, a sweet combination that fits the stereotype while not still not feeling too stale.

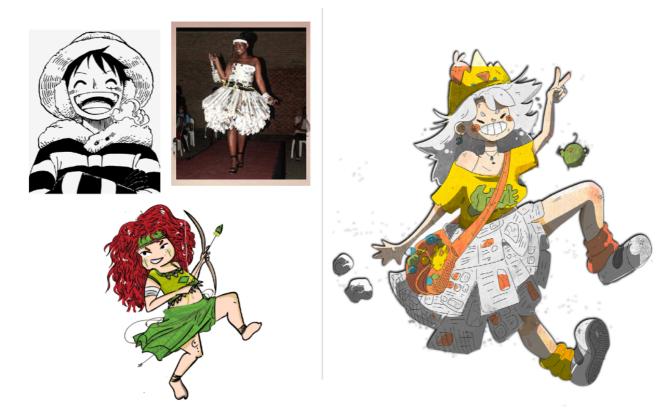


PICTURE 26. From the first sketch to using references to create the final design of the pink princess (right) (Tinker Bell 2008 (top left); The Legend of Zelda: A Link Between Worlds 2013 (top right))

The following design was also inspired by the earlier data, as classic human characters appeared rather popular. Humans are the easiest to identify with and the easiest to understand as there are no secret skills and know-how involved with them, as there might be with other fantastical races. This is why this princess was also made to be the easiest to play among all the player characters, with high general skills at the cost of other more advanced options.

The first sketch of the character came to be a wild ranger woman of the forest, but this idea almost immediately felt overused lacking in both creativity and excitement. The lack of direct sources prompted then the character to draw inspiration directly from myself, the creator when I momentarily found myself amongst an unruly apartment, with pieces of tin cans and plastic trash nonchalantly piling up. Thus the idea for the happy-go-lucky trash princess was born.

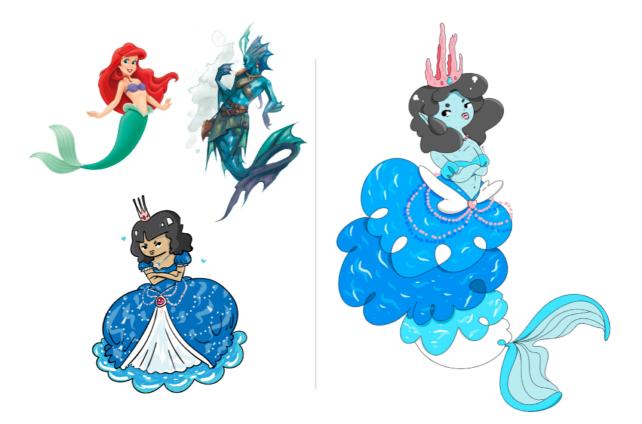
The princesses' design implies in every aspect that she is resourceful, fast, and powerful from all that scavenging she does daily. In her design, it was decided to make her hair and clothes a bit unruly, as in her world there would be no time to sit in front of a mirror. As white and grey alone made the character a bit pale, adding the bright and energising yellow made the character feel more alive. The trash princess is also designed for the youngest of the princesses, at only 10 years of age.



PICTURE 27. The yellow princess (right) was inspired by the need to bring an environmentalist message into the game (Oda 1997 (top left); Ttakhwiri 2020 (top right))

A beautiful kingdom with one sector being a wide landfill also hints at an environmentalist subtext. Rather than hoping to prompt anxiety in the young players, the idea is to show the state of our current world as mundanely as possible. Here, the humans continue living in the trash land now quite happily even recycling and reusing what they can in the world they have created for themselves.

The third princess was in turn inspired by the game board, not the other way around. As a large portion of the map would consist of a watery area, it needed its own princess inhabitant. After considering a few options the choice came down to mermaids and merfolk. As these mythical creatures are already quite similar, combining elements from both of them into something new was not a difficult task. Regardless, the name merfolk was more gender-neutral and it is used in other encounter cards to speak about the race as a whole, it was picked.



PICTURE 28. The blue princess (right) draws inspiration both from modern mermaids to the more nefarious merfolk (Little Mermaid 1989 (top left); Dungeons & Dragons Monster Manual 2014 (top right))

As for their personality, a sort of sassy counterpart was needed for the previous princesses. Drawing from the lore of vast riches that lay below the waves—such as seen in Disney's adaptation of Little Mermaid (1989)—she became

somewhat of a spoiled brat from what can be seen from the outside. As this character needs to go about their business in other areas as well during the game, a bubble engulfing their head was later added into the design. Also as she is equipped with fins instead of legs, she is one of the slowest characters in the game that does best when moving with a party.

The princess of the mountain regions was the hardest to design, as there were fewer sources to draw direct inspiration from. A cool, calm, and collected princess was a necessary addition to the group and one that would have proficiency in using magic items. As such, this character would probably become the oldest and tallest character.



PICTURE 29. The red princess' (right) strong magical powers can be observed just by looking at the design (Dungeons & Dragons Monster Manual 2014 (top left); Dungeons & Dragons Player's Handbook 2014 (top right))

I ended up using the popular Thieflings and Dragonborn people from the D&D universe as a basis for her, with both horns and a tail to complete the design. Being a powerful sorceress from the fiery region, a little fireball sprouts from her hands to emphasise her magical prowess. She dresses in pants rather than a dress to be more adapt to the difficult terrain which also explains the few scratches and bandages seen on the design. Being a little more mature and prepared she also carries a backpack implicitly filled with the necessary equipment to survive in the wilderness. (Dungeons & Dragons Player's Handbook 2014.)

As all players however might not opt to play as a princess, one neutral character was opted for. This could for example be because someone is at the time of the play struggling with their gender identity, or simply does not prefer to play as female or humanoid characters. Whatever the reasoning might be, the cute mascot character became a princen, narratively a still a humanoid at heart but cursed to inhabit the body of a fluffy magical creature.

The design process started by going through some popular trends going on in the world in the past few years. Alpacas—or llamas—and unicorns were all trending on social media at some point, prompting them to appear in various characters, merchandise as well as plushies. These animals were picked as the basis for the royal steed and by combining them with the remaining green colour, the leafy royal unipaca was created. Their main character traits include being rather small, shy and withdrawn, easy to shock but always diligent and hard at work. (Fisher 2017; Gonzales 2019.)



PICTURE 30. The green princen (left) was born by combining some popular trends of the past (Animal Crossing: New Horizons 2020 (top left); My Little Pony: Friendship is Magic 2010–2015 (top right))

3.2.2. Character costumes

Designing the dresses for each of the characters was of great importance, as they would tell a lot about each character wearing them without the need to spell everything out literally and unnecessarily. The goal was to have each dress and costume be believable for their circumstances and the materials had to be available in their habitat.

The fairy princess received the warmest most luxurious coat available, with soft thick fur lacing the inner side and visible at the bottom. The coat features a pattern to further paint a picture of a wealthy kingdom, where high-quality materials such as these are available. Some details include a large compass around her neck that the player can find many meanings behind if they wish to. She wears large warm snow boots to match the design and also to keep her warm and wields two swords to imply her ability based proficiency with weapons.

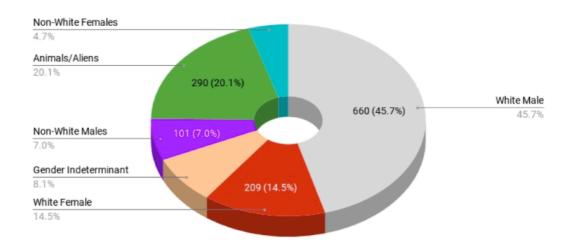
The trash princess has a unique dress compiled of an old t-shirt and a dress sloppily put together from old newspapers. These are materials that would be readily available in her natural environment in the vast wastelands filled with thrown-away treasure. Due to their environment, they would constantly be on the hunt for more or less useful items to scavenge, so she needed a bag to hold them. Some of the key details here are the paper crown and toy fairy wings that can be seen on her back, as well as the small critters surrounding her. This is a representation of her goodhearted nature, as even though she has little she is never shy to share any found food scraps with others in need.

The merfolk princess is engulfed in luxury, pearls, corals, and gems. The dress, or the fin, is a multi-layered magical enchantment that appears to reflect the ocean itself. The dress is highly impractical, and a good contrast to the draconic princess. She on the other hand appears to praise practicality and carries nothing but the essentials. They almost move on barefoot, but the hard rocky mountains require some layers of protection. Her colourful garb and the handmade crown are also gifted to her by her people. As a draconic being, she has a fire burning from within and absolutely no need for furs nor feathers for insulation.

3.2.3. Representation

As mentioned earlier, when over 90% of the games currently in the popular market are designed by white males, it is only natural that these designers then represent the world from their point of view. In 2018 the top 100 games rated on the Board Game Geek had more animals and aliens on their covers than non-white people combined. What is more, is that independently aliens and animals beat all the women represented in terms of numbers as well. (Pobuda 2018.)

In Magical Kingdoms, I wanted to make sure people of all complexions were as equally represented as possible and that more women overall would get the main stage on the cover art game. The meaning of representation cannot be undermined as a tool to empower people by making them feel valued, seen, and included. As the board game scene is already congested with hundreds of titles entering the scene each year, it was not the intention to create a 100% accurate reflection of reality but to focus on those not equally represented in this current market. (Mulata 2020.)



Top 100 BGG Games - Representation in Cover Art by Gender, Race

Figure 7. Tanya Pobuda. "A Chart Based on Top 100 BGG Games – Gender, Race Representation in Box Art." 2018.

PICTURE 31: "Gender, Race Representation in Box Art" (Pobuda 2018)

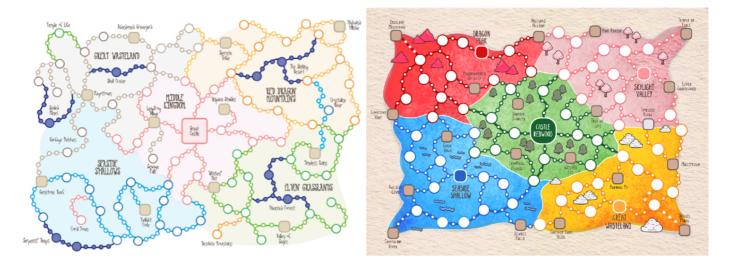
3.3. Game board design

The game board's design is one of the key elements of the game as it is always the centre of attention. It should be well thought out from a game designing perspective as well as visual, meaning the size of the map needs to be wide enough to create a sense of adventure, but still compact in a way that movement does not feel too slowed down or dragging.

Each section of the map is represented by one main colour from the colour palette and serves as an implied home for one of the player characters. This gives the map some instant character as well as provides the possibility to add terrain advances or disadvantages through certain encounter cards.

At its first stage, the map included some darker paths but these were later scrapped. These areas in this iteration would have been unlocked by players by drawing certain cards from the deck, but it was concluded that this was too far from the core of the game, too random and too small of a feature while still disproportionately complicating the rules.

The maps' sector positions are based on the types of weaknesses introduced in the game's advanced play mode. Each sector and its inhabitants have a weakness against the one on its left and strong against the one on its right. Green cards are neither weak nor strong against any other type. Being strong or weak in this context means the player throws their dice in a specific situation with either advantage or disadvantage. Advantage and disadvantage in turn mean throwing the dice 2 separate times and either picking the better or worst outcome of the two throws.



PICTURE 32: Map design development, most recent iteration on the right

These map designs presented in this document remain only at their most basic prototype phase. The final design intends to visually match more closely to the character designs, and include more terrain illustrations such as mountains, islands, and other details around the named spaces. Some of the final elements in already visible including the names of the five sections and the key locations on the map. The locations and sectors are named for two reasons: to make the world's inner narrative more believable and game mechanics-wise to be able to prompt the player to go to certain areas on the map with the help of encounter and trap cards.

3.4. Iconography

When designing icons for both the cards and the pieces on the board, the main goal was to keep everything as simple as possible while sticking to the predetermined palette as much as possible. Especially the character cards took careful planning, and easy to understand icons would make the game much faster to play. That is why many stereotypes were utilised, including the hears for life, swords for attack and so forth. Also, their colour scheme was kept uniform so that each character would be solely linked with one of the affiliated colours.



PICTURE 33: Iterations of one player character card

In an early gameplay iteration, the player would receive the legendary items by throwing a modified D20, a special die that in the course of the game could only be thrown in very specific situations. After gathering data about the most common artefacts from myths, legends, stories, and popular culture a list of 20 items was compiled.



PICTURE 34: Rory's Story Cubes (The Creativity Hub 2005) were an inspiration behind the legendary items

This design was later scrapped, however, one of the reasons being that the legendary item icons on each side of the D20 would have to be so small that the accessibility of the game would suffer in turn. Still, the icons stuck and were incorporated into the design in another way.

The icons were created in Adobe Illustrator (2020) because of the good scaling properties associated with vector-based illustrations. These icons were kept quite basic on purpose to ensure they could be easily identified and distinguished from each other, even on a small scale. All of the icons can be seen in the game rulebook attached at the end of this document.



PICTURE 35: Upscaled examples of the final legendary item icons

4. DISCUSSION

4.1. Conclusion

In the end, the project did not come along as far along as was originally envisioned. Through the game testing sessions, it became evident quite fast that the game would need more complexity than anticipated to grip an audience thus the amount of work needed on the game designing side took longer than expected.

On the visual design side, creating the map was certainly the biggest challenge, as the design still lacks and iterating its design to a marketable form would need many and more playtesting sessions with various audiences. The icons, colours, and characters, on the other hand, turned out rather well but the princesses would have to still be modified slightly to ensure their visual continuity.

In conclusion to complete the project in the phase that it could be published commercially would still take a few rounds of iterations based on game testing session feedback. The setting, theme, and world however came along as planned, and a level of originality was reached while still introducing most of the basic tropes to the complete beginners looking for the first foray into the world of gaming.

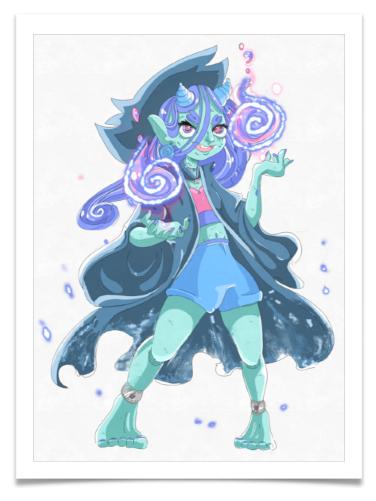
4.2. Further development

Moving on with the production, both the current design would still need to be iterated more through player testing and evaluations. Going forward, the absolute most important thing will be testing the product with the target audience. I was not able to set up a playtest session with the game's young target demographic during the thesis process, which was a huge disappointment, as feedback from the target group would have been most valuable. On the production side, a cardboard prototype of the board, the decks would need to be professionally printed, 3D models for the enemies and the first player token designed and manufactured. The box and its marketing art would be more than necessary, as their quality would drive most of the game's potential success.

The encounter cards are still missing art and more of these cards would be required to keep the game entertaining and provide more variety, thus increasing the game's replayability. Much of the cards' creative writing is still in progress and will take much time to complete. With all these changes, the rulebook will also need to be changed accordingly and tested to whether or not it provides all the players with enough information for them to be able to play the game independently.

After the game is published with an appropriate price range, it would be time to evaluate the market potential for expansion. As I tried to keep the game as simple as possible, I had to cut out an integral part of the design; the antagonist.

In the expansion pack, the antagonist would be introduced as a playable character, increasing the maximum player size to 6. The CO-OP playstyle would now be twisted to be a more complicated one versus many type game, where one player would begin on a new game board called the underworld. In the new scenario, the antagonist can more actively control the game board's enemy pieces, making combat more unpredictable and varied.



PICTURE 36. The design concept for the antagonist planned to be introduced in the expansion pack

REFERENCES

Animal Crossing: New Horizons. 2020. Director: Aya Kyogoku. Nintendo.

Betrayal at the House on a Hill. 2004. Designer: Bruce Glassco. Avalon Hill Games Inc & Wizards of the Coast.

Betrayal at Baldur's Gate. 2017. Designers: Chris Dupuis & Mike Mearls. Avalon Hill Games Inc & Wizards of the Coast.

Breverton T. 2011. Breverton's Phantasmagoria. London: Quercus Publishing Plc., 68 – 95, 142 – 227, 229 – 301

British Dyslexia Association. 2022. Creating a dyslexia-friendly workplace. Read 1.4.2022. https://www.bdadyslexia.org.uk/advice/employers/creating-a-dyslexia-friendly-workplace/dyslexia-friendly-style-guide

Brown K. 1996. The British Toy Business: A History Since 1700. London: The Hambledon Press, 40 – 41

Brune M. 2022. Zooming in on Female Gamers with Consumer Insights Data. Read 30.3.2022. https://newzoo.com/insights/articles/zooming-in-on-femalegamers-with-consumer-insights-data/

Carcassonne. 2000. Designer: Klaus-Jürgen Wrede. Hans im Glück.

Chen F. 2021. RPGs Are Mobile's Biggest Genre by Revenues: How Do Gamers Across East and West Engage with the Genre? Read 14.4.2022. https://newzoo.com/insights/articles/rpgs-are-mobiles-biggest-genre-by-revenues-how-do-gamers-across-east-and-west-engage-with-the-genre/

Chovato L. 2021. Hypercasual Games Introduced Millions of Consumers to the World of Gaming: What's Next? Read 14.4.2022. https://newzoo.com/insights/ articles/hypercasual-mobile-games-introduced-millions-of-consumers-togaming-ultracasual-interview-crazylabs/

Collins H. 2017. How "Magical Girls" Became Such A Big Thing In Anime. Read 15.4.2022. https://www.ranker.com/list/why-does-magic-girl-anime-exist/hannah-collins

Coolors. Designer: Fabrizio Bianchi. Used 30.3.2022. https://coolors.co/

Deason. R. 2017. A Brief History of Go: The Oldest Board Game in the World. Read 06.4.2022. https://theculturetrip.com/asia/china/articles/a-brief-history-of-go-the-oldest-board-game-in-the-world/

Denton M. 2021. Game Genre & Statistics: Not All Games Are Created Equal (part 1). Gamify. Read 30.3.2022. https://www.gamify.com/gamification-blog/not-all-games-are-created-equal-pt1

Digimon Adventure. 1999 – 2000. Director: Hiroyuki Kakudō. Toei Animation

Disney Villains. 2018. Designer: Prospero Hall. Ravensburger & Wonder Forge.

Dufva H. 2022. Pelimaailmojen käsikirjoittaminen ruokkii luovuutta. Turun Sanomat.

Dungeons & Dragons 5th Edition. 2014. Designers: Mike Mearls & Jeremy Crawford. Wizards of the Coast

Edwards D. 2018. Accessibility and Boardgames. Games in Libraries. Read 1.4.2022. https://games.ala.org/accessibility-and-boardgames/

Eriksson B & Blixt L. 2018. Monsterbestiarium. EU: Natur & Kultur, 5 – 126

Euromaxx. 2018. Alpacas are the new Unicorns. https://www.dw.com/en/alpacas-are-the-new-unicorns/av-43407140

Frozen. 2013. Director: Chris Buck & Jennifer Lee Walt Disney Animation Studios.

Fisher A. 2017. Why the unicorn has become the emblem for our times. Read 16.4.2022. https://www.theguardian.com/society/2017/oct/15/return-of-the-unicorn-the-magical-beast-of-our-times

Fullerton T. & Swain C. & Hoffman S. 2004. Game Design Workshop. San Francisco: CMP Books, 1 – 21, 196 – 218

Gerard S. 2021. Fail Fast And Fail Forward. Learn By Doing! Read 15.4.2022. https://www.forbes.com/sites/forbesbooksauthors/2021/07/29/fail-fast-and-fail-forward--learn-by-doing/

Glatch H. 2021. What is Magical Realism in Literature? An Exploration of El Realismo Mágico. Read 16.4.2022. https://writers.com/what-is-magical-realism-in-literature

Gonzales I. 2019. Are Llamas the New Unicorns? Read 18.3.2.22. https://www.oprahdaily.com/life/a27684422/llama-trend/

Hilda. 2018. Director: Luke Pearson. Netflix.

Lee J. 2021. The 10 Best Complex & Heavy Board Games for Epic Gameplay. Read 15.4.2022. https://whatnerd.com/complex-board-games-for-heavy-gameplay/

Legacy of Dragonholt. 2017. Designer: Nikki Valens. Fantasy Flight Games.

Lehtinen E. & Kuusinen J. & Vauras M. 2007. Kasvatuspsykologia. Helsinki: WSOY Oppimateriaalit OY. Oppimateriaalit Oy, 22 – 30

Lien T. 2013. No Girls Allowed. Unraveling the story behind the stereotype of video games being for boys. Polygon. Read 30.3.2.22. https://www.polygon.com/features/2013/12/2/5143856/no-girls-allowed

Little Witch Academia. 2017. Director: You Yoshinari. Trigger.

London Image Institute. 2017. Color Psychology: How Do Colors Affect Mood & Emotions? Read 30.3.2.22. https://londonimageinstitute.com/how-to-empower-yourself-with-color-psychology/

Majander A. 2022. Ysiluokkalainen Eedi on saanut pelata lapsesta asti niin paljon kuin haluaa: Nyt hän ja äitinsä, nuortenkirjailija Annukka Salama kertovat, mitä kaikkea hyötyä pelaamisesta voi olla. Helsingin Sanomat. Read 30.3.2022. https://www.hs.fi/kulttuuri/art-2000008681146.html

Marshall L. 2017. Storytelling Tropes: Good vs Evil. Read 30.3.2.22. https://thanetwriters.com/essay/subtext/storytelling-tropes-good-vs-evil/

Mingren W. 2018. The Origin of Snakes and Ladders: A Moral Guide of Vice and Virtue. Ancient Origins. Read 30.3.2022. https://www.ancient-origins.net/ history-ancient-traditions/origin-snakes-and-ladders-moral-guide-vice-andvirtue-0010012

Montola M. & Stenros J. 2008. Playground Worlds. Creating and Evaluating Experiences of Role-Playing Games. Jyväskylä: Gummerrus Kirjapaino Oy, 5 – 8

Mulata M. 2020. Why I write about race, female empowerment, representation, and leadership. Medium. Read 02.4.22. https://medium.com/age-of-awareness/why-i-write-about-race-female-empowerment-representation-and-leadership-9b9f2ce57c07

My Little Pony: Friendship is Magic. 2010–2015. Director: Jayson Thiessen. Hasbro.

Naranjo-Bock C. 2011. Effective Use of Color and Graphics in Applications for Children, Part II: Kids 7 to 14 Years of Age. UX matters. Read 30.3.22. https://www.uxmatters.com/mt/archives/2011/12/effective-use-of-color-and-graphics-in-applications-for-children-part-ii-kids-7-to-14-years-of-age.php

Newzoo 2017. Male and Female Gamers: How Their Similarities and Differences Shape the Games Market. Read 16.4.2022. https://newzoo.com/ insights/articles/male-and-female-gamers-how-their-similarities-and-differencesshape-the-games-market/

ニノ国。 漆黒の魔道士マギっクマスター。 2010. Japan: Level-5, 145 – 264

Oda E. 1997 – present. One Piece. Shueisha.

Outfoxed! 2014. Designers: Shanon Lyon, Marisa Pena, Colt Tipton-Johnson. Gamewright.

Pobuda T. 2022. The Unbearable Whiteness of Board Games. Read 31.3.2022. https://medium.com/@tanyapobuda/the-unbearable-whiteness-of-board-games-1eb8d1f2688f

Rory's Story Cubes. 2005. Designer: Rory O'Connor. The Creativity Hub.

Rowling J. 2017. Fantastic Beasts and Where to Find Them. London: Bloomsbury Publishing London, 1 – 94

Saari M. 2018. Löydä lautapelit. Vantaa: Avain, 56 – 65, 128.

Sailor Moon. 1992–1997. Director: Junichi Sato. TV Asahi.

Scott K. 2017. What's your favorite color?. Scott Design Inc. Read 30.3.2.22. https://www.hotdesign.com/marketing/whats-your-favorite-color/

Stern J. 1991. Making Shapely Fiction. United States of America: W. W. Norton & Company, 15 – 29

Stuffed Fables. 2018. Designer: Jerry Hawthorne. Plaid Hat Games. The Big Book of Madness. 2015. Designer: Maxime Rambourg. IELLO.

Soderlund J. 2018. Dungeons and Data Science: What Can Data Tell Us About D&D? Read 15.4.2022. https://www.displayr.com/dungeons-and-data-science/

The Legend of Zelda: A Link Between Worlds. 2013. Designer: Koji Takahashi. Nintendo.

The Little Mermaid. 1989. Directors: Ron Clements & John Musker. Walt Disney Pictures.

The People History. 2012. Board Games played for thousands of years is board games-especially throughout the 20th century. Read 30.3.2.22. https://www.thepeoplehistory.com/boardgames.html

The Settlers of Catan. 1995. Designer: Klaus Teuber. Teuber.

Tinker Bell. 2008. Director: Bradley Raymond. Walt Disney Pictures.

Tolkien. J. R. R. 1968. The Lord of The Rings. United Kingdom: Allen & Unwin.

Ttakhwiri. 2020. Newspaper dress. https://commons.wikimedia.org/wiki/ File:Rocking_the_Bulletin_Dress.jpg

Weisgram, Fulcher, Dinella. 2014. Pink gives girls permission: Exploring the roles of explicit gender labels and gender-typed colors on preschool children's toy preferences. https://www.semanticscholar.org/paper/Pink-gives-girls-permission%3A-Exploring-the-roles-of-Weisgram-Fulcher/315608f9b01003f016000c4ccbda1ed85e306833

Wheeler M. 2018. Age appropriate game design for children. Read: 30.3.2022. https://fundayfactory.com/media/147699/age-appropriate-game-design-forchildren.pdf

Winx Club. 2004. Director: Iginio Straffi. Rainbow SpA.

Wizards RPG Team. 2014. Dungeons & Dragons Player's Handbook. China: Wizards of the Coast, 32 - 34, 42 - 43

Wizards RPG Team. 2014. Dungeons & Dragons Monster Manual. China: Wizards of the Coast, 12 – 350

Ralph Breaks the Internet. 2018. Director: Rich Moore & Phil Johnston. Walt Disney Animation Studios.

Yee N. 2016. 7 Things We Learned About Primary Gaming Motivations From Over 250,000 Gamers. Quantic Foundry. Read 30.3.2022. https:// quanticfoundry.com/2016/12/15/primary-motivations/

APPENDICES

Appendix 1. Rulebook 1 (3)



VENLA KÄHKONEN, 2022



CONTENTS

BOARD COMPONENTS

- 1. Game Board 2. Encounter Deck 3. Threat Deck 4. Item Deck
- 5. Item and Encounter Tokens
- 6. King's Letter 7. Monster Figures XL

CHARACTER COMPONENTS

8, Character Cards x5 9, Dice 5x5 10, First Player Token 11, Ability Tokens 12, Gem Tokens 13, Player Figures x5

INTRODUCTION

Magical Kindohs is a CD-OP—short for co-operative—bord game for 2-5 players. The players take on the role of rouge royalty terms to save their kinggom from failing to evil hands. To depent the forces of evil, they need to avoid trays, discover items and complete quests and much more.

GAME SETUP

To set up the game please follow these instructions. If any or all players are new to the game, please read the "First King's Letter" before any of the steps to introduce the coal and setting of the game.

1, Each plater chooses <u>a character cand</u> and its matching <u>figure, nice and tokens</u>. Each set can be differentiated by looking at the colour and icoms,

2. Setup the chrencters initial speed and might skills, hearts and cems by placing tokens on the chrencter card, hithil values can be seen in each chreacter card in bakker colour.

3. THE OUT THE GATE BORD - LECENDARY ITEM AND ENCOUNTER TOKENS, SHUFFLE THE TOKENG FACE DOWN ON THE BORRD AND PLACE THEM ON THE BORRD, REPETISER TO MATCH THE COLOUR AND KON OF THE PRESS TO THE CORRECT SECTION OF THE BORRD.

 ${\cal L}$ Put player figures at any one of the starting areas. Multiple players can choose the same starting location,

5. SUFFLE THE ITEM CARD DECK, QUEST DECK AND THREAT DECK.

6. Each player takes 3 item cards. Each player can choose to keep 2, and they must throm away at least one. Put the thrown nump cards at the bottom of the terms deck.

 Put the <u>L provide provides</u> on the one board in their maticities species on each coerer of the mer, Puso search for their corresponding manster cards, and set them mere the sound.

8, DITENTINE HIRO STARTS BY INVIKE EACH PLAYER THROW TOLKT. THE ONE WHO GETS THE HIGHEST NUMBER GGES FIRST RECEIVES THE <u>PRST PLAYER TOKES</u>, NO THE TURNS THEN MOVE IN QLOCKHISE GREEK TO THE LEFT.

Appendix 1. Rulebook 2 (3)

FIRST TURNS

Duce the game is set up, if is the to start plantar, The planer with the prist planer token starts by thenic a <u>Movement real</u>, meaning boling buce equal to the amount of their speed skill. If they bench an encounter space, they can choose to stop and check what indid of encounter they have uncovered, a treat, quest or permans a portal. Then the encounter is planed as written in the denian card, and then the turn moves to the next planer. If the planer encodes to stop at a excenting, they lose the rest of their movement.

INVENTORY

EACH PLAYER HAS A BASE INVENTORY THAT IS LIMITED TO 7 CARDS AND 6 CEMS. THESE CAN BE EXPANDED BY SOME ITEMS HOWEVER.

ADVANCED RULES

IN NORTHAL GAME, THESE RULES CAN BE SKIPPED, ONCE YOU ARE PAHILINE WITH THE GAME, OR ARE AN EXPERIENCED BOARD GAME PLAYER, YOU CAN START TO INTRODUCE NEW RULES AND WAYS TO EXPERIMENT WITH THE GAME.

Type reventages find disrovantages (written below) can now also be included. The player type can be checked in their chirr-cere gard, and this type can grant rovantage to rolls in random excounters if they have in pavourable type. If the player runs into an encounter where they would be against softeene who has an advantage over the player, the player runst roll at disrovantage instead.

* FAUNA - NO TYPE WEAKNESSES OR STRENGTHS

- * Fairy Rovantage against Humans, disadvantage to Draconic
- ★ Human Advantage against Merfolk, disadvatage to Fairy
- MERFOLK ADVANTAGE AGAINST DRACONICS, DISADVANTAGE TO HUMANS
- ★ Draconic Advantage against Fairles, Disadvantage to Merfolk

8. Reditional, Better the encounter has been resolved, the player can still trade with other players, use terms or abuiltes if they want to, Reiting can be done at any physic of the players then and and are not limited to the encount term.

HELPING - IF TWO OR HOME PLAFERS ARE TRAVELING TOGETHER, THE ACCOMPANYING PLAFERS CAN HELP THE PLAFER WHOSE TURN IT IS BY THEOMING I DOG THAT WILL BE ROOFD TO THE PRIMI, SCORE, HELP CAN ONLY USED ONCE PER CYCLE PER PLATER.

Teading - Trading have then a construction with other players, can be done one the players turn. The traded hers can be used instantiz only, if the players are one the same <u>area</u>, and otherwise the traded her can only be used in the next code. The same her to an only be traded once per code between players.

ABULTIES - ÉACH CHRRACTER CARD HAS A SPECIAL ABULITY WOTTEN ON IT, THAT CAN BE SOMETIMES BE TRICGERED ON THE PLAYERS TURN.

Link due for the torn to the next planer in clockwise caser. <u>Hove the manster planes</u> i step tomads the castle each the The torn masses to the planer with the first planer token, if the monster plane moves to the same same with a planer, start an additional containt public.

COMBAT RULES

Once the combat starts, the plaper can choose whether to <u>fight or fight</u> or <u>fight</u> or

2. FLEEING - TO FLEE FROM A BATTLE, THE PLAYER NEEDS TO ROLL AN <u>ESCAPE ROLL</u>, MEANING THROWING THER SPEED AGAINST THE ENERTY'S, IF THE PLAYER FALS(THROWS A LOWER NUMBER THAN THE ENEMY), THEY LOSE THEART. IN CASE OF A SUCCESSFUL ESCAPE, THE ENCOUNTER IS RESOLVED.

3. LOSING ALL HERETS - IF THE MONSTER RUNS OUT OF HERETS, THE ENCOUNTER IS RESOLVED AND THE PLAYER GAINS AS MANY GENS AS WRITTEN ON THE MONSTER GARD. IF THE PLAYER LOSES ALL THEIR MERITS HOWEVER, THEY LOSE I GEM AND ARE INSTANTLY TELEPORTED BACK TO THE (ASTLE REAMOND, THE ENCOUNTER IS THEN COUNTED AS RESOLVED. THE PLAYER THEN LOSES THEIR NEXT TURN, BUT ARE BACK AT THEIR GRIGHAL HERLTH.

GAMEPLAY RULES

HOWNERS THE PLAYER HOWES BY THROWING DEE EQUAL TO THE AMOUNT OF THER SPEED VALUE. THE PLAYER CAN ALSO USE HERES OR RELITIES TARGETING HOVEPENT TO BOOST THER SCORE. THE PLAYER CAN CHOOSE TO STOP ON AN ENCOUNTER SPACE, OR CONTINUE AS FAR AS THER HOVEPENT ALLOWS THEM TO.

Moving as a mater - When presing by, or ending hovement on the some spree spree with motifier planer, fou can choose to hove on as a party. When moving as a <u>party</u>, you still take individual trans, but move tochier and gave <u>merp</u> to par and all party members doring encounters. By member of the prety can choose to separate reom the prety on their turn.

2 DECOMPTER 1 THE PLATER LANCE ON AN <u>ENCOUNTER SPACE</u> THEY CAN CHOOSE TO GYEN IT. TO OPEN <u>A LECENDARY ITEM</u>, THE PLATER MUST YM 2 GENS.

QUESTS - QUEST ENQUATERS THE CHALLENGES THE PLANER CAN CHOOSE TO TAKE ON OR, INSTANTLY COMPLETE IF THEY CAN. IF THE PLANER DOES NOT WANT THE QUEST HOUSEVER, IT COES UP FOR GAMAS FOR OTHER PLANERS, IF MORDOF TAKES ON THE QUEST, IT COES BACK TO THE BUTTOH OF THE ENCOUNTER USEC, DHE PLANER OF HAVE UP TO 3 UNRESOLVED DUESTS AT COME. THEMDOWING A QUEST COSTS I COME. INTEREST - THREAST, LUE TRANS AND COMMAN, FOR SOMARE TO THE PLANERS WHO UNCOVER THEM. SOMETHING THAN A QUEST COSTS I COMM. SETLED WITH CAME, IN THREE COSTS AND COMMAN. THE AND THIS AN THE CARE, COMMAN IS A THREES THAD CAN ANTER THE PLANE HOUST COMMAN EAST, UNIT THAN AND COMMAN.

Items & Equipment – Items nob equipment are cards that take space on your investion that can either be used once or multiple limes, They usually roost one soll or ability and take movanisms the game ensien.

PREMIS - PRETALS GRANT FAST TRAVEL FROM SPACE TO SPACE AND BO NOT COST MOVEMENT TO USE. PORTALS ARE INITIALLY HIDDEN AND MUST BE UNCOVERED FIRST TO BE USED. PORTALS CAN ALSO BE USED TO INSTANTLY TRAVEL TO THE <u>Anster Redwood</u>.

Lectorer tens - Lecendrey tens her specing arteracts that campt the player areat advantages. These tens do not take up inventory space. See more about the lecendary tens and their effects in the <u>"Lecendary tenss</u>" section in the back page of this tensor.

LOSING THE GAME

The game is lost if any of the & monster units reach Castle Redwood in the middle of the board.

WINNING THE GAME

The came is won when all the 4 monster units are defeated and the kincdom saved. Hurrah!

GLOSSARY

REVENTINGE = ROLL THE DICE TWO TIMES AND TAKE THE BETTER SCORE. IF THERE ARE CONFLICTING ADVANTAGES AND/OR DISADVANTAGES, DISAEGARD BOTH.

Dispovenings = Roll the dice two times and take the worst score. If there are conflicting advantages and/or dispoventages, dispectand both.

PARTY - PLAYERS MOVING TOGETHER AS ONE UNIT.

Ercle - When the players' turns have all been taken once and rotated back to the player with the first player token. Resolved Card - encounter or combat card that has plied its purpose and can be moved back to the bottom of the corresponding deck.

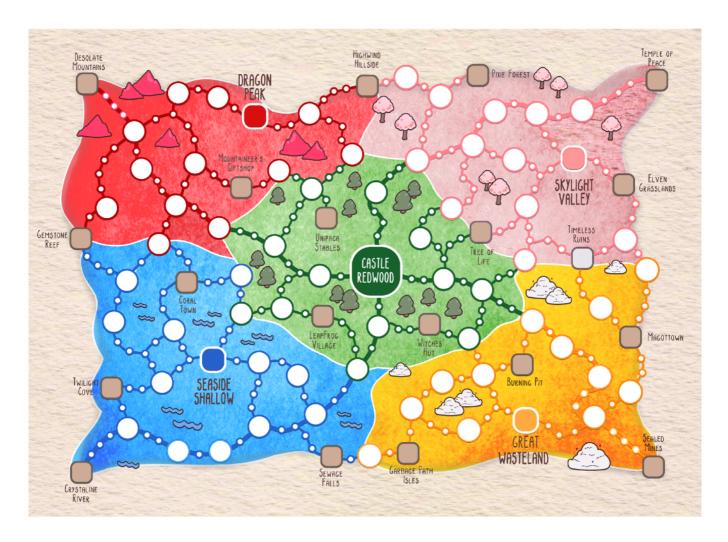
Dice Score = Schetines an item or ability allows the player to add additional points to the final dice score. Dice Roll = if a card prompts you to roll for something, check the associated skill from your cheracter card and roll that anount of dice. If you have applicable tiens or equipment for that white Roll, you that also use those. Movement Roll = Roll the amount of dice that your cheracter's spece stati allows you to. Escare Roll = Roll the amount of dice that your cheracter's spece stati allows you to. Combart Roll = Roll the amount of dice that your cheracter's pred stati allows you to. Combart Roll = Roll the amount of dice that your cheracter's micht stat allows you to. Combart Roll = Roll the amount of dice that your cheracter's micht stat allows you to.

(000)

Appendix 1. Rulebook 3 (3)

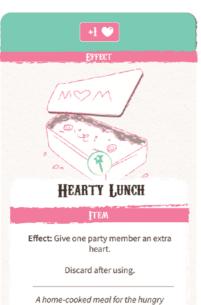


Appendix 2. Game board









A home-cooked meal for the hungry travelers. Fills the recipient with warmth and determination.

Appendix 4. Player character cards



