

Lesson 1 : Characters & Scenes Design

Teachers: Seven & Claire	Grades: 3-5	Time Required: 120 min
Subject: Characters & Scenes Design	Teaching objectives: Students will 1) Know how to design scenes and characters for a game 2) Know how to create simple games	
Materials Needed		
Students: Computers with the latest version of mBlock 5 installed	Teacher: A computer with the latest version of mBlock 5 installed, the lesson plan and the slide	
The Teaching Sequence		
<p>Introduction: Giving an overview of the lesson—Characters & Scenes Design</p> <p>(Teaching objective) : Students will have an understanding of the principles of designing characters and scenes and know how to use mBlock 5 to create characters and scenes.</p> <p>Navigate students: “When we are new to a game, the first thing we notice about the game is its art design, in other words, how it looks like. The art design is about many things, including main characters, costumes, color contrast, overall style and backgrounds. In most cases, the moment characters and scenes come into sight, we know roughly what the game style is and how we should play the game. Actually, how players play a game is mostly decided by its characters, scenes and back stories. And these elements work together to determine which group of potential players will find the game attractive. In this sense, we have no reason to ignore the importance of characters and scenes designs when we’re talking about a game. When a game has characters and scenes with more intricate details, the game is more visually enjoyable and naturally will keep players engaged.</p> <p>Then how do we design good characters and scenes?</p> <p>I. Defining Parameters</p> <ol style="list-style-type: none"> Defining the tone and scenes based on the game theme (warm tone/cold tone; city/country) <p>In different backgrounds, characters vary a lot. To be specific, characters could differ from each other regarding their identity and status and the functions of characters are defined by the background where they are placed. From the historical background and the nationality settings of the level design, players can know the features of the whole game and characters even before they start playing it.</p> Defining the character style and type (modern, cartoon, ancient, futuristic, etc.) based on the game theme and the back story <p>Cute style: Cartoon characters, bright colors, adorable style. All these elements make the game light-hearted and approachable.</p> <p>Realistic style: Design the characters based on real persons. The characters and the real persons are similar in sizes, proportions and facial features.</p> <p>Surreal style: The characters are surreal in sizes, proportions, and shapes. All the characters in this type of games look like unusual creatures.</p> <p>Geometric style: Characters are designed by piecing together simple geometric figures.</p> Defining the shapes, motions, and accessories of characters based on the relations between characters. <p>II. Finding Inspirations</p> <ol style="list-style-type: none"> Design ideas come from life. That is to say, we can get inspirations from the real world’s characters and scenes when designing game characters and scenes. Find inspirations in existing game characters and scenes. Find inspirations in other designs from different cultures. <p>III. Explaining Elements</p> <ol style="list-style-type: none"> Straight lines suggest peace. Ovals suggest kindness. Sharp triangles suggest speediness, sharpness or evil. A beefy man suggest power. A slender character suggest softness. 		

(You can make the list longer.)

Tell students to have a close look at the following characters and answer the questions below:

1. Ask students: “What features ddrafo these characters have in common?”
2. Ask students: “What feelings do you have for these characters respectively?”
3. Ask students: “Could you sort out these characters? Who is sweet and who is evil?”



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Give your feedback on the students’ answers and direct students to summarize the fundamentals of game character design.

Guided Practice:

1) Brainstorming: (Teaching objective) Students will understand what kind of characters are suitable for a racing game.

Navigate students to think about one question – What kind of characters and scenes should we design for a racing game?

The teacher: “Kids, we’ve learned about the basic rules for designing game characters and scenes. Now, we are going to create a racing game. So what kind of characters and scenes should we design? As we all know, car racing is a top-class sport. In the real world, we have the Formula 1 racing that attracts many fans ([show videos or pictures here](#)). But few of fans get the chance to experience the sport because it is so dangerous and risky. However, thanks to the rapid development of computer technology, we’ve got plenty of realistic racing games that allow us to have some fun, for instance, *FI Racing Legends*, *World Circuit*, *Need for Speed*.”

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Have students think about the question and discuss with others – (the teacher saying to students) “There are plenty of racing games available on the Internet. What are their features? If you are to design a racing game of your own, what kind of characters and scenes will you put in your game?”

Typical features of other racing games:

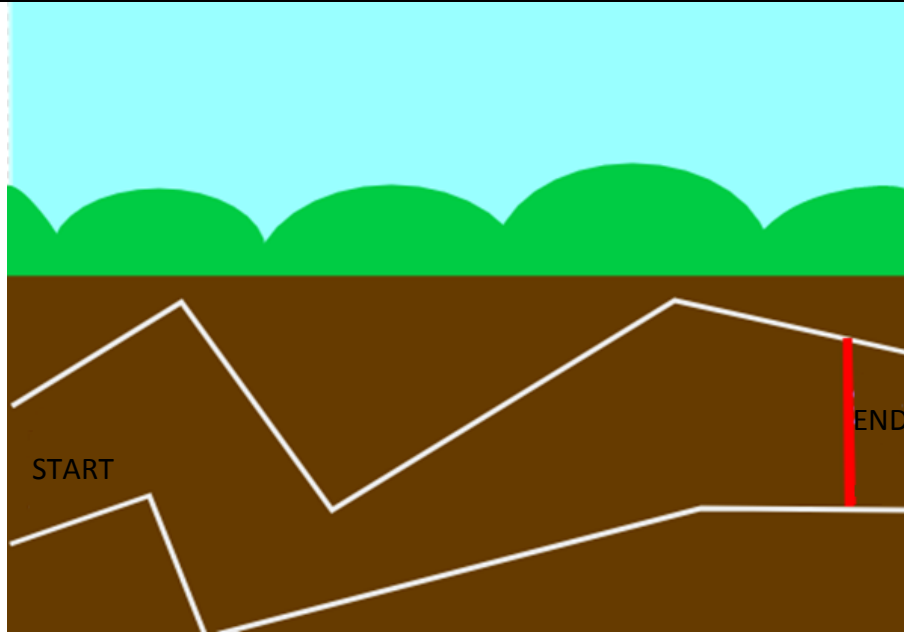
- Simulating real racing cars by making adjustments to their looks
- Cartoon versions of racing cars (bright colors, sweet & cute).
- Geometric pixel characters. These types of characters are relatively easy to design.

Leave students some time to discuss in groups and have them think about how to design their game characters and scenes.

The teacher summarizes: “I’ve been thinking about what kind of characters and scenes I should create, too. The theme of today is *Racing Games*, so the main character should be a racing car and the scene should be a race track.”

2) Prototyping: (Teaching objective) Have students learn how to use mBlock 5 to design the control schemes for their games.

Physical prototype: The teacher will draw a draft to make his or her conceptual design clear to the class. (Check out the slide for details)



The teacher gives students instructions: “Since we are creating an electronic racing game, we have to turn the physical prototype into a digital prototype using mBlock 5.”

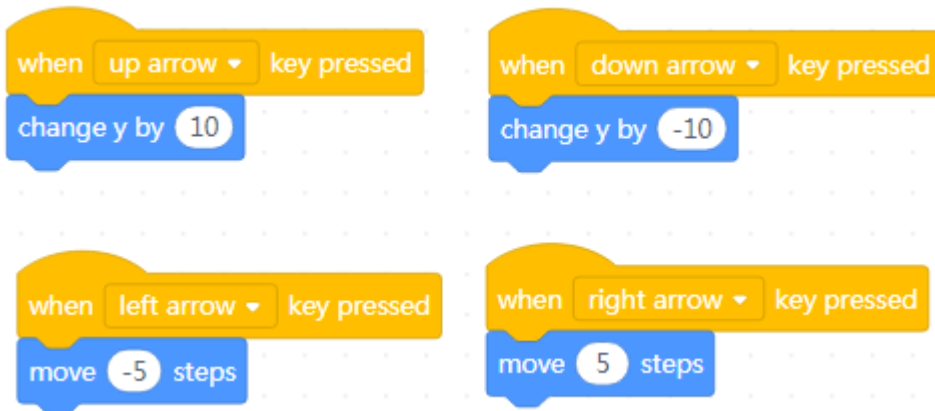
Digital prototype: “After we nail down the character and the scene, next we are going to make it real. Step by step.”

① **How to delete the sprite *panda* and add a sprite *racing car*? (check out the slide for details)**

Ways: **A.** Select the sprite in Sprite Library **B.** Import a picture in My Sprite **C.** Draw a sprite

② **Get the racing car moving:**

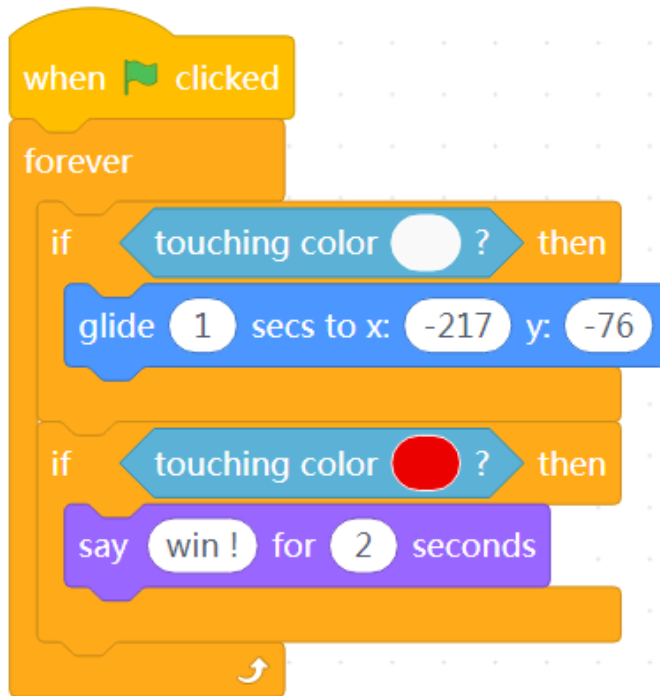
Use the arrow keys to control the racing car;



③ **How to add the scene “race track”? (check out the slide for details)**

Enrichment tasks (optional) :

- **The car returns to the starting point when it runs off the track.**
- **When the car touches the red landmark at the destination, the game shows “Win”.**



3) Playtesting: (Objective) Students will have a better understanding of Playtesting - a pivotal step in game design.

The teacher guides students: “Anyone wants to try this game and share with us what you think of it? Is there anything to improve about the game? Or is there anything that you feel not right?”

4) Reiterating& Implementing: (Objective) Students will know how to reiterate the prototype and implement it.

Reiterate the prototype based on the feedback from students (players).

Independent Practice:

It's Your Turn!

Assignment: Racing Car

1) Selecting a solution: “We’ve just discussed how to design characters and scenes for a racing game. And you came up with so many ideas. But now you have to pick out a best one among your own ideas. After that, follow the conceptual idea to design your game, making the racing car running.”

2) Prototyping: (The teacher saying to students) “Draw a draft or create a prototype based on your idea. Or you can use mBlock 5 to write programs straightaway.”

3) Playtesting: “When your game is ready, put your hands up. You can invite some target players to experience the game. Of course, you can invite me to try it.”

4) Reiterating & Implementing: (The teacher says to students) “Fix bugs based on the players’ feedback. Perfect your game.”

Share:

Presentation: Allow each student to share his or her game with the class. [At the end of this session, let students vote for the best design of the day.](#)

Differentiation & Modification

For advanced students	For struggling students	Strategies to maximize engagement
Increase the difficulties of the tasks Example: Add some backward-moving trees in the race track scene. (the car is running forward while the trees are moving backward)	Reduce the difficulties of the tasks Example: Reduce or adjust the difficulties of a certain session to fit the needs of the class, like telling students to pick the sprite in the Sprite Library.	Voting for the best design

Comments:

Teachers’ Reflections: