

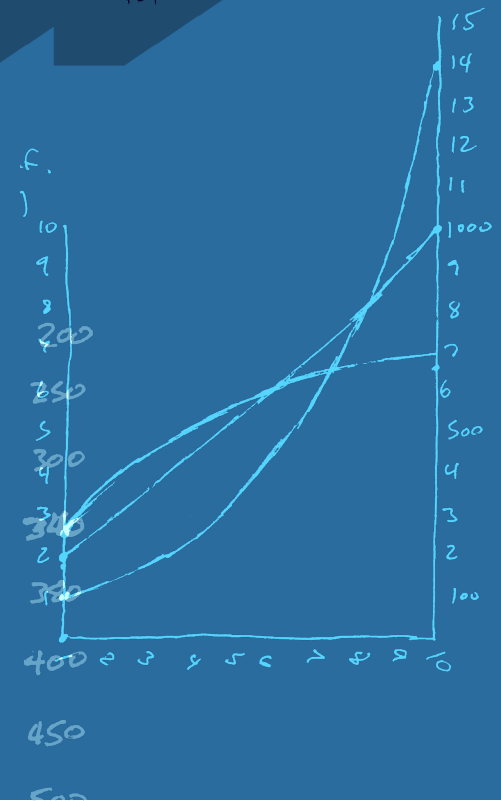
# WILL WRIGHT

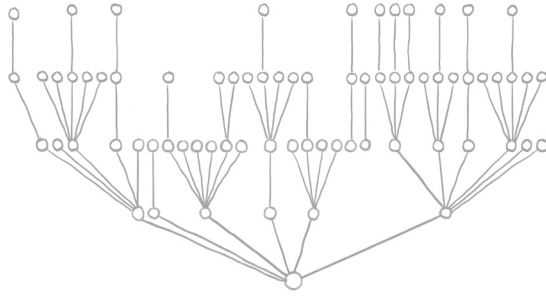
TEACHES GAME DESIGN AND THEORY

-P.1



1	100	150
2	150	180
3	200	220
4	250	250
5	350	375
6	450	500
7	650	625
	850	750





ωx  
ωy

GetLowDir (x,y) 0..3



## WILL WRIGHT | CHAPTER 01

# The Fundamentals of Game Design

### TERMS

**play (v.)** To engage in recreational activities like exploration, discovery, and experimentation, often in a symbolic representation of the real world.

**prototype (n.)** A rough but playable version of a game created early in the design process.

**win state (n.)** The objective conditions that must be achieved for a player to win a game.

**lose state (n.)** The objective conditions that must be achieved for a player to lose a game.

**goal state (n.)** A condition in which a player is seeking to accomplish a task or objective.

**zero-sum game (n.)** A game with clear winners and losers. Gains by one player are balanced exactly through losses suffered by another.



## HOW TO USE THIS WORKBOOK:

Throughout this course, you will develop three bodies of work.

**Concept Book:** A simple notebook in which you will record high-level game concepts. You'll also use this notebook to write responses to thought experiments posed to you throughout the class.

**Prototype Library:** A collection of all your playable prototypes. Throughout the class you'll be asked to build dozens of small interactive experiences to test various game mechanics and concepts. We've designed assignments to be engine agnostic, so don't worry about finding the "right" medium. For many, prototypes will be small tabletop experiences using paper, cards, chips, dice, etc. For those with more programming experience, prototypes may be wireframes in Unity, Unreal, Game Maker Studio, Twine, etc. Regardless of which vehicle you choose, the goal of prototyping is to build something interactive as quickly as possible, learn a core lesson from it, and move on.

We've provided a cover sheet template for your prototype library. [Download it here](#) and use it to track progress whenever you create a new prototype or playtest an older one.

**Game Design Document (GDD):** A deep dive into a single game concept we call your "Capstone Game." Your GDD should answer any questions a potential audience might have about the game, from high-level concept down to the minutiae of aesthetic choices in visual and audio design. After the course, you might bring your GDD to potential team members, publishers, or investors interested in your game.

We've provided a GDD template with headings and subheadings. [Download it here](#) and convert to a Google doc, so that you can collaborate on it with your team. By the end of the course, your GDD will run somewhere around 30 pages. Afterwards, you may choose to edit it into relevant sections based on your audience.

## READING LIST

*A Pattern Language*, Christopher Alexander et al. Oxford University Press, 1977.

*Flow: The Psychology of Optimal Experience*, Mihaly Csikszentmihalyi. Harper Collins, 2009.

*Urban Dynamics*, Jay W. Forrester. Pegasus Communications, 1969.

*Maps of the Mind: Charts and Concepts of the Mind and its Labyrinths*, Charles Hampden-Turner. Collier/Macmillan, 1982.

*The Ants*, Bert Hölldobler and Edward O. Wilson. Belknap Press, 1990.

*Gaia: A New Look at Life on Earth*, James Lovelock. Oxford University Press, 1979.

*The Ages of Gaia*, James Lovelock. Oxford University Press, 1988.

*Reality Is Broken: Why Games Make Us Better and How They Can Change the World*, Jane McGonigal. Penguin, 2011.

*The Medium Is the Massage: An Inventory of Effects*, Marshall McLuhan. Gingko Press, 2001.

*Thinking in Systems: A Primer*, Donella H. Meadows. Chelsea Green Publishing, 2008.

*The Society of Mind*, Marvin Minsky. Simon & Schuster, 1988.

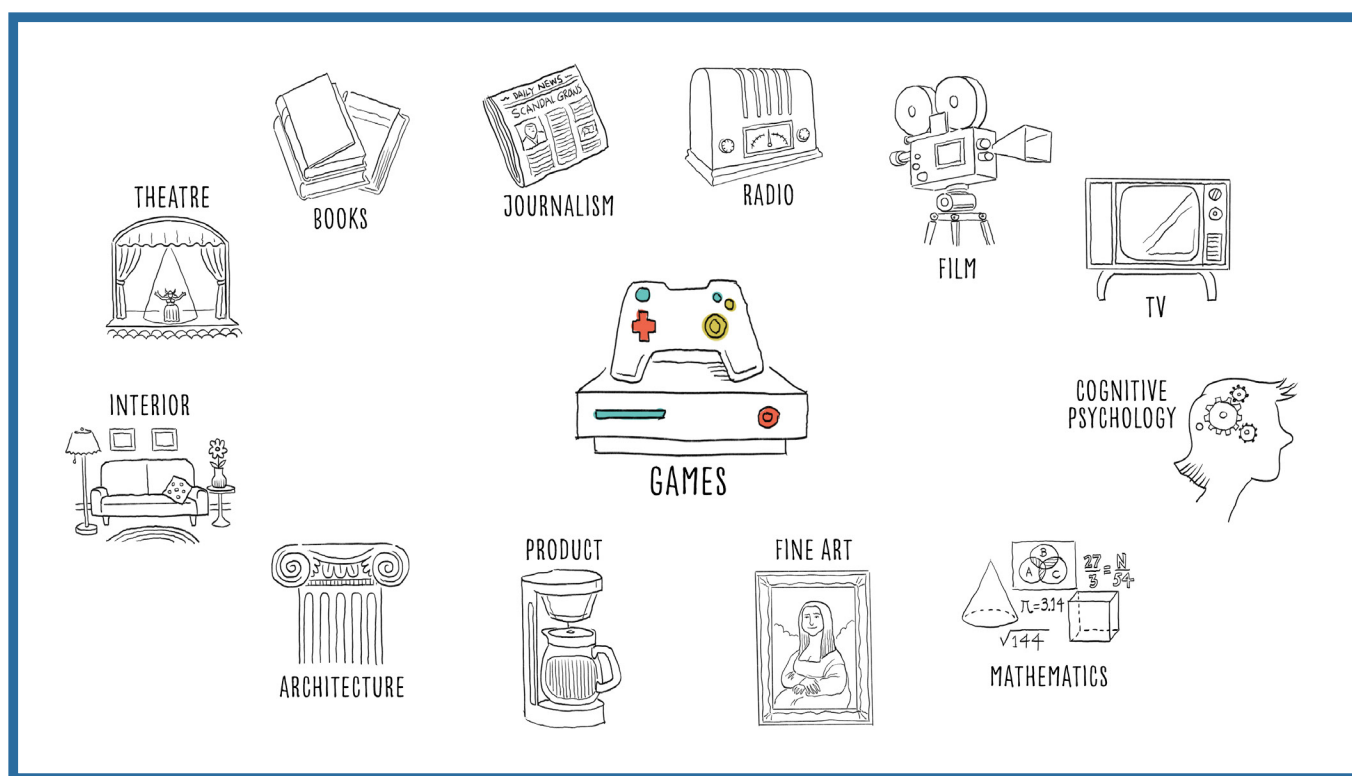
*Blood, Sweat, and Pixels*, Jason Schreier. HarperCollins, 2017.

**G**ame design is a multidisciplinary creative process that directs the natural human inclination to play. For Will, the foundations of becoming a good game designer are:

- **Become familiar with design thinking outside of games.** If you're making a chair, there are many qualities you can choose to give your chair: comfort, portability, affordability. Similarly, there are many qualities you can give your game. Make deliberate decisions about which to explore and which to leave behind.

- **Aim for a state of continuous learning.** Will seeks design lessons from biology, cognitive science, even Japanese gardening. Draw inspiration from a variety of creative fields and academic disciplines, as well as playtesters, other games, conversations with your team, and your own mistakes. Strive to be a good listener, and remain open to the possibility of learning new things.
- **Begin making games as soon as possible.** Come up with an idea and play it immediately, no matter how unprepared you feel. It's no use cultivating some grand idea in your head which you eventually discover is too complex to execute. Instead, start creating simple games in your day-to-day life, test them with your friends, and begin to modify the gameplay based on your findings. This iterative process is used at the highest levels of the industry.

"Games have the possibility to go way beyond (a) zero-sum approach."



Will's work is unique because he rarely makes zero-sum games. Instead, *SimCity*, *Spore*, and *The Sims* empower the player to develop their own goals, and then pursue them as they see fit. Unlike many games, which tend to direct player behavior, his games encourage and amplify player creativity. Don't be afraid to push the boundaries of your game designs as you progress through the course.

## LEARN MORE

Read Don Norman's book *The Design of Everyday Things* (Basic Books, 1988). There you'll find an influential design

philosophy called "user-centered design" which you can apply to games. Consider the game as an object whose sole purpose is to communicate possible interactions to the player. What interactions does a particular game "afford" the player? How does the game encourage certain behaviors, while discouraging others?

Read the book *Reality Is Broken* by Jane McGonigal (Penguin Books, 2011). Focus on the introductory chapters, where McGonigal writes about the vital role that games played in ancient civilizations and cultures. Consider how you can channel that vitality in your own designs.

## ASSIGNMENTS

Play one of Will's games (e.g. *The Sims*, *SimCity*, *Spore*) and focus on the goals you develop for yourself while doing so. Are you trying to create a city with the lowest crime in *SimCity*? Do you find yourself trying to have the best-decorated house on the block in *The Sims*? Are you interested in creating the largest spacecraft possible in *Spore*? When you find a goal that interests you, write a concept for a board or card game in your Concept Book that explores that

goal in greater depth. Specify several possible win and lose states for your new game.

As a thought exercise, examine chairs by three different designers (e.g. Eames, Breuer, and Verner Panton). Write down which properties are given highest priority in each design. Comfort? Portability? Visual aesthetic? Durability? Then, write down which properties are given low priority. Rank these properties in order from least to most vital to the design.

