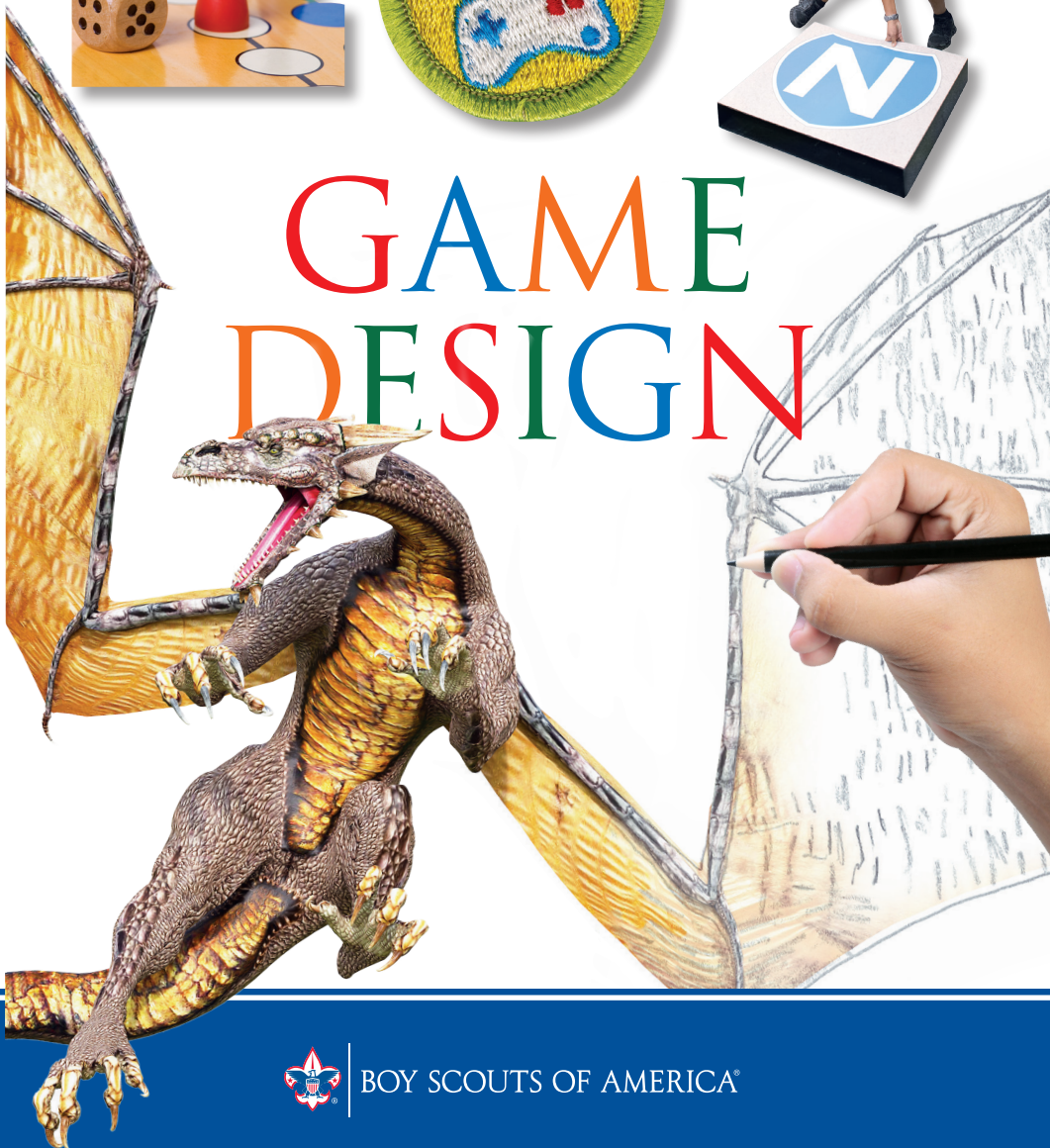


MERIT BADGE SERIES



GAME DESIGN



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Game Design

1. Do the following:
 - (a) Analyze four games you have played, each from a different medium. Identify the medium, player format, objectives, rules, resources, and theme (if relevant). Discuss with your counselor the play experience, what you enjoy in each game, and what you dislike. Make a chart to compare and contrast the games.
 - (b) Describe four types of play value and provide an example of a game built around each concept. Discuss with your counselor other reasons people play games.
2. Discuss with your counselor five of the following 17 game design terms. For each term that you pick, describe how it relates to a specific game.

Thematic game elements: *story, setting, characters*

Gameplay elements: *play sequence, level design, interface design*

Game analysis: *difficulty, balance, depth, pace, replay value, age appropriateness*

Related terms: *single-player vs. multiplayer, cooperative vs. competitive, turn-based vs. real-time, strategy vs. reflex vs. chance, abstract vs. thematic*
3. Define the term *intellectual property*. Describe the types of intellectual property associated with the game design industry. Describe how intellectual property is protected and why protection is necessary. Define and give an example of a licensed property.
4. Do the following:
 - (a) Pick a game where the players can change the rules or objectives (examples: basketball, hearts, chess, kickball). Briefly summarize the standard rules and objectives and play through the game normally.
 - (b) Propose changes to several rules or objectives. Predict how each change will affect gameplay.
 - (c) Play the game with one rule or objective change, observing how the players' actions and emotional experiences are affected by the rule change. Repeat this process with two other changes.
 - (d) Explain to your counselor how the changes affected the actions and experience of the players. Discuss the accuracy of your predictions.

5. Design a new game. Any game medium or combination of mediums is acceptable. Record your work in a game design notebook.
- (a) Write a vision statement for your game. Identify the medium, player format, objectives, and theme of the game. If suitable, describe the setting, story, and characters.
 - (b) Describe the play value.
 - (c) Make a preliminary list of the rules of the game. Define the resources.
 - (d) Draw the game elements.

You must have your merit badge counselor's approval of your concept before you begin creating the prototype.

6. Do the following:
- (a) Prototype your game from requirement 5. If applicable, demonstrate to your counselor that you have addressed player safety through the rules and equipment. Record your work in your game design notebook.
 - (b) Test your prototype with as many other people as you need to meet the player format. Compare the play experience to your descriptions from requirement 5b. Correct unclear rules, holes in the rules, dead ends, and obvious rule exploits. Change at least one rule, mechanic, or objective from your first version of the game, and describe why you are making the change. Play the game again. Record in your game design notebook whether or not your change had the expected effect.
 - (c) Repeat 6b at least two more times and record the results in your game design notebook.
7. Blind test your game. Do the following:
- (a) Write an instruction sheet that includes all of the information needed to play the game. Clearly describe how to set up the game, play the game, and end the game. List the game objectives.
 - (b) Share your prototype from requirement 6 with a group of players that has not played it or witnessed a previous playtest. Provide them with your instruction sheet(s) and any physical components. Watch them play the game, but do not provide them with instruction. Record their feedback in your game design notebook.
 - (c) Share your game design notebook with your counselor. Discuss the player reactions to your project and what you learned about the game design process. Based on your testing, determine what you like most about your game and suggest one or more changes.

8. Do ONE of the following:

(a) With your parent's permission and your counselor's approval, visit with a professional in the game development industry and ask him or her about his or her job and how it fits into the overall development process. Alternately, meet with a professional in game development education and discuss the skills he or she emphasizes in the classroom.

(b) List three career opportunities in game development. Pick one and find out about the education, training, and experience required for the profession. Discuss this with your counselor. Explain why this profession might interest you.



Game Design Resources

Scouting Literature

Athletics, Chess, Digital Technology, Inventing, Programming, and Scouting Heritage merit badge pamphlets

Visit the Boy Scouts of America's official retail website (with your parent's permission) at <http://www.scoutstuff.org> for a complete listing of all merit badge pamphlets and other helpful Scouting materials and supplies.

Books

- Bell, R.C. *Board and Table Games From Many Civilizations*, revised ed. Dover Publications, 1979.
- Botermans, Jack. *The Book of Games: Strategy, Tactics & History*. Sterling Publishing, 2008.
- Brathwaite, Brenda, and Ian Schreiber. *Challenges for Game Designers*. Charles River Media, 2009.
- Koster, Raph. *A Theory of Fun for Game Design*. Paraglyph Press, 2005.

- Morehead, Albert H., Geoffrey Mott-Smith, and Philip D. Morehead. *Hoyle's Rules of Games*, third revised and updated ed. Signet, 2001.
- Sackson, Sid. *Card Games Around the World*. Dover Publications, 1994.
- Schell, Jesse. *The Art of Game Design: A Book of Lenses*. Morgan Kaufmann, 2008.

Organizations and Websites

Adventure Game Studio

Website: <http://www.adventuregamestudio.co.uk>

Entertainment Software Rating Board

Website: <http://www.esrb.org>

RPG Maker

Website: <http://www.rpgmakerweb.com>

Scratch Project

Massachusetts Institute of Technology
Website: <http://scratch.mit.edu>

Unity 3D

Website: <http://unity3d.com>

YoYo Games/GameMaker: Studio

Website: <http://yoyogames.com/gamemaker/studio>