

From Level Up! The Guide to Great Video Game Design, 2nd Ed. By Scott Rogers, John Wiley and Sons, Ltd., 2014.

[Taken from Chapter 9: Everything I Learned About Level Design, I Learned From Level 9]

Everything I Learned About Level Design, I Learned From Disneyland

"The world is the best narrator."

-Ken Levine

I believe that it is within a game's level where the story should actually be told. Using space to tell a story isn't a new concept; this approach has been used in architectural design for centuries. When I first started designing game levels, I found that theme parks held the answers to many of my questions on how to tell a story as well as inform players. I pored over theme park maps and studied how they were laid out. I found that theme parks are designed to move guests from one adventure to the next in the most effective way possible, much like a well-designed game level.

Disneyland, in particular, proved to be a source of great inspiration. I read about Walt Disney's imagineers and how they went about designing their own world. Walt Disney had a deep love of miniature railroads, and Disneyland was structured around a train track. The imagineers needed something to fill in the middle of the track, five "lands" were created, each inspired by Disney's passions: history, progress, nature, his animated movies, and nostalgia for his childhood hometown. These became Frontierland, Tomorrowland, Adventureland, Fantasyland, and Main Street.



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The imagineers filled these lands with attractions, themed adventures that allowed guests to “ride the Disney movies.” These attractions were built as storytelling experiences within a physical space, and detailed attention was given to each scene as guests passed through it.

I noticed that the creation and structure of Disneyland bore a strong resemblance to creating and structuring a video game world. The basic progression of creation is this:

- **Disneyland:** *World to land to attraction to scene.*
- **Video game:** *World to level to experience to moment-to-moment gameplay.*

The world of Disneyland contains many lands. Within each themed land are attractions, each with its own story. The “story” of the attraction is composed of scenes.

The world of the video game contains many levels, each with its own part of the story. Within each themed level are encounters, challenges, and story points that move players through the level. Connecting these experiences is the moment-to-moment gameplay that keeps players engaged.

[...]

Foreshadowing

Foreshadowing is a powerful tool to get players excited about the activities and dangers found in a level. Building anticipation is just as important as delivering on it. In all my years of making haunted houses, I’ve found that a scare is bigger and better if the victims know it’s coming. It’s waiting for the scare to happen that drives them nuts.

You can use lighting, sound effects, and geometry to make a level look foreboding. And remember, nothing says “beware” like a pile of skulls.

Another lesson I learned from Disneyland is to provide foreshadowing with **posters**. Guests pass by posters advertising attractions as they enter the park. While the guests don’t understand the significance of the images they’re seeing, the posters provide foreshadowing to future adventures. In games, one of the

best uses of posters is in *BioShock* when the player, first entering Rapture, sees posters advertising the superpower-giving plasmids. Only when the player learns about plasmids and what they can do is their significance understood.

Goal Setting

Much like a game map, the level itself should help transport players through the level from story point to story point. The always eloquent imagineers of Disneyland describe it this way:

When we began designing Disneyland, we looked at it just as we do a motion picture. We had to tell a story, or in this case, a series of stories. In filmmaking, we develop a logical flow of events or scenes that will take our audience from point to point through a story. If I were to 'leapfrog' from Scene One to Scene Three, leaving out Scene Two, it would be like sending the entire audience out to the lobby for popcorn in the middle of the film.

-Disneyland The First Quarter Century, Walt Disney Productions, 1979.

Disneyland's attractions tell four different stories to their guests. I have found these stories have parallels with the players' goals within a video game level:

- Escape/survive
- Explore
- Educate
- Provide a moral

[For example], the goal of learning a **moral** can be found in many of Disneyland's attractions. Mr. Toad's Wild Ride's moral message is: "Drive recklessly and you'll crash and burn." Quite a statement for the happiest place on Earth!

[...]

Sandbox Play

When creating these sandbox worlds, you should divide them up into distinct areas to aid the players' navigation and orientation, much like the "lands" of

Disneyland. Disneyland goes through great pains to make each land visually distinct. Take Frontierland: it has everything you would expect in the Old West—watering troughs, wooden cigar-store Indians, wagons, cactus, and even those old video game standbys, crates and barrels. (Frontierland’s main thoroughfare was originally dirt road until guests complained about dusty pants and shoes.) Disneyland even themes the trash cans! For example, Frontierland’s trash cans are painted to look like wood, while Tomorrowland’s are futuristic silver. You always know where you are even when throwing out the trash.

[...]

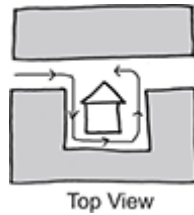


Disneyland’s imagineers pioneered the use of architectural landmarks like Sleeping Beauty’s castle, the Matterhorn, and Space Mountain, which they call **weenies**. Weenies are used to get the interest of guests and draw them in their direction. Weenies don’t have to be giant castles or mountains. They can be interesting architectural elements like statues, bridges, and buildings, or even natural elements like a distinct tree or rock.

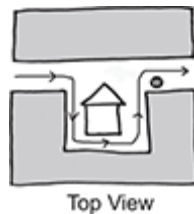
Theoretically, you want to string your weenies along your path to keep players moving from one to the next. When creating 3-D maps, make sure the path is clearly marked with weenies. I once created a map that looked like this:



When I play tested this part of the level, players would travel down the road, see the path leading behind the house, and walk around the back of the house looking for treasure. When they emerged onto the road, they turned around and walked back down the way they came!



I realized that the area needed a landmark (marked on the map) so that when players came out, they were able to re-orient themselves.



This brings up an important truth about designing games: players will ALWAYS find a way to break your game, whether or not they are doing it intentionally. Tackle this issue head-on by making players play the game the way YOU want it to be played, but provide plenty of help to show them the way.

Islands work particularly well for multiplayer games because you can accommodate many different styles of playing. Do you like to sneak around the back of the map? Islands provide a back to sneak around. You can still charge up the front if you want, or you can camp over on that hill and snipe to your heart's content.

That doesn't mean alleys and islands can't live together in perfect harmony. Islands can still have alley-like sections. *Red Faction Guerrilla* and *Team Fortress 2* use interior spaces that feel like alley level designs, but their freedom of approach and wide perimeter edges mark them as islands. The *Uncharted* series alternates between using alleys and islands frequently. *Darksiders* and the *Maximo* games use alleys for their dungeon levels and islands for their hubs and battle arenas. Whether to use island or alley all depends on the gameplay.

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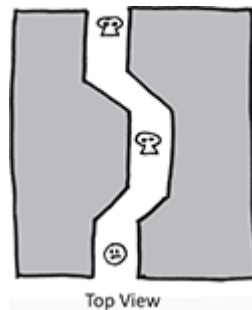
Another lesson I've learned from Disneyland is that there are three ways for players to get around a world. The first is the main path—using weenies and the tricks described earlier in this chapter—that helps guide players around the level. The second is to use secret paths and shortcuts; these are sneaky and tricky ways

players learn as they explore and get more familiar with the level. Using these shortcuts makes players feel smarter. They can also be used for gameplay, such as time trials where getting from point A to point B as quickly as possible is the goal. The third way is to use circuit transportation. Like the train that circles Disneyland, players need a fast way to get around the level but one that provides a handful of stops. It has to be faster than traveling by foot. It doesn't have to be a train. It can be a car or a horse, or a mythical mount like a griffin or dragon. Let them catch a lift in a zeppelin or on a spaceship, or, if your fiction supports it, there's always the ever-popular teleporter.

Just be aware that traveling in vehicles can really chew up the real estate. You'll need to build that space into your levels. But it's a double-edged sword. Don't make the experience last too long, especially if it's something you will be doing often. Just remember this **very important thing** when it comes to traveling through levels:

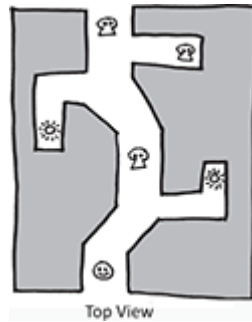
IF IT EVER FEELS TOO LONG OR TOO BORING, THEN IT IS

Avoid boring levels! But how? Variety is one way. **Fingers** are another way of making a world feel deeper and fuller without having to build lots of complex geometry and multiple paths that players may never take. Picture a linear path:



Not too exciting, huh? You can place all type of hazards and enemies along the way to make things challenging for players, but it's just going to feel like a straight path even if you crinkle it up and bend it around.

However, if you start to add fingers off your path, little dead ends for players to explore and go down, it makes the players feel as if they are exploring the level and not just promenading down it. These fingers expand the life of your level and you can promote the players exploring them. Take a look at the level now that a few fingers have been added off the main path:



Now you have interesting places for players to explore as they work their way through a level. Although I wouldn't suggest putting something that is important to the critical path down a finger, you can place whatever you want along a finger: combat, treasure, bonus materials, or just something visual or fun. Remember this simple yet **very important thing**:

**EVERY FINGER SHOULD HAVE A REWARD AT THE END,
EVEN IF IT'S JUST A TRASH CAN**

Locations of "normal" and "secret" paths in Toontown, Disneyland:

