



Exploring the World of Science

2018-2019

Game On Rubric Decoded

This is a detailed explanation of how points could be awarded using the Game On rubric. It is intended to inform the students, coaches and supervisors what is expected within each area of the rubric.

Game On Rubric.

- I. Game follows/related to theme and Game type
 - A. Yes – game is ranked in front of all games that do not follow the theme and/or game type
 - B. No – game is ranked behind all games that follow the theme and/or game type
- II. Game Mechanics (50 points)
 - A. Introduction (4 points)
 1. Game title is present (2 points)
 - a. Game title not present = 0 pts
 - b. Game title present = 1 pt
 - c. Game title conveys idea of the game = 1 pt
 2. Buttons used to access other screens options (2 points)
 - a. No alternate screens/options available = 0 pts
 - b. Buttons to access other screens not available = 0 pts
 - c. Buttons to access other screens present = 1 pt
 - d. Buttons are successful in accessing other screens = 1 pt
 - B. Help/Instructions (6 points)
 1. Game Objective Stated (2 points)
 - a. Instructions not available = 0 points
 - b. Instructions available = 1 point.
 - c. Instructions provide clarity to the user = 1 point.
 2. Movement Controls Explained (2 points)
 - a. Instructions not available = 0 points
 - b. Instructions available = 1 point.
 - c. Instructions provide clarity to the user = 1 point.
 3. Scoring Explained (2 points)
 - a. Instruction not available = 0 points.
 - b. Instruction available = 1 point.
 - c. Instruction provides clarity to the user = 1 point.
 - C. User Controlled (UC) Sprite (6 Points)
 1. Movement Complexity (4 points)
 - a. Sprite does not move = 0 points
 - b. User Controlled Sprite is present = 1 point
 - c. Sprite moves = 1 point
 - d. Sprite movement is smooth given gameplay = 1 point
 - e. Sprite has advanced movement -Diagonal, acceleration ,etc. 1 point
 2. Sprite Orientation (2 points)
 - a. No Sprite = 0 points.
 - b. Character faces appropriate direction = 1 point.
 - c. Character returns to the original position or holds position given gameplay = 1 point.

- D. Autonomous Sprites (6 Points)
 - 1. Movement Complexity (4 points)
 - a. Sprites do not move given gameplay = 0 pts.
(If sprites are supposed to move then they should)
 - b. Autonomous sprites present = 1 pt
 - c. Sprites move when appropriate = 1 pt
 - d. Sprite movement is smooth given gameplay = 1 pt.
 - e. Sprite has advanced movement -Diagonal, acceleration, etc. 1 pt
 - 2. Sprite Orientation (2 points)
 - a. Sprite faces appropriate direction = 1 point.
 - b. Sprite returns to original or holds position given gameplay = 1 pt
- E. Collision Management (6 Points)
 - 1. Sprite Interactions (4 points)
 - a. Sprites unable to interact with each other = 0 points
 - b. Interaction appropriate given rules and gameplay = 2 points.
 - c. Interaction appropriate given game type = 2 points
 - 2. Environment Interactions (2 points)
 - a. Sprites unable to interact with environment = 0 points.
 - b. Interaction is appropriate given rules and gameplay = 1 point.
 - c. Interaction is appropriate given game type = 1 point
- F. Score Keeping (6 Points)
 - 1. Functions Properly in Game (2 points)
 - a. Scoring not available = 0 points.
 - b. Scoring adds up instantaneously = 1 point.
 - c. Scoring adds/deducts correctly = 1 point.
 - 2. Scoring Appears on Screen (2 points)
 - a. Scoring does not appear on screen = 0 points.
 - b. Scoring appears on screen = 2 points.
- G. Debriefing (8 Points)
 - 1. Clear Outcome of Game (2 points)
 - a. Game does not have an end = 0 points
 - b. Game provides you with a stated final score = 1 points.
 - c. Game lets you know if you have won or lost = 1 points.
 - 2. Gameplay Stops (2 points)
 - a. Game does not have an end = 0 points
 - b. Image/Screen pops up indicating the end of the game = 1 point
 - c. Sprites stop moving/timing stops = 1 point
 - 3. Items Remaining on Screen are Appropriate (2 points)
 - a. Items remaining are not appropriate given gameplay = 0 points.
 - b. Items remaining are appropriate given gameplay = 2 points.
(Given Gameplay: Are sprites/items that have disappeared reappearing?
Are the sprites supposed to be there at the end of the game?)
 - 4. End of Game options available. (2 points)
 - a. No option to replay/start over = 0 points.
 - b. Option to replay/start over present = 1 point.
 - c. Option to replay/start over works = 1 point.

H. Documentation (4 Points)

1. Coding Comments Included (2 points)
 - a. No comments included = 0 points.
 - b. Comments included = 2 point.
2. Main Sections of Coding Explained (2 points)
 - a. No comments included = 0 points.
 - b. Main sections of coding not explained = 0 points.
 - c. Several sections commented on = 1 point.
 - d. Code function is explained clearly in comments = 1 point.

I. Code Organization (8 Points)

1. Elements are Named/Titled (2 points)
 - a. Elements are not named/titled = 0 points.
 - b. Elements are named/titled = 2 points.
2. Elements are Logically Grouped and Organized (2 points)
 - a. Elements are not logically grouped and organized = 0 points.
 - b. Elements are logically grouped = 1 point.
 - c. Elements are logically organized = 1 point.
3. Coding is efficient (2 Points)
 - a. No overlapping of code = 1 points
 - b. All code must be individually visible = 1 point

III. Game Play (50 points)

A. Science of Theme (12 points)

1. Level of scientific thought applied to theme (4 points)
 - a. Multiple (up to 4) scientific concepts are presented (1 point each)
2. Appropriate Scientific principles applied to theme (4 points)
 - a. Each scientific concept is accurately presented (1 point each)
3. Scientific explanations included in game (4 points)
 - a. Each scientific concept is specifically identified (0.5 points each)
 - b. Scientific concepts are appropriate for the game (0.5 points each)

B. Graphics (12 Points).

1. Quality/Complexity of User Controlled Sprite (4 points)
 - a. No sprite = 0 points.
 - b. Stock sprite used = 1 point.
 - c. At least one change to sprite = 1 point.
 - d. Custom sprite created = 2 point.
 - e. Quality of custom sprite = up to 2 points.
2. Quality/Complexity of Autonomous Sprites. (4 points)
 - a. No autonomous sprites = 0 points.
 - b. At least one simple autonomous sprite available = 1 point.
 - c. At least one change to sprite = 1 point.
 - d. Custom sprite(s) created = 2 point.
 - e. Quality of custom sprite = up to 2 points
3. Quality/Complexity of Background. (4 points)
 - a. No background = 0 points.
 - b. Background available = 1 point.
 - c. Background appropriate for theme and gameplay = 1 point.
 - d. Background includes multiple elements = 2 points.

- C. Sound (6 points).
 - 1. Sounds are Appropriate (2 points)
 - a. No sounds used = 0 points.
 - b. Sounds used are appropriate for theme = 2 points.
 - 2. Quality/Complexity of Sounds (4 points)
 - a. No sound used = 0 points.
 - b. Variation in sounds = 1 point.
 - c. Background music included = 1 point.
 - d. Sounds are appropriate given the theme = 1 point.
 - e. Creativity of sounds = 1 point.
- D. Play Balance (12 points).
 - 1. Level of Difficulty. (4 points)
 - a. Difficulty is appropriate given gameplay = 1 point.
 - b. Objective is achievable = 1 point.
 - c. Difficulty increases/decreases when appropriate (i.e. levels) = 1 point.
 - d. Multiple levels included = 1 point.
 - 2. Speeds are Appropriate for the Game (4 points)
 - a. Speeds are inappropriate for gameplay = 0 points.
 - b. Speed is appropriate for gameplay = 2 points.
 - I. UC sprite speed = 1 point
 - II. Autonomous sprites speed = 1 point
 - c. Speed changes during game play = 1 point
 - I. UC sprite speed = 1 point
 - II. Autonomous sprites speed = 1 point
 - 3. Movements are Appropriate for the Game (4 points)
 - a. Movements are inappropriate for gameplay = 0 points.
 - b. Movements are appropriate for gameplay = 2 points.
 - I. UC sprite movement = 1 point
 - II. Autonomous sprites movement = 1 point
 - c. Movement changes during game play = 1 point
 - I. UC sprite movement = 1 point
 - II. Autonomous sprites movement = 1 point
- E. Overall Game (8 Points)
 - 1. Overall Impression of Game (4 points)
 - a. Judge's Interpretation (from a user standpoint) = up to 4 points.
 - 2. Originality of the Game (4 points)
 - a. Judge's Interpretation (from a user standpoint) = up to 4 points.