

## Scratch Race!

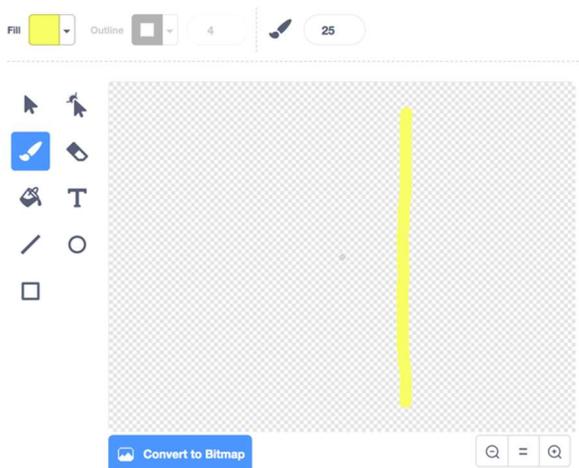
You may work in pairs as long as both of you are coding it on your computer.

First go to <http://scratch.mit.edu> and create an account in Scratch (you will need to confirm the account via your email).

There are many Scratch tutorials to help you learn.

Exercise: Make a game where two characters race each other.

1. Choose a backdrop that is appropriate for your race. (Ex. Track, Beach, etc.)
2. Click on your cat Sprite and drag a move block into the Scripts area (Move 5 Steps)
3. Click the events category and drag a When space is pressed block and snap it on top.
4. To draw a finish line, click the paintbrush icon  to draw a new sprite where it says New sprite and see below:



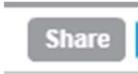
5. Drag your finish line to where you want it on the stage
6. Click the Code tab for the cat. Click the Control category and drag an if block, then using the Sensing category, drag a touching block (touching mouse-pointer) into the if statement. Change mouse-pointer to if touching Sprite2 (the name of the new Sprite which is the third option on the dropdown). If the new Sprite is touched, say something appropriate for 2 seconds like "I made it!"
7. Drag your Cat to the beginning of the game where it should start.
8. In events, add a When green flag is clicked.
9. Add a go to x y where x is -200 and y is -45 under it (in Motion) (or the location where the x and y coordinates where the cat is currently). When you click the green flag it should go to that starting point. Try it!
10. Add a second Sprite to your race. Choose any sprite you want.

11. Code this new Sprite like you did for the Cat, choosing a different starting point like -200 and 60 (it may be different depending on the sprite you chose – you can also resize the sprites if necessary) and use a different key to press like when right arrow is pressed move 5 steps (instead of the space bar).
12. Make sure you have logic once again for touching Sprite2 and say a different message if that happens.
13. Test the game (using the space and right arrow keys).
14. Personalize the game. Some ideas to try:
  - a. Sound – Click on the sounds tab and then click sounds tab and try adding clapping sound from the library. Or cheering sound. This way if someone makes it there can be cheering!  
 Add it to your code like this  Note: If you want to do this for the other Sprite you will need to add the sound again.
  - b. Animate the Sprite – Make the cat sprite look like it's running by switching between costumes. Just add a next costume block (in Looks) after it moves 5 steps (this way every time it moves it will change the costume back and forth and will look like it is running)  

  - c. Race against the computer – Make one of the sprites move automatically! Modify the code so that when the flag is clicked it glides 7 secs to x=165 and y=60 (this may be different depending on your screen)– see if you can win by controlling the other Sprite.
  - d. Paint and decorate- Draw your own new backdrop or try creating your own costumes for your sprite. You can duplirate a costume and modify it.
  - e. Explore and Experiment – Customize any way you want. Ex. a swimming race or any other race.

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2. Sign into Scratch to save your project (You'll need to join Scratch if you haven't)
3. Go to File menu > Save now



4. Click Share to get a link you can send others and people can see and add to.



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