

Racing Car Game

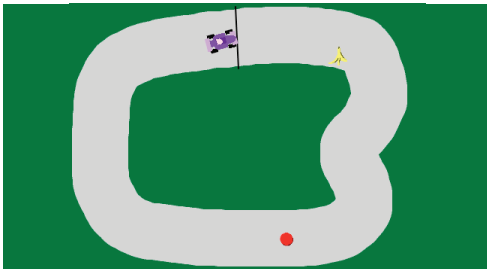
2

- Create a racing car game
- Design your own graphics using Scratch
- Add power-ups and a two-player option



45 mins

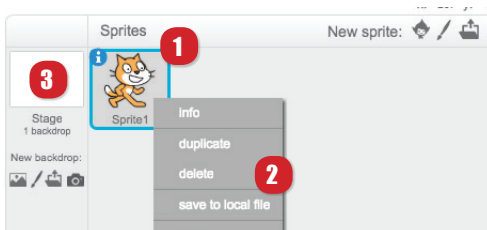
1. Objective



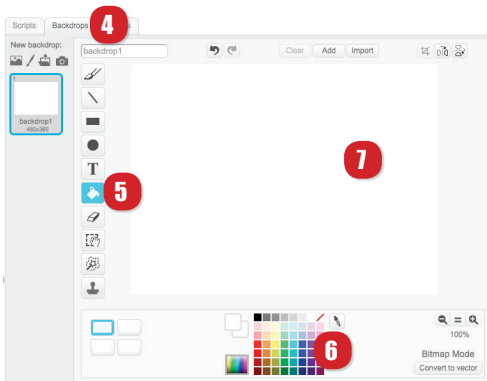
You will make a racing car game using Scratch. Design and create your own graphics. As an extension, add power-ups; a lap-counter; and a two-player option to compete against a friend.

Start by Googling "Scratch", clicking on the top result, then clicking on the "Create" button at the top.

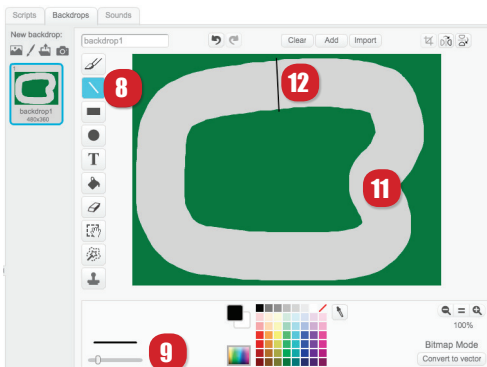
2. Create the race track



1. Delete the cat sprite -- you'll be creating your own graphics for this project.
2. Using the right-mouse button, click on the sprite and select *delete*.
3. Click on the *Stage* icon next to where your sprite was

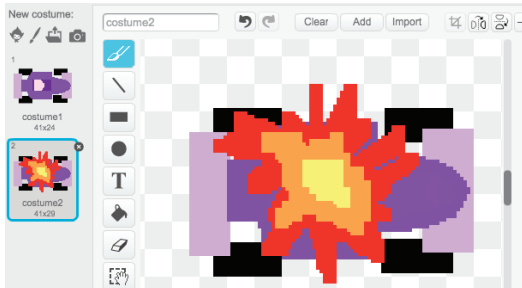
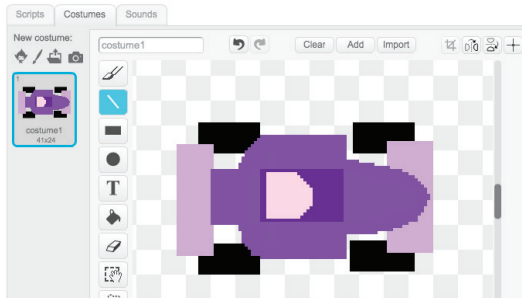
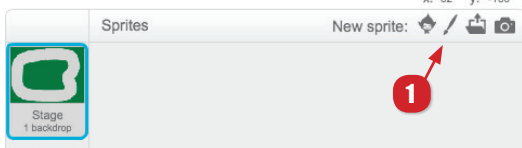


4. Click the *Backdrops* tab, which is in the middle of the window.
5. You are going to add the grassy background. Click the paint bucket icon
6. Click the dark green colour. This will be your grass colour
7. Click the white box in the middle. It will fill with the green colour



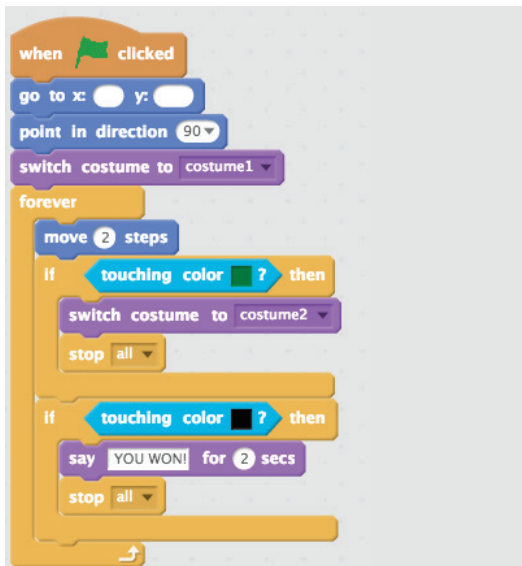
8. Now you have your green grass, it's time to add the track. Click the brush icon
9. Move the slider to the right to create a thick brush
10. Click a grey colour
11. Draw your track
12. Add a finish line. Click the *line tool*, move the slider back to a narrow width; click the *black* colour; draw a straight black line over the track.
13. You have now completed your track. It's time to create your racing car!

3. Create the racing car



1. You are going to draw your racing car. Click the *Paint new sprite* button
2. Ensure the *Costumes* tab is selected in the middle of the window
3. Zoom right in to the *Costume* area, ensuring the cross is in the middle of your window
4. Use the tools and colours to draw a simple racing car
5. As you draw your car, you will see it appear in the centre of the stage. This will give you a good idea of whether it is a suitable size. Remember, it must easily fit into the race track.
6. Once your car is drawn, we need another costume for when it crashes!
7. Right-click on *costume 1*, and select *duplicate*. This will create another costume for the same sprite.
8. On our new costume, labelled *costume 2*, draw an explosion!

4. Add the scripts



1. First, you need to be able to steer your car left and right
2. Add the code blocks as shown
3. To finish, you need to add code to set the game up; to move on its own; define what happens if it goes on the grass; and how to win
4. First, drag the car sprite to just after the finish line. Make a note of the X and Y position (shown just below the stage)
5. Use those coordinates in the *go to x: y:* block
6. To change the colour in the *touching colour blocks*, click the colour box, then click on the colour you want to choose (e.g. the green grass)
7. Can you work out what the other blocks do?
8. Play the game and have fun!

5. Challenge activity

Well done on creating your racing game. Here are some ideas you could try to make the game even better:

- Add a second car for a two-player game and race a friend
- A lap counter, with three laps to win the race instead of just one
- Mario Kart style power-ups, for example:
 - a speed increase if you go over a coloured square on the track;
 - a banana peel which causes your car to skid