

## Create a Game Project – SAMPLE

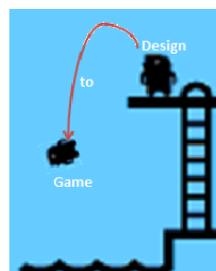
Do digital games improve student learning and understanding? Research and students say “yes” – however, not just any game, but games that emphasize the learning goals and objectives in a fun, challenging way. To find games to engage students why not have students design the games?

This will be a team project. Your task is to design a game for the computer or iPad to help teach or review a topic from geometry. You do not have to implement the game, just design it and write the problems and answers that will appear in the game.

### Requirements:

- State the topic of the game in about two sentences. Example: *Practice identifying congruent triangles.*
- Give a brief description on how the game will be played. Example: *Pairs of triangles will move slowly across the screen. At the bottom are the five labels on how to prove the triangles congruent (SSS, SAS, HL, ASA, AAS). Players must drag the proper label over the triangles before they move off the screen.*
- Your game must include two levels. The second level should be similar to the first but add some new element and be more challenging.
- For each level, describe how points are awarded and how a level is won or lost.
- Include at least one way to earn a bonus in the game. Example: *Every 10 – 30 seconds a pair of triangles will move faster than the others. This pair will appear as a different color. If players get this answer correct they will earn 25 extra points.*
- Design the opening scene. This can be done using PPT, PicCollage, or something else. The opening scene should include the name of the game and what the user needs to know in order to play the game.
- Visually show the layout of the two levels of your game and how the level is played.
- Build the question bank. Each level should include a minimum of 10 problems. Worked out solutions are also required.
- The emphasis of your game should be problem-solving.
- Be creative and have fun with this project!

See back for grading rubric.



**Rubric:**

Phase 1: Drafts turned in for pre-approval and/or suggestions. All must be on time for full credit. Drafts for visuals may be hand-drawn or rough sketches.

- Team members identified \_\_\_\_\_(1)
- Topic of the game \_\_\_\_\_(2)
- Description of the game \_\_\_\_\_(3)
- Visual for opening scene \_\_\_\_\_(1)
- Visual for Level 1 \_\_\_\_\_(2)
- Visual for Level 2 \_\_\_\_\_(2)

Phase 2: Final project

- Game includes a title \_\_\_\_\_(1)
- Final game description \_\_\_\_\_(3)
- Two levels included \_\_\_\_\_(2)
- How points are earned and game won are included \_\_\_\_\_(2)
- Opening scene visual \_\_\_\_\_(2)
- Level 1 visual \_\_\_\_\_(5)
- Level 2 visual \_\_\_\_\_(5)
- Question bank \_\_\_\_\_(20)
- Neatness, creativity, effort, math challenge \_\_\_\_\_(5)

Late deduction of 10% per day late.

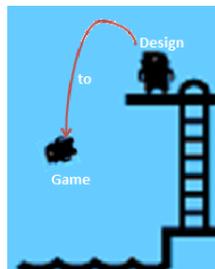
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This will be a team project. Your task is to design a game for the computer or iPad to help teach or review a topic from \_\_\_\_\_. You do not have to implement the game, just design it and write the problems and answers that will appear in the game.

### Requirements:

- State the topic of the game in about two sentences. Example: \_\_\_\_\_.
- Give a brief description on how the game will be played. Example: \_\_\_\_\_.
- Your game must include two levels. The second level should be similar to the first but add some new element and be more challenging.
- For each level, describe how points are awarded and how a level is won or lost.
- Include at least one way to earn a bonus in the game. Example: \_\_\_\_\_.
- Design the opening scene. The opening scene should include the name of the game and what the user needs to know in order to play the game.
- Visually show the layout of the two levels of your game and how the level is played.
- Build the question bank. Each level should include : \_\_\_\_\_.
- Be creative and have fun with this project!



**Rubric:**

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Phase 2: Final project

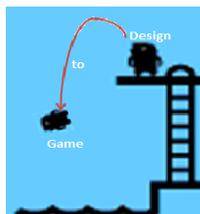
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- Neatness, creativity, effort, math challenge \_\_\_\_\_( )

Rubric Made Using:

RubiStar ( <http://rubistar.4teachers.org> )

### Making A Game : Designing the Game

CATEGORY	Exemplary	Proficient	Basic
Draft	Draft turned in on time and includes team members, topic and description of game, and draft of visual for	Draft includes all requirements detailed under "Exemplary" but turned in late.	Some required elements missing.
Attractiveness	Contrasting colors and at least 3 original graphics were used to give the game visual appeal. Opening scene with title,	Contrasting colors and at least 1 original graphic were used to give the game visual appeal. All levels are included.	Contrasting colors and "borrowed" graphics were used to give the game visual appeal. One or more levels missing.
Rules	Rules were written clearly enough that all could easily participate. The rules include the game objective, how	Rules were written, but one part of the game needed slightly more explanation.	Rules were written, but people had some difficulty figuring out the game.
Accuracy of Content	All questions made for the game are correct. Questions and answers are included.	All but one or two of the questions made for the game are correct. Or, some answers are not included.	Several questions made for the game are not accurate or missing.
Creativity	The group put a lot of thought into making the game interesting and fun to play as shown by creative questions and	The group put some thought into making the game interesting and fun to play.	Little thought was put into making the game interesting or fun.
Cooperative work	The group worked well together with all members contributing significant amounts of quality work.	The group generally worked well together with all members contributing some quality work.	The group often did not work well together and the game appeared to be the work of only 1-2 students in the group.
Presentation	Final project turned in electronically as one file and includes all required elements.	Final project turned in electronically as one file but is missing some required elements.	Final project not turned in according to requirements.



# Games-Based Learning

## A few links

**Developing first video game – Article and links:**

<http://gamedlearning.com/2013/01/22/developing-your-first-video-game/>

**eschoolnews.com – Article:**

<http://www.eschoolnews.com/2014/07/07/gaming-engaging-students-365/>

**Game Based Learning – Pinterest:**

<http://www.pinterest.com/edutopia/game-based-learning/>

**Gamesandlearning.org – Game development resources:**

<http://www.gamesandlearning.org/>

**Gamification in education:**

<http://www.gamification.co/channel/education/>

**Jointtheteam.com – Video games in the classroom:**

[https://www.jointtheteam.com/educators\\_video\\_games.html](https://www.jointtheteam.com/educators_video_games.html)

**Making first video game – Article:**

<http://kotaku.com/5979539/a-beginners-guide-to-making-your-first-video-game>

