What is a Game?: Crash Course Games #1

Crash Course: Games
https://youtube.com/watch?v=QPqR2wOs8WI
https://nerdfighteria.info/v/QPqR2wOs8WI

Hi, I'm Andre Meadows and this is Crash Course Games. In this series we're going to look at everything from the ancient games depicted on cave walls to board games to the rise of the arcade machine to home consoles to virtual reality to role playing games. And, hey nerds, even sports. All games are created equal.

Games are used in schools and in treating medical conditions. They were used to train warriors for combat. Some games have international tournaments, some even have very real political consequences. There are games that you can play alone, tear, and there are games that millions of people at a time can play together. Some of these created worlds, some even have their own economics.

Gaming affects millions of players all over the world and makes an impact on popular culture and culture culture.

I've got as many interesting game facts and stories for you as a Pokedex has Pokemon. How many Pokemon are there now? Like eight, fifty-something... After one-fifty-one I'm done.

So sit back, hit the pause button on whatever you're playing and prepare for a multi-pixel journey through the history of games. And remember, it's dangerous to go alone. Take this.

Intro Plays

Before we drop into all this like a misplaced Tetrad, Tetrad, Tetrazoid, Tetrazone, Tetris piece; we need to orient ourselves. We should answer a basic question: What is a game?

The dictionary will tell you: a game is a construct that organizes play through a series of rules, for the purpose of achieving a set of goals, overcoming an obstacle, and/or obtaining an objective. That's a decent definition. I would call games "entertainment" but they're very specific kind of "entertainment".

Game designer, Chris Crawford, came up with a really cool hierarchy to explain this. To start, Crawford characterizes any kind of interactive entertainment as a play thing. Anything that you interact with to entertain yourself qualifies. But there are also two types of play things. A plaything without a goal, like a Slinky, is a toy. But when there's a goal involved, like trying to get the Slinky down the stairs, Crawford calls that a challenge.

Now if you're working to complete this challenge with no other active agent or person involved, it turns out you're working on a puzzle. But when there is some kind of second party involved, then you have a conflict. Okay, we're almost there.

Crawford subdivides conflict into competitions and games. In a competition the participants don't interact or interfere with each other. A good example of a competition is figure skating. Everybody's skating to win, but they can't really affect each other's performances. Well, except for that one time where Tonya Harding and Nancy Kerrigan, but, you know... Look it up.

Mario Kart though, now that's a game. Players interact continuously; blocking and passing and there's no clearer example than when you're in first place and one of your friends in eighth place, and they use a blue shell and take you out and take the lead! Why you always do that to me, Katie?!? That's not cool!

And here's an interesting thing to think about. You don't have to be playing against a person for something to be a game. Those soldiers blocking your path in Metal Gear, are artificial intelligence or AI agents, trying to stop you from accomplishing your goal. The rules of Solitaire can be constructed as an agent working to stop you from completing the game.

Some games have goals, like scoring points or saving the princess, and we achieve those goals by following the rules, like moving your game piece six places when you roll a six on the die, or ending our turn when we've spent all of our mana. Of course none of this matters unless you want to play. Voluntary participation is essential. Otherwise, it's work.

I'd also like to get at why we play games, but that's a little harder. The short answer is: there is no short answer. There's no universal unified theory of why we play games, there's no constitution of gaming, no ten commandments of gaming; different games work on our brains in different ways. Games like Tetris appeal to our desire to create order. Something like Animal Crossing lets us be the center of a whole, tiny universe. Games like World of Warcraft or Destiny let us live a remarkable life in another world. Games like Candy Crush let us crush candy. We play games for a lot of different reasons.

Lets leave behind the mystery of why we play for a while and talk about what can a game be, and what can a game do? Take video games. Modern video games can be a bit formulaic, but recent technological advances have made games available to a wider audience, and they've made the tools to create games widely available... and that's, well... a game changer! Get it? GAME changer, you see 'cause we're talking games.

A larger audience and a larger pool of creators means a wider variety of games gets produced. Sure, you'll get Call of Duty and the annual licensed NFL game that costs millions to make and sells millions of copies, but more gamers and lower production and distribution costs means quirky games like Braid, or Super Meat Boy, or Shovel Knight, games that might have relatively small audiences, can be profitable. And sometimes those "quirky independent" games can get so profitable and so popular that soon they hit a wide audience just as much as a triple A title.

And when I say "wide audience," I mean WIIIIIDE audience. In the United States alone, there are around 145 million video game players, 37% of those players are over the age of 36, and 13% are under 18. Kinda breaks the games stereotype, doesn't it? And increasingly games are part of players' daily lives. According to video game academic Jane McGonagall, by 2010 the average video game player in the US played for 22 hours a week. That's like watching all the Harry Potter movies in order, and then watching Chamber of Secrets again. Every week. That's a dedicated Harry Potter fan.

Clearly we're spending a LOT of time playing video games, so what's this doing to us? We now have entire schools devoted to gaming and almost every major university offers classes and degrees related to games. The University of Southern California, University of Utah, and Savannah College of Art and Design all have renowned programs in game art, programming, and design. The gaming industry makes so much money, even more sometimes than movies and television. There are even people right now on YouTube who are making a living playing video games. On camera. That's a job!

And it's not just about learning how to make games or make money off of games. Massively Multiplayer game worlds can provide insights across disciplines. Sociologists can study how people form groups, economists can finally see if their models work, and in 2005, World of Warcraft became a legitimate subject of study for epidemiologists. Let's go to the Thought Bubble.

In 2005, a plague hit World of Warcraft; the developers introduced a new mission that called on players to defeat a boss named Hakkar the Soulflayer, blood god of the Gurubashi trolls.
Is Gurubashi right? Whatever. When players attacked Hakkar, he

cast a spell called Corrupted Blood which would drain the player's hit points. The spell was tentatively contagious, but it was only supposed to spread in that part of the game. Well, it turns out corrupted blood was kind of like a real world pathogen. It got out of the intended area and spread through the entire game world. According to an article from Reuters, the major towns and cities were abandoned by the population as panic set in and players rushed to evacuate to the relative safety of the countryside, leaving urban areas filled to the brim with corpses and the city streets literally white with the bones of the dead.

This is where science got interested. The Journal of Epidemiology compared Corrupted Blood to real life SARS and avian influenza outbreaks. Terrorism experts also studied the event. They looked at the decision by some gamers to intentionally infect other players, and this provided some insight into how terrorist cells form in the real world. In the end, game developers had to invoke the nuclear option and reset the game servers to undo the havoc wrought by Hakkar the Soulflayer, blood god of the Gurubashi trolls. And apparently bio-terrorists. Thanks Thought Bubble!

Games also make their way into daily life through gamification. This grows out of achievement systems some video games use to reward players in addition to the normal game objectives. These systems have proven to be very motivational, so why not try them out in real life? Purdue is doing this. Some schools reward students with badges when they pass tests or complete homework assignments.

Gamification is also used in fitness. For example some fitness apps award badges for walking around and even let users compete with friends for the highest step count. Oh, that reminds me, hold on. This counts as steps, right?

Academic studies also seem to validate time spent gaming. Studies from China and Australia indicate that expert-level video game players have a measurable increase in cognitive functions, perception, and motor control. These players were found to have increased gray matter and increased connectivity in their brains! So next time your mom says you're playing too much video games, you go "hey mom I'm increasing my gray matter."

A hospital in Florida studied their surgeons who played video games before performing surgery and found that surgeons who played video games for more than three hours in a week made 37 percent fewer errors. They were 27 percent faster during surgery over those surgeons who did not.

Gaming also has cool applications in medicine. An Oxford University study indicated that playing Tetris can reduce the after effects of psychological trauma and might offer relief of PTSD symptoms. There's this virtual reality game called Snow World. It's played on the Oculus Rift and it's used for pain management. Burn victims report less pain during bandage removal and reapplication while playing this game.

Another example is the online game Fold It. In this game thousands of players help doctors an computers fold proteins and other structures to support drug research. In 2011 players helped scientists solve a decade old problem in under 10 days! That's the power of games!

So what we're saying here is that games can be a positive force in the world. And that's why we're going to spend the next twenty weeks or so playing with these ideas. So press Start, or set up the board, or tee up the ball or whatever. Let's play! Thanks for watching. We'll see you next week. Now if you excuse me, I got some roads to crossy.

Outro music plays

Crash Course Games is filmed in the Chad and Stacey Emigholz Studio in Indianapolis, Indiana, and it is made with the help of all these nice people. If you'd like to keep Crash Course free for everyone forever, you can support the series at Patreon, a crowdfunding platform that allows you to support the content you love. Speaking of Patreon, we'd like to thank all our patrons in general, and we'd like to specifically thank our high chancellor of knowledge Brett Henderson, MD, our headmaster of learning Linnea Boyev, and our vice principal Mike Hunt. Thank you for your support.