Cat & Ball

Program description
This is a game where a cat chases a ball. The ball starts moving slowly in random directions. When the ball is caught, it reappears in one of two random spots and moves slightly faster. There is a score counter to keep track of each point earned, and there is a timer to control the game's length. When the timer reaches zero, the cat and ball are hidden and a game over message is displayed.
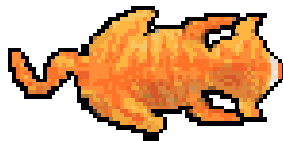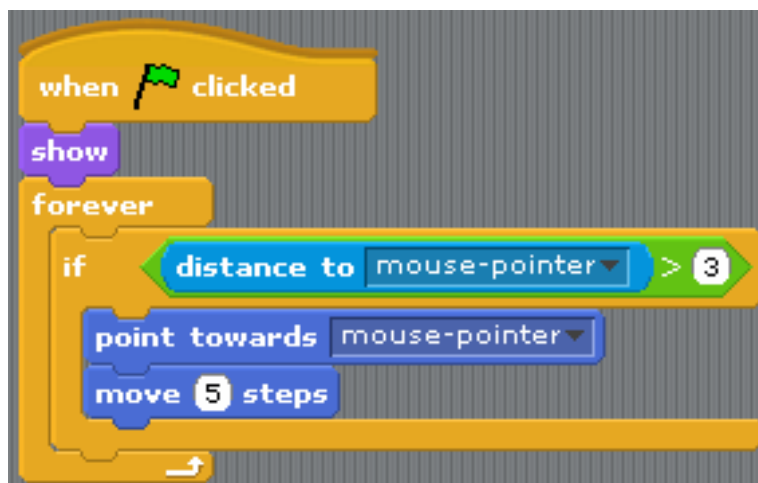
Instructions
Create a new project.
Delete the default sprite (the cat).

Add a new sprite and select the top down view of a cat.
Name it: **Cat**

Add the following blocks to the <u>CAT</u>

The cat moves toward the mouse pointer. If the cat reaches the mouse pointer, it stops moving.

Import a meow sound for the cat.

Click the Variables button

Create a variable named: clock
Create a variable named: movement
Create a variable named: score

Uncheck clock and movement, and leave the checkmark in score

The variables will be used to keep track of the clock, the movement speed, and the score.

Draw or add a ball (under Things)
Name it: **Ball**

Add the following blocks to the BALL

```
when [flag] clicked
set size to (20) %
show
set [score] to (0)
set [movement] to (1)
forever
    if < touching [Cat]? >
        play sound [Cat]
        change [score] by (1)
        change [movement] by (1)
        hide
        wait (1) secs
        if < pick random (1) to (2) = (1) >
            go to x: (-235) y: (90)
        else
            go to x: (235) y: (-90)
        show

    if < pick random (1) to (2) = (1) >
        turn ↻ (pick random (15) to (45)) degrees
    else
        turn ↺ (pick random (15) to (45)) degrees
    if on edge, bounce
    move (movement) steps
```

Set the ball size to an appropriate size.

Set the score to 0 and the starting movement speed to 1.

If the cat gets the ball, play the meow sound, and then increase the score and speed by one, then hide the ball for one second.

Randomly choose 1 or 2. If it is 1, have the ball appear on the left. If it is 2, have the ball appear on the right.

This section controls the ball movement. It randomly turns left or right a number of degrees between 15 and 45. It then moves forward. The rate of movement increased as each ball is captured.
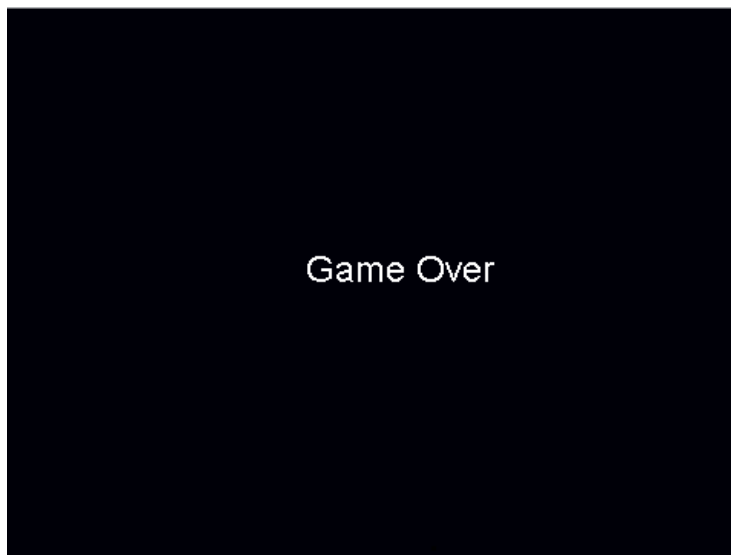
Select the stage. Paint a background from a top-down perspective. Create whatever you want. I created a living room scene. Some other ideas could be a backyard scene, a baseball diamond, a football field, a tennis court, etc.

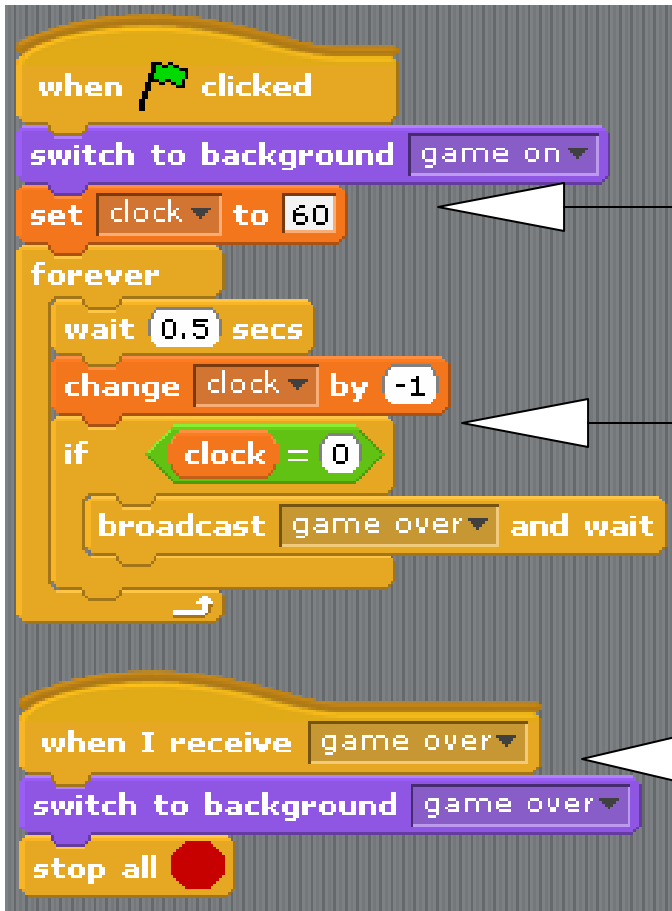Name this background: **Game On**

Create a second background of a black screen with the words Game Over near the center.

Name this background: **Game Over**

Add the following blocks to the <u>BACKGROUND</u>

Show the correct background, set the clock to 60.

Decrease the clock by 1. Wait * secs controls the clock's rate of speed. When the clock reaches 0, broadcast the game over message.

When the game over message is received, show the "Game Over" background.

Add the following to the <u>CAT</u> and <u>BALL</u> sprites
(the same command goes to both sprites)

When the game over message is received, the cat & ball will both be hidden.

Congratulations, you are finished!
Now see what changes you can make to improve the game.