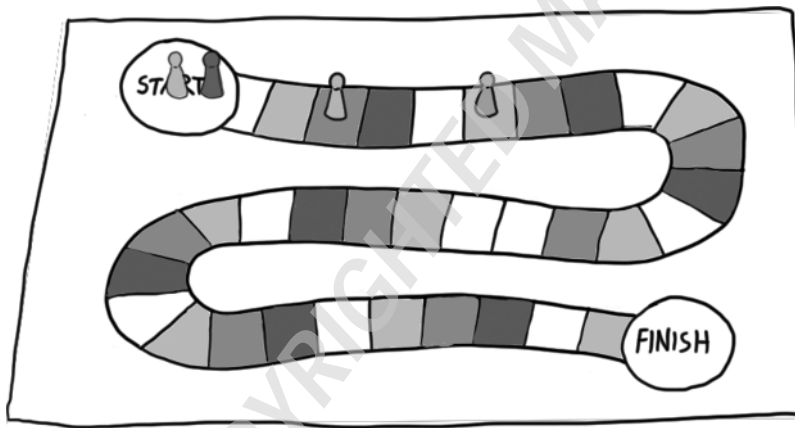


# Chapter 1

## Let's Make a Board Game!

**AS I SAID** in the introduction, the best way to learn how to make something is to copy someone else. This time, that someone is me! You will start by copying me, but soon enough you'll learn how to make your own board game without having to copy anyone. It'll be fun!



Until the 1980s, the most common style of board game was the “track” or “race” type. These are games you’ve probably played like *Monopoly* (1935), *Mouse Trap* (1963), *Candy Land* (1949), *Parcheesi* (400 AD), *Sorry* (1929), *Backgammon* (-3000 BC), *The Game of Life* (1960), and many more.

If you ask someone to draw a picture of a board game, the odds are the game they will draw a track-style board game. This style of game is known as a *roll and move*, as in “You roll your dice and move your mice,” which is a great description of the roll-and-move game *Mouse Trap*. And guess what? We’re going to make one.

## The Game Board

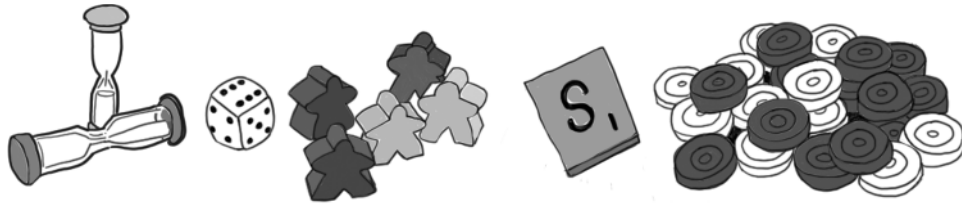
Before we start, let's talk about the **board** itself. The board represents where the game happens. A board is often a map of some kind—of a world, a country, a city, a village, or a house. It can be the schematic of a space station or the deck of a pirate ship. It can be the rings of a circus, the layout of a summer camp, the interior of a mansion, or the tunnels and chambers of a dungeon. The board is the microcosm where play occurs.

A board can be constructed of three-dimensional buildings or other toy-like structures. There can be ramps and gears and thingamajigs that cause actions to happen like they do in games like *Mouse Trap*, *Tzolk'in: The Mayan Calendar* (2012), or *Fireball Island* (1986). A board can have electronic features built into it to talk to the player or convey information or a story like *The Omega Virus* (1982) or *Mall Madness* (1988). The board can be as elaborate or simple as the design calls for.

The one thing these type board games have in common is that the board is a *shared space*. All players have access to this place where they can move and place their pawns/meeples, collect resources and cards, or interact with and combat the other players. This is usually where you find resources and currency used in the game.

The board gives the players a place to focus their attention during the game. It also creates something special called the **magic circle**, an idea that was first created by Dutch historian Johan Huizinga in his book *Homo Ludens: A Study of the Play-Element in Culture*. Huizinga wrote that the magic circle is the space in which the normal rules and reality of the world are suspended and replaced by the artificial reality of a game world. In other words, while we gamers are in the magic circle created by the game, not only do we immerse ourselves in the world of the game, but we also agree to follow the rules of the game—no cheating and no talking on your mobile phone.

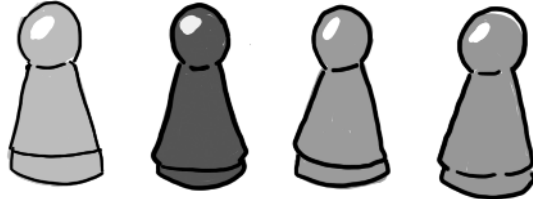
Keep in mind that while the term *board game* is always a tabletop game, many tabletop games do not need to have a board. Some games such as *Carcassonne* (2000), *Descent: Journeys in the Dark* (2005), and *Betrayal at House on the Hill* (2004) use tiles or map pieces to create the play space or an environment. Some games such as *Star Wars: X-Wing Miniatures Game* (2012), *Wings of War: Famous Aces* (2004), or *Flick 'em Up!* (2015) are played on a table but do not have a designated board on which play occurs. Other games, such as *Warhammer 40K* (1987), *Heroscape* (2004), and *Dark World: Village of Fear* (1993), use three-dimensional terrain placed on a table or other play space to indicate areas of importance. And some games such as *Werewolf* (1986), *The Game of Things* (2002), and *Bring Your Own Book* (2015) don't require the use of a table at all to play the game.



## A Brief Note About Components

In addition to a board, many board games come with **components**. Components are the things that you need to make and play a game. Sometimes they are called *bits*, *parts*, or *pieces*. No matter what you call them, you will need them to play a game.

Some games need only one type of component such as a deck of cards for *War* (date unknown) or a set of dice for the game *Farkle* (1930). Other games need a lot of components that might include pawns, tokens, money, chits, wooden cubes, player's guides, score pads, miniature figures, foam guns, leather cups, miniature terrain, polyhedral dice. . .you can use just about anything as a component!



A **pawn** is a component that usually represents the player in the game. You might know the word *pawn* from the game *Chess* (1475), but the term is used pretty interchangeably by game designers. There are many different names and types of pawns, depending on what they look like and what they are made from. For example, a plastic or metal figure is called a **miniature**, while a figure cut out of wood is commonly known as a **meeple**.<sup>1</sup> To many in the game industry, a pawn is called a **mover** because a player “moves” it around the game board.

One of the distinguishing factors of pawns is they can come in different colors such as red, blue, yellow, and green. The color helps players remember which pawn is theirs while playing

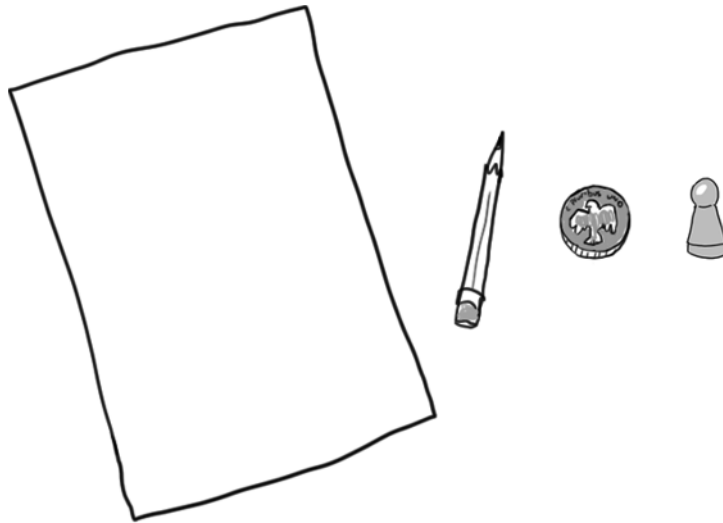
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<sup>1</sup> The term was coined in 2000 by Alison Hansel during a game of *Carcassonne* when she mistakenly mashed together *my* and *people* into *meeple* to describe the game's wooden figures.

the game. Some gamers are particular about what color pawn they play with, but when you are choosing colors to make your pawn in your game, you want to remember that some players have **color blindness**, which makes it difficult for them to distinguish one color from another. We'll be talking more about how to help players see the colors better later in this book. In the meantime, let's make a game!

## Getting Started

I like to start designing a game by getting together all the components that I think I will need to play the game. Sometimes, I first draw a picture of all the components to help me get my head around the number of components that I will need.



To make and play our first game, you will need the following components:

- A sheet of paper (to make the board)
- A drawing implement (to draw the game)
- A coin (any type)
- A pawn item for each player (you can use anything you have lying around the house for a pawn like a coin, a piece of paper with a drawing on it, a tiny car, a miniature ship, a thimble, a metal top hat, or a toy dog)<sup>2</sup>

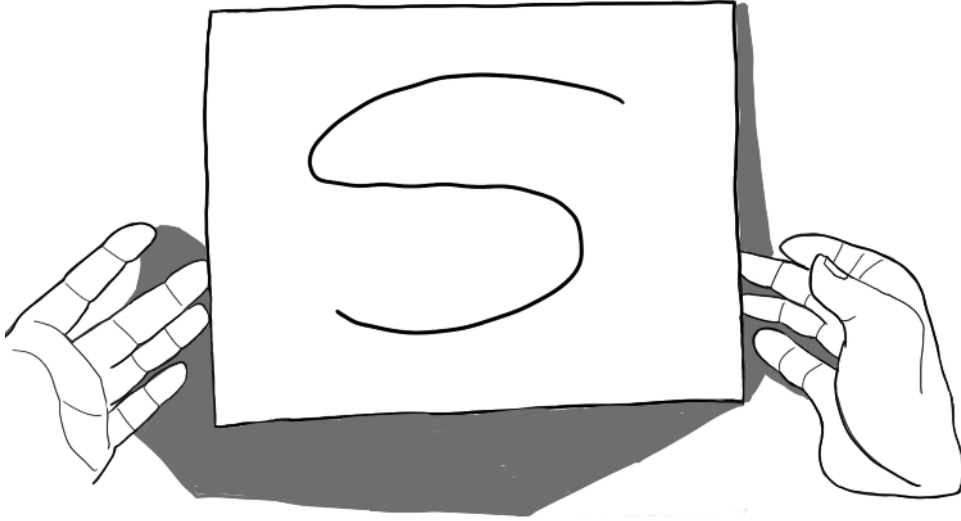
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<sup>2</sup> If these last few components sound familiar, it's because they are from the classic game *Monopoly*. When *Monopoly* was first created, the game was shared between friends who created their own versions of the game by hand (just like you are doing!). *Monopoly* initially didn't come with components. Players used things that were lying around the house like buttons or thimbles for pawns. When Parker Brothers, the publisher of *Monopoly* released the game in 1935, they included lead miniatures made by the Dowst Manufacturing Company, who had produced toys for Cracker Jack. Many of their toys, such as the iron and the battleship, were included in the game and have become iconic pieces since!

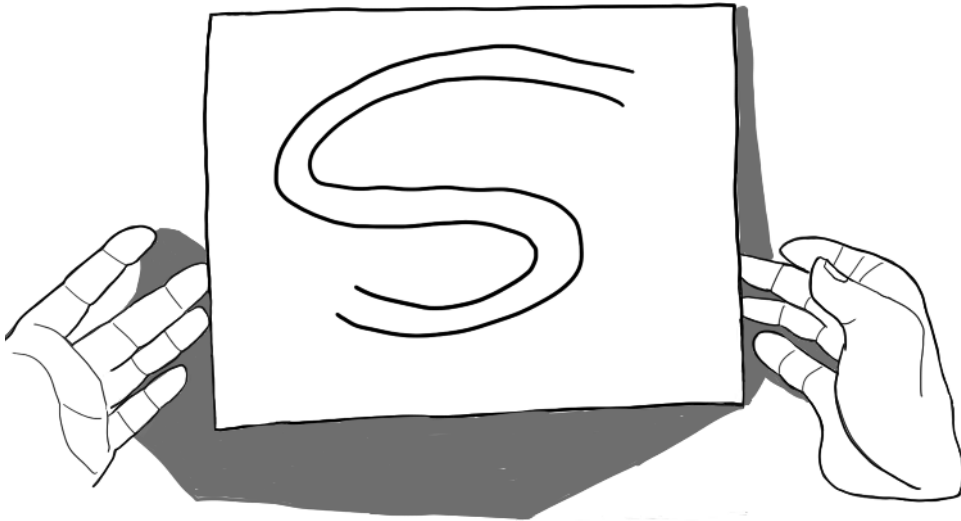
## How to Make a Game Board

We will walk through seven easy steps to make our board game. Let's start with the first three.

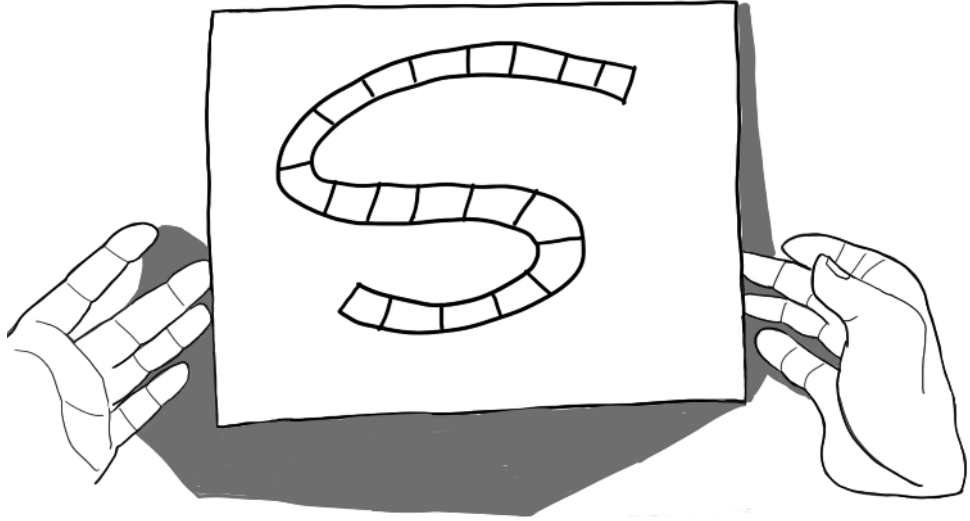
**STEP 1:** On your piece of paper, draw a big curving line like an *S*.



**STEP 2:** Draw a different big curving *S* next to the first one. This second curve should be parallel and close, but not too close, to the first one.



**STEP 3:** Draw little lines to connect the two bigger lines together to make little squares all the way up the track:



Congratulations! You have created the board for your board game! A board is considered a component too. Besides components, there is something else very important that games need: **rules**. Let's talk about rules for a moment. We will be diving deep into rules in the next chapter, but because they're such an important part of making games, let's talk about the basics now.

### Rules

Rules are the actions, conditions, and guidelines that the players must all agree to perform and follow to play the game. If you don't have rules, then you don't have a game. It's just that simple. For example, you can have components, you can roll dice, you can deal out cards, and you can move miniatures around on a board, but without rules, these actions are just play—meaningless fun. There's nothing wrong with play, but if our intention is to create a game, then we must have rules.

Following the rules might be easy for players, but for game designers, writing rules is hard. Writing rules is hard because there are so many questions that the game designer needs to answer for the player to play a game.

If I were to make up a game and play it with you right this moment, I would describe to you how to play the game. However, almost always,<sup>3</sup> the game designer is not there to tell the

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<sup>3</sup> Unless you happen to be at a live play testing event or a convention—which are two of the best ways to meet a fellow game designer!

players how to play the game or to answer the player's questions about how to play the game. Because a game designer is not there to help the players, the rules must do that instead.

Let's look at our game so far. We already have so many questions about it.

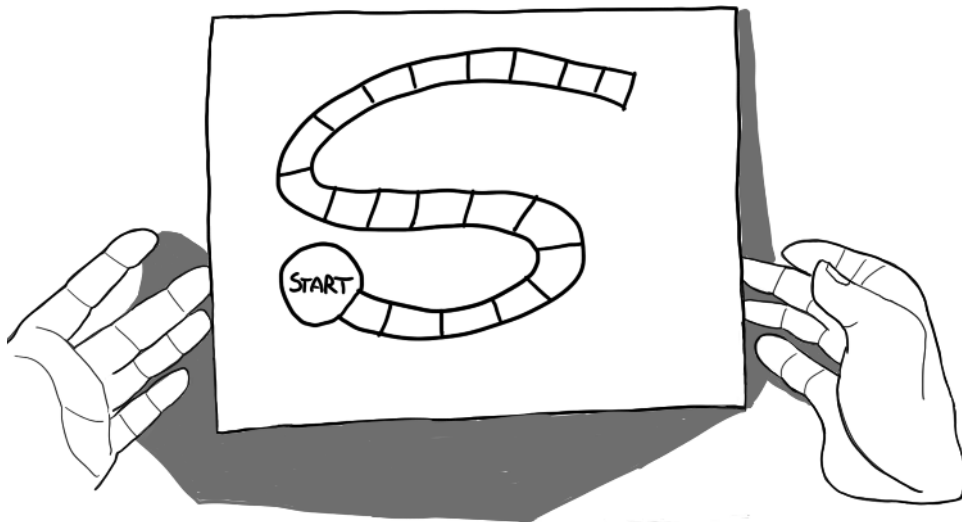
- How do we play the game?
- Where do we start?
- How does the player move their pawn?
- How far do they move the pawn?
- What's that coin for?
- How does the player win?
- Who goes first?

So many questions that we need to answer! That's okay, because we'll learn how to answer these questions in a moment. But in addition to rules, the players need to know their objective.

**Objectives** are short-term and long-term goals that the player has to accomplish during the game. In some games, the objective might be to earn the most money. In other games, it might be to defeat all the enemies. Other objectives include controlling the most territory, earning the most victory points, figuring out a mystery before the other players, and, in our game's case, moving our pawn down the track.

Ah! I knew we forgot something! We need to indicate a **starting point** on our game! Let's return to the seven steps I was sharing with you for building our game.

**STEP 4:** Write **START** on the first square on one end of your track.

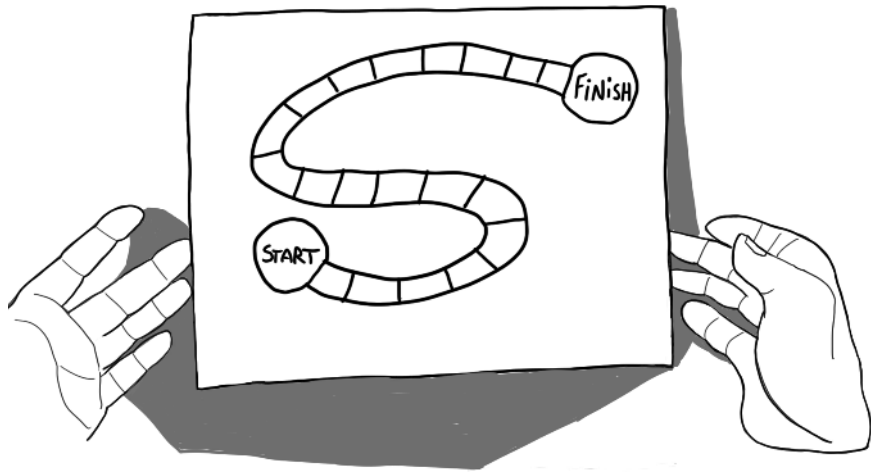


**STEP 5:** Next, our game needs a victory condition. A **victory condition** is what the player needs to do by the end of the game, usually to win the game. A victory condition can often cause the game to end, but not always.

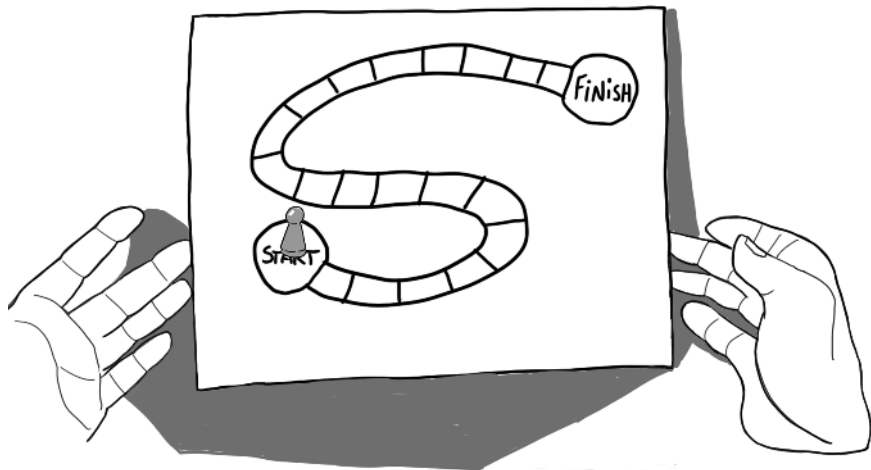
Victory conditions are different than objectives in that a player usually must complete many objectives over the course of the game to reach the victory condition. Let me repeat: a victory condition often causes a game to end, but not always. We'll talk about this idea later.

In our game, the victory condition is "the first player to reach the FINISH square wins the game." I guess we need to add a FINISH square to our game!

**STEP 6:** Write **FINISH** on the last square of your track, like so:



**STEP 7:** Place your pawn (and any other player's pawns) on the START square. It helps to know where and how to begin the game.



We have created a board, we have a track, we have our pawns on the track. . .oh yeah, what's that coin for?

The coin is a **randomizer**, a component that can generate a random result, such as “heads” and “tails.” A randomizer can take many forms—a coin, a die, a spinner, a deck of cards, a bag of tiles, pages of a book, etc.

In our game, let's use the coin to move the player. Flip the coin. If you get heads, you move one space down the track. If you get tails, you move two spaces.

Why do we need a randomizer? Because games are more fun when we don't know who is going to win before the game ends. A randomizer is just one way to create **unpredictability** in a game. Don't worry, we'll learn many more ways to create randomness. We'll also cover all the different ways randomization can be used to create gameplay.

### The Gameplay's the Thing

**Gameplay** is the interaction between the player and the game and its components. Gameplay is the activity of playing the game.

Gameplay is what creates **fun** for the player. If a game is too difficult or boring, then we lose interest. But if the gameplay engages the player, then the game is “fun.”<sup>4</sup>

Tracy Fullerton and Chris Swain, authors of *The Game Designers Workshop: A Playcentric Approach to Creating Innovative Games*, have created what I think is a great definition for what a *game* is.

*“A game is a closed formal system that engages players in structured conflict and ends in an unequal outcome.”*

*Fullerton and Swain*

I use Fullerton and Swain's definition all the time when teaching my board game design class, but I have simplified it even further to the following:

*“All games must have rules, gameplay, and a victory condition.”*

*Me*

If what you are creating doesn't have all three of these things, then it's not a game. It's a toy or a simulation or a puzzle or something else.

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<sup>4</sup> I don't like to use the word *fun* because the term is too subjective. We'll talk more about creating fun—and unfun—later in the book.

### Are There Any Unanswered Questions?

Speaking of gameplay, let's get back to making our game! So, see if we've answered all our questions.

- *How do we play the game?*  
Flip the coin to move your pawn down the track.
- *Where do we start?*  
Place your pawns on the START square.
- *How does the player move their pawn?*  
By flipping the coin.
- *How far do they move the pawn?*  
If you flip heads, move one square. If you flip tails, move two squares.
- *How does the player win?*  
When the first pawn lands on the FINISH square.
- *Who goes first?*  
That's a good question!

There are many ways to determine who gets to go first. Determining the **first player** can often be fun or funny—an icebreaker for your game that encourages the players to interact with each other.

In many children's games, the youngest player goes first or the oldest player goes first. You can let the **theme** of your game guide who gets to go first. For example, if your game is about sailing a ship, you could have the player who has most recently been on a boat go first. If your game is about outer space, you could have the player who most recently watched a science-fiction movie be the first player. If your game is about eating food, then the person who most recently ate something goes first. You get the idea. We'll be talking more about theme very soon.

### Rules for Our Game

Now that we have answered all our initial questions about how to play our game, we should write down all the rules so we don't forget them! Here are the rules for your game:

#### My First Game's Rules

1. All players put their pawns on the START square.
2. The youngest player goes first.
3. Flip the coin. If the result is heads, then the player moves one space on the track. If they get tails, they move two spaces on the track.
4. Each player takes turns flipping the coin.
5. After each player's turn, pass the coin clockwise around the table.
6. The player whose pawn reaches the FINISH square first wins the game!

Now that we have all the rules written down, we can play the game! Go ahead, play it! (I'll wait.)

Done?



Hooray! I knew you could design a game!

Between you and me, I think we can make the game better. The heart of game design is **iteration**, which means that by playing a game over and over and over and over, we can find everything that isn't quite right about the game,<sup>5</sup> fix it, and improve a game design.

## Let's Make Improve the Game!

To improve your game, you should think about all the aspects that you can change. Looking at our game, there are five fundamental aspects that we can change that will make a big difference in how the game is played.

- A number
- A component

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<sup>5</sup> Some game designers call when a rule or interaction or gameplay isn't doing what they expect it to do "broken," but just because something is "broken" doesn't mean it can't be fixed. By fixing these "broken" interactions and gameplay, we make the game play better and stronger.

- A rule
- An objective
- The theme

## Change a Number

When you change the number of anything, you will change the experience of the game. For example, let's say that when we flip the coin, if we get heads, we move forward one space, but if we get tails, we don't move forward at all.

That single number change would totally change the feel of the game, wouldn't it? Playing the game will take longer and flipping a tail wouldn't be very much fun, would it?

Let's change a number again. Let's say if we flip a head, we move forward two spaces. If we flip a tail, we move forward three spaces. That would also change the experience and make the game shorter.

What if we changed it to, if you flip a head, you move forward two spaces, but if you flip a tail, you move forward five spaces? While that would make flipping tails much more exciting, it might make the game result in an unequal outcome where one player is still only halfway down the track when the other finishes.

The outcome and the impact the change has on all the game's players is something that you must keep in mind when you are adjusting—or **balancing**—your game design. A good rule of thumb is this:

A close finish is much more exciting to all the players.

An exercise that I like to do when play testing a game is to record all the players' results—their score, the number of cards they have in play, their remaining health, etc. If those numbers are close to each other—for example, if Brenda has 13 points, Evelyn has 15 points, and Jack has 16 points—then I'm satisfied with the balance of the game. But if the scores are way off—Brenda has 5 points, Evelyn has 15 points, and Jack has 35 points—then I know the balance is off, and I start looking at what factors contributed toward creating such a large gap in the final scores.

Another number that can be changed is the actual amount of something being used in the game—not limited to just components. For example, what if we feel that our game plays too fast? We could increase the number of squares on the track. This would require us to redraw the track, but it might be worth it if we get the desired play results. Or perhaps we feel that rolling a 1 on the die makes the player's movement too slow,<sup>6</sup> so we could put a sticker over the 1 spot on the die and change it to a 7. That would speed things up!

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<sup>6</sup> Statistically, this can happen several times in a row. I once had this happen to a player during a play test and they said, "I hated this game because I only ever got to move one space!"

Speaking of dice, let's talk about the next way to change our game: by changing a component.

## Change a Component

Let's change a component for our game right now. Instead of using a coin, which gives only two results, let's change to using a six-sided die. If you already own a board game, go ahead and take a die from it. So now, on the player's turn, they roll the die and move that many spaces. Notice how this already speeds things!

This reminds me of a saying that I have.

*"Your goal as a designer is to get the player to play your game the way that you want it to be played."*

*Me (again)*

It's important for us, as game designers, to know what kind of experience we want the player to have. The great video game designer Shigeru Miyamoto<sup>7</sup> says, "When I create a game, I try to focus more on the emotions that the player experiences during the gameplay." Let's write down an **emotion** that we want the player to experience when playing your game:

**The emotion I want the player to experience is:** \_\_\_\_\_

There are lots of emotions that you could write down: wonder, joy, fear, tension, sadness, curiosity, anger. . .but there's one emotion that I prefer *not* to go after when designing a game, and that's *fun*.

### The Problem with *Fun*

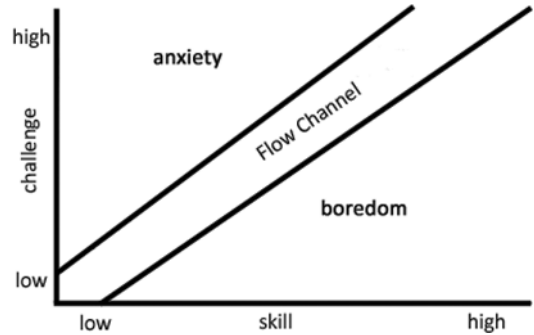
The word *fun* is hard for a designer to capture, especially when starting to design a game. Oh, you can start with an idea that you *think* might be fun or start with a proven gameplay that is *you know* is fun. But fun itself is elusive and, even worse, **subjective**.

Fun is like *funny*—there are some things that people think are funny and make them laugh while other things fall flat. But sometimes it's hard to say what is funny or not. It depends on many different things that you, as a designer, could not know about. I find that if you chase something as nontangible as *fun*, you end up frustrated and discouraged with your design. This is why I prefer to go after "unfun." We all know when something is "unfun"—whether it's rolling straight 1s on a die or moving your pawn verrrrrry slowly up the track. It's easier to change "unfun" back into "fun" by changing or removing it.

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<sup>7</sup> Shigeru Miyamoto (1952–present) is a video game designer and director for Nintendo of Japan. He is the creator of *Mario*, *Donkey Kong*, *Legend of Zelda*, and many more famous and successful games.

Fun is really another name for what we experience when we are being properly challenged and engaged by a game. Psychologist Mihaly Csikszentmihalyi (“Me-high Cheek-sent-me-high”) introduced this idea in his theory of flow. You know when you’re doing something and you lose all track of time? That’s when you are in the “flow state”—you are so engaged in what you are doing that everything else seems to fade away.



Flow is gauged by two vectors: skill and challenge. If the player is able to keep between these vectors, they will remain in a flow state. However, if a game is too hard or too boring, then they will fall out of flow and get discouraged or even quit playing.

It is the game designer’s job to set up challenges for the player that are appropriate to their skill level. This is when we can engage the player and create an atmosphere—the magic circle—where it’s okay for challenge and fun to occur.

### Back to Our Board Game

If we want to make even more changes to our game to make it more interesting or challenging, we can combine our first two methods—change a number and change a component—by changing the *number of components*. Tricky, right? Go ahead and add a second die to your game.



Now, when the player rolls both dice on their turn, their results would be from 2 to 12. A 12 would really zoom the player along the track! But that might be too far for the player to travel on one turn, and we don't want our game to be over that quickly.

## Change a Rule

Instead, we could **change the rules**. We could let the player roll two dice and then choose which result they wanted to use. That way, if they rolled a 1 and a 5, they of course would use the 5 because it would move them further along the track. Just changing the rules about how the components are used makes our game more interesting.

What are some other rules we could change about our game? For this, we are going to need to get some colored pencils, pens, or crayons. Go ahead and color each space a different color such as blue, yellow, green, and red.

Now, let's add rules to go with those colors.

- When you land on a blue space, you roll the dice again, pick one, and move that many spaces.
- When you land on a yellow space, you can move another player's pawn either forward or back to the space you are on.
- When you land on a green space, you roll the dice and immediately move the result of both dice. (For example, if you roll a 2 and a 3, you move five spaces!)
- When you land on a red space, you lose a turn.

Now that we've added these new components and rules, let's revise the rules of our game!

### My First Game's Rules (Version 2.0)

1. All players put their pawns on the START square.
2. The youngest player goes first.
3. Roll two dice. The player gets to pick one of the two results and move up the track that many spaces.
4. If the player lands on a colored space, the following happens:
  - a. When you land on a blue space, you roll the dice again, pick one, and move that many spaces.
  - b. When you land on a yellow space, you can move another player's pawn either forward or back to the space you are on.
  - c. When you land on a green space, you roll the dice and get to move the result of both dice. (For example, if you roll a 2 and a 3, you move five spaces!)
  - d. When you land on a red space, you lose a turn.
5. After each player's turn, pass the dice clockwise around the table.
6. The player whose pawn reaches the FINISH space first wins the game!

Go ahead and play this version of the game. See how different it is than the previous one? Just with the addition of a few new rules, we have something brand new.

## Change the Theme: An Introduction to Theme and Genre

The last way to change our game is to change the theme. **Theme** refers to the type of game that it is. Actually, that's only half-true. First let's talk about another word that often gets used in place of *theme*, and that's **genre**.

The dictionary definition of *genre* is “a category of artistic, musical, or literary composition characterized by a particular style, form, or content.”<sup>8</sup> But, in tabletop game design, there are two types of genres—one that refers to the content and the other that refers to gameplay.

The first type, **story genre**, pertains to the authored theme of the game. There are many, many story genres (and subgenres!). I like to think of them as how the books are organized in a bookstore; books are classified by the type of story: mystery, horror, science-fiction, fantasy, romance, finance, biography, etc.<sup>9</sup>

One of my favorite things about board games is that they can be of any genre! Really! All story genres that you can think of can be a board game. Here is a list of games and their story genres:

- *Clue* (mystery)
- *Arkham Horror* (horror)
- *Twilight Imperium* (science-fiction)
- *HeroQuest* (fantasy)
- *Fog of Love* (romance)
- *Monopoly* (finance)
- *Einstein: His Amazing Life and Incomparable Science* (biography)

I hope this short list proves that any story genre can be turned into a board game!

But there is a second type of genre, and that is the **game genre**, which refers to game's type of designed gameplay. Just like story genres, there are many of these, all of which we will be talking about in more detail later in this book.

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<sup>8</sup> Definition from [www.merriam-webster.com/dictionary/genre](http://www.merriam-webster.com/dictionary/genre).

<sup>9</sup> My book *Level Up! The Guide to Great Video Game Design* has a great big list of story genres in it because there are so many story genres that sometimes I forget some of them!

Taking our previous list, here are the game's game genres:

- *Clue* (deduction)
- *Arkham Horror* (coop area control)
- *Twilight Imperium* (4X)
- *HeroQuest* (dungeon crawler)
- *Fog of Love* (card hand management)
- *Monopoly* (roll and move)
- *Einstein: His Amazing Life and Incomparable Science* (polyomino tile placement)

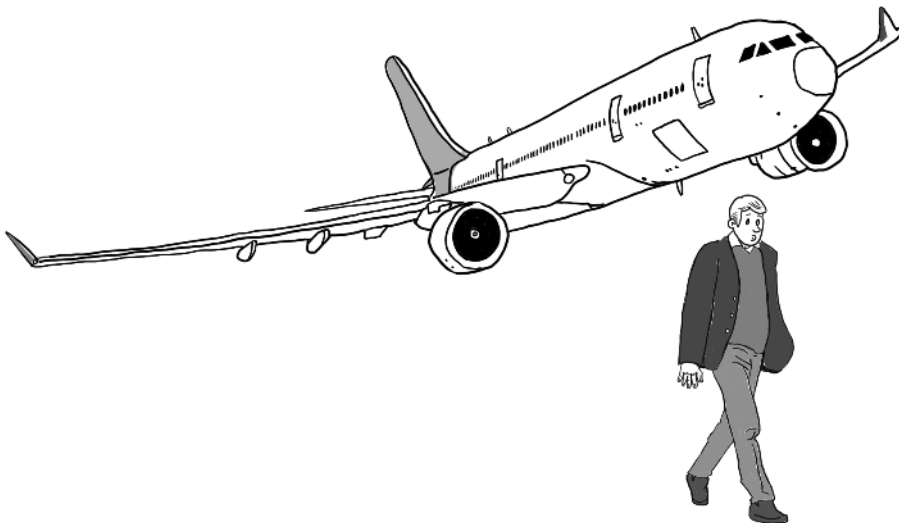
It is common to refer to a game by both the story genre and the gameplay genre. For example, my board game *Rayguns and Rocketships* is a pulp sci-fi action/skirmish game. “Pulp sci-fi” describes the story genre, while “action/skirmish” describes the game genre.

But let's concentrate on the game we are making. The game genre of the game we are making is known as a “roll and move,” but what is the theme (story genre) of our game?

**The theme of my game is:** \_\_\_\_\_

If you couldn't come up with an answer, that's okay because this was a trick question.

Our game has a genre, but it doesn't have a theme. . .yet. Currently the genre of our game is known as an **abstract game**. We'll talk more about abstract games and other genres of games in the rest of the book. But for now, we want to come up with a theme for our game because themes do many things to help our game.



One of the things a theme can do is to help the players understand the rules. If, in my game, I have two ways to travel—by foot or by airplane—then it makes sense that moving by airplane will be faster than moving on foot.



If my game is about pirates, it makes sense for the goal of the game to be the pirate with the most gold. It also makes sense for each of the players to be able to steal gold from each other because that's what pirates do!

There are so many ways to inform a player of the theme—art, text, rules, gameplay—but let's concentrate for a moment on the art of our game. You don't need to be a great artist to communicate theme. Here are just a few ways we can easily give our game some theme:

- Color the path blue to indicate that it is a river and we are boats traveling up it.
- Draw a castle on the FINISH tile to indicate that we are traveling in a medieval kingdom.
- Draw a ghost on the red tile where the player has to lose a turn.
- Draw stars all around the path to set it in outer space.

You can also change the text on the game and in the rules to give our game more theme. Here are some examples:

- If a player lands on a red square (where there is a ghost), they are too scared to keep moving and lose a turn.
- If the player lands on a green tile, they have gotten a ride from a friendly frog who hops them forward the number result from rolling both dice.
- If a player lands on the yellow space, a witch curses another player, and they must be moved backward to the closest player.
- If a player lands on a blue space, you continue your journey through the kingdom.

Just using some theming to describe what happens to the player in the game makes the game come alive!

Let's try this again. No tricks this time:

**The theme of my game is:** \_\_\_\_\_

Rewrite your rules and update the art on your board to match your new theming. Go ahead and play this new version with your friends and family.



Congratulations! You know what that makes you? A game designer! You don't need to sell a board game to be a game designer. Game designers make games. So, write this down: "I am a game designer!"

We're just getting started! There's much more work to do to make your game fun! Go play your game again and write down any ideas you might have to make your game better. I'll be waiting for you in the next chapter.

**Things I can do to make my game better:**

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## Important Chapter 1 Concepts and Takeaways

- A game consists of rules, gameplay, and a victory condition.
- Rules are the actions, conditions, and guidelines that the players must all agree to perform and follow to play the game.
- Gameplay is the interaction between the player and the game and its components. Gameplay is the activity of playing the game.
- A victory condition is the goal or the group of goals that the player needs to achieve to win the game.
- Change one thing, and you change the entire game experience. Things we can change include the following:
  - A number
  - A component
  - A rule
  - An objective
  - The theme
- Game designers make games.