

## T-Rex Runner



### What is our GOAL for this MODULE?

We created a jumping and running T-Rex Dinosaur for our T-Rex Game.

### What did we ACHIEVE in the class TODAY?

- Made jumping and running T-Rex.
- Learned to scale the images in the game.
- Learned to indent the code correctly to make it more readable.

### Which CONCEPTS/ CODING BLOCKS did we cover today?

- Adding animation to a sprite
- Using code to add gravity effect to sprites.
- Adding indentation to code.
- Identifying bugs in the program.
- Debugging the code.

### How did we DO the activities?

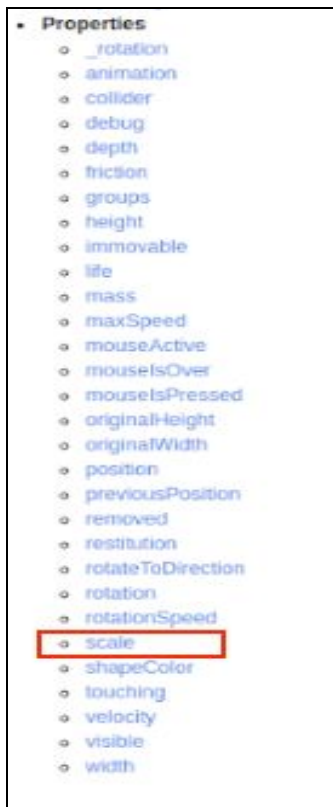
1. Create a Trex sprite and load a running Trex animation.

```
1 var trex, trex_running;
2
3 function preload(){
4   trex_running =
   loadAnimation("trex1.png","trex3.png","trex4.png");
5 }
6
7 function setup(){
8   createCanvas(400,400);
9   trex = createSprite(200,350,20,50);
10  trex.addAnimation("running",trex_running);
11 }
12
13
14 function draw(){
15   drawSprites();
16 }
```

2. Scale the dinosaur to the right size.



The screenshot shows the p5.js documentation for the **Sprite** module. On the left, a sidebar lists navigation options: Animation, Camera, Group, p5.play, **Sprite** (highlighted with a red box), and SpriteSheet. The main content area has the title "Sprite" and shows the module path: "Module: p5.play" and "Parent Module: p5.play". The text describes a Sprite as the main building block of p5.play, capable of having position, visibility, a collider, and interactions. It concludes by stating, "To create a Sprite, use [createSprite](#)."



Code:



Output:



3. Make the T-rex jump and add gravity effect to it. Ensure the T-rex falls on the 'ground'.

```
trex = createSprite(50,180,20,50);
trex.addAnimation("running", trex_running);

//adding scale and position to trex
trex.scale = 0.5;
trex.x = 50

//create ground sprite
ground = createSprite(200,180,400,20);

function draw() {
  background("white");

  //jumping the trex on space key press
  if(keyDown("space")) {
    trex.velocityY = -10;
  }

  trex.velocityY = trex.velocityY + 0.5;

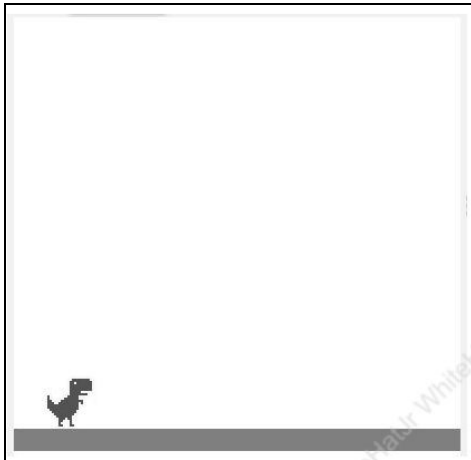
  //stop trex from falling down
  trex.collide(ground);
  drawSprites();
}
```

4. Create a rectangular sprite called ground. This is where the T-Rex dinosaur will run. The ground sprite should ideally cover the entire screen.

```
sketch.js • Saved: just now
6 loadAnimation( trex1.png , trex3.png , trex4.png );
7   trex_collided = loadImage("trex_collided.png");
8   groundImage = loadImage("ground2.png")
9 }
10
11 function setup() {
12   createCanvas(400, 400);
13
14   //create a trex sprite
15   trex = createSprite(50,380,20,50);
16   trex.addAnimation("running", trex_running);
17
18   //adding scale and position to trex
19   trex.scale = 0.5;
20   trex.x = 50
21
22   //create ground sprite
23   ground = createSprite(200,380,400,20);
24
25 }
26
27 function draw() {
28   background(220);
29
30   //jumping the trex on space key press
31   if(keyDown("space")) {
32     trex.velocityY = -10;
```

```
sketch.js • Saved: 2 minutes ago
14 //create a trex sprite
15 trex = createSprite(50,380,20,50);
16 trex.addAnimation("running", trex_running);
17
18 //adding scale and position to trex
19 trex.scale = 0.5;
20 trex.x = 50
21
22 //create ground sprite
23 ground = createSprite(200,380,400,20);
24
25 }
26
27 function draw() {
28   background(220);
29
30   //jumping the trex on space key press
31   if(keyDown("space")) {
32     trex.velocityY = -10;
33   }
34
35   trex.velocityY = trex.velocityY + 0.8
36
37
38   //stop trex from falling down
39   trex.collide(ground);
40   drawSprites();
41 }
```

Output:



5. Leave a space after every meaningful line of code.

```
> sketch.js Saved: 8 minutes ago
11 function setup() {
12   createCanvas(400, 400);
13
14   //create a trex sprite
15   trex = createSprite(50,380,20,50);
16   trex.addAnimation("running", trex_running);
17   trex.scale = 0.5;
18
19   //create a ground sprite
20   ground = createSprite(200,380,400,20);
21   ground.addImage("ground",groundImage);
22   ground.x = ground.width /2;
23   ground.velocityX = -2;
24
25
26 }
27
28 function draw() {
29   background(220);
30
31   //jump when the space key is pressed
32   if(keyDown("space")) {
33     trex.velocityY = -10;
34   }
35
36   //add gravity
37   trex.velocityY = trex.velocityY + 0.8
38
Console
```

6. Leave an even space after every instruction contained inside another block of code.

```
> sketch.js
21 ground.addImage("ground",groundimage);
22 ground.x = ground.width /2;
23 ground.velocityX = -2;
24
25
26
27 }
28
29 function draw() {
30   //set background color
31   background(220);
32
33   //jump when the space key is pressed
34   if(keyDown("space")) {
35     trex.velocityY = -10;
36   }
37
38   //add gravity
39   trex.velocityY = trex.velocityY + 0.8
40
41   if (ground.x < 0){
42     ground.x = ground.width/2;
43   }
44
45   trex.collide(ground);
46
47   drawSprites();
48 }
```

Output:



### What's next?

We will fix the problem of limited game space.

### Extend Your Knowledge:

1. [Animation in JavaScript](#): Read more about how to use animation in Javascript.