# Game Design
## Merit Badge Workbook

This workbook can help you but you still need to read the merit badge pamphlet.

The work space provided for each requirement should be used by the Scout to make notes for discussing the item with his counselor, not for providing the full and complete answers. Each Scout must do each requirement.

No one may add or subtract from the official requirements found in ***Boy Scout Requirements*** (Pub.  33216 – SKU 616334).

The requirements were first issued in 2013   •   This workbook was updated in March 2013.

Scout's Name:_____     Unit: _____

Counselor's Name: _____     Counselor's Phone No.: _____

> *Note:  For requirements 5-7, your work should be recorded in a notebook, not on this worksheet. Therefore, all we've provided for those requirements below is a checklist so you can record your progress on the various portions of the requirements.*

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.

| Name | 1. |
|---|---|
| Medium | |
| Player Format | |
| Objectives | |
| Rules | |
| Resources | |
| Theme | |

Discuss the play experience, what you enjoy and what you dislike. _____

_____

_____

_____

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_____

| Name | 2. |
|---|---|
| Medium | |
| Player Format | |
| Objectives | |
| Rules | |
| Resources | |
| Theme | |

Discuss the play experience, what you enjoy and what you dislike. _____

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| Name | 3. |
|------|----|
| Medium | |
| Player Format | |
| Objectives | |
| Rules | |
| Resources | |
| Theme | |

Discuss the play experience, what you enjoy and what you dislike. _____

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| Name | 4. |
|---|---|
| Medium | |
| Player Format | |
| Objectives | |
| Rules | |
| Resources | |
| Theme | |

Discuss the play experience, what you enjoy and what you dislike. _____

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☐ Make a chart to compare and contrast the games. (*Note: You can put the chart on the back of this page or on a separate sheet.*)

b. Describe four types of play value and provide an example of a game built around each concept.

| | Type of Play Value | Example |
|---|---|---|
| 1 | _____ | _____ |
| 2. | _____ | _____ |
| 3. | _____ | _____ |
| 4. | _____ | _____ |

Discuss other reasons people play games. _____

_____

_____

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_____

_____

_____

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).

Game: _____

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.

_____

_____

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_____

_____

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_____

☐   c.  Play the game with one rule or objective change, observing how the players' actions and emotional experiences are affected by the rule change.

Rule Change:_____

Observations: _____

_____

_____

☐        Repeat this process with two other changes.

Rule Change 2: _____

Observations: _____

_____

_____

Rule Change 3: _____

Observations: _____

_____

_____

☐  b.  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.

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.

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

☐  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 whether or not your change had the expected effect.

☐     c.   Repeat 6b at least two more times.

> First repetition:

☐     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 whether or not your change had the expected effect.

> Second repetition:

☐     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 whether or not your change had the expected effect.

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 6a 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

1. _____

2. _____

3. _____

Pick one and find out the education, training, and experience required for this profession.

Career:_____

Education: _____

_____

_____

Training:_____

_____

_____

Experience: _____

_____

_____

Discuss this with your counselor. Explain why this profession might interest you _____

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**Requirement resources can be found here:**

http://www.meritbadge.org/wiki/index.php/Game Design#Requirement resources

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# Note to the Counselor:

The project portion of the Game Design merit badge gives Scouts flexibility to work with a medium of their choosing. The level of effort required to make a game in different mediums can vary significantly. However, the requirements define what each Scout must include in his design notebook so that there is a baseline for all Scouts to meet.

The notebook must demonstrate a thoughtful initial concept, multiple design iterations based on initial testing, and feedback from blind testing. Encourage Scouts to use their notebook to record brainstorming sessions, test parameters, and any game-related ideas throughout the process. Also encourage them to record thoughts behind key design decisions to help them trace and retrace their steps as their designs evolve.

Before a Scout begins the prototyping phase, he must have counselor approval for his design concept. The counselor must make sure that he has put enough effort into the concept phase to have a good foundation for the prototype phase. Watch out for overly ambitious projects that could lead to unnecessary frustration. It is important to understand that the Scout is making a prototype. The challenge of the project is to develop and experiment with gameplay, not to develop extensive programming skills, create beautiful artwork, or spend a lot of time fabricating components.

When prototyping, Scouts should devote most of their energy to assessing and improving the play experience. With each iteration, Scouts should identify game elements that they want to change and how the changes will alter the play experience. After making changes, they then test the game and evaluate whether or not the changes had the desired outcome. It is acceptable for the final prototype to be very different from the initial concept, provided that the notebook shows the progression.

Because the project is so flexible, it is likely that you will have Scouts working in mediums with which you are unfamiliar. The game design community has a vast array of publicly available resources, and the merit badge information online at www.scouting.org maintains updated links to relevant material. If you have a specific concern about programming an electronic game prototype, there are a number of free or inexpensive game design software packages available online. Some are very easy to use with little or no computer knowledge, and most have robust information resources to support them. See the resources section at the end of (the) pamphlet.

The merit badge includes many opportunities for teamwork and group play. Group participation is mandatory to complete requirement 7, but all of the other nonproject requirements also work well in collaboration. Note, though, that each Scout must deliver his own game prototype to complete the project. This ensures that every Scout has the chance to develop and use the critical thinking skills that are part of testing and design iteration. If they want to collaborate on their projects after completing the requirements for the badge they are encouraged to do so, but that is beyond the scope of this badge.

The Game Design merit badge relies heavily on specific terminology. Because game design is broad and game analysis is relatively young, there are few established definitions in the industry. Please refer to the glossary at the end of (the) pamphlet for definitions applicable to the pamphlet and requirements. For additional questions, refer to the merit badge website and the resources listed at the end of the pamphlet.

# Important excerpts from the *'Guide To Advancement'*, No. 33088:

Effective January 1, 2012, the *'Guide to Advancement'* (which replaced the publication *'Advancement Committee Policies and Procedures'*) is now the *official* Boy Scouts of America source on advancement policies and procedures.

- **[ Inside front cover, and 5.0.1.4 ] — Unauthorized Changes to Advancement Program**

  ***No council, committee, district, unit, or individual has the authority to add to, or subtract from, advancement requirements.*** (There are limited exceptions relating only to youth members with disabilities. For details see section 10, "Advancement for Members With Special Needs".)

- **[ Inside front cover, and 7.0.1.1 ] — The *'Guide to Safe Scouting'* Applies**

  Policies and procedures outlined in the *'Guide to Safe Scouting',* No. 34416, apply to all BSA activities, including those related to advancement and Eagle Scout service projects. [Note: Always reference the online version, which is updated quarterly.]

- **[ 7.0.3.1 ] — The Buddy System and Certifying Completion**

  Youth members must not meet one-on-one with adults. Sessions with counselors must take place where others can view the interaction, or the Scout must have a buddy: a friend, parent, guardian, brother, sister, or other relative —or better yet, another Scout working on the same badge— along with him attending the session. When the Scout meets with the counselor, he should bring any required projects. If these cannot be transported, he should present evidence, such as photographs or adult certification. His unit leader, for example, might state that a satisfactory bridge or tower has been built for the Pioneering merit badge, or that meals were prepared for Cooking. If there are questions that requirements were met, a counselor may confirm with adults involved. Once satisfied, the counselor signs the blue card using the date upon which the Scout completed the requirements, or in the case of partials, initials the individual requirements passed.

- **[ 7.0.3.2 ] — Group Instruction**

  It is acceptable—and sometimes desirable—for merit badges to be taught in group settings. This often occurs at camp and merit badge midways or similar events. Interactive group discussions can support learning. The method can also be attractive to "guest experts" assisting registered and approved counselors. Slide shows, skits, demonstrations, panels, and various other techniques can also be employed, but as any teacher can attest, not everyone will learn all the material.

  There must be attention to each individual's projects and his fulfillment of *all* requirements. We must know that every Scout — actually and *personally*— completed them. If, for example, a requirement uses words like "show," "demonstrate," or "discuss," then every Scout must do that. It is unacceptable to award badges on the basis of sitting in classrooms *watching* demonstrations, or remaining silent during discussions. Because of the importance of individual attention in the merit badge plan, group instruction should be limited to those scenarios where the benefits are compelling.

- **[ 7.0.3.3 ] — Partial Completions**

  Scouts need not pass all requirements with one counselor. The Application for Merit Badge has a place to record what has been finished — a "partial." In the center section on the reverse of the blue card, the counselor initials for each requirement passed. In the case of a partial completion, he or she does not retain the counselor's portion of the card. A subsequent counselor may choose not to accept partial work, but this should be rare. A Scout, if he believes he is being treated unfairly, may work with his Scoutmaster to find another counselor. An example for the use of a signed partial would be to take it to camp as proof of prerequisites. Partials have no expiration except the 18th birthday.--