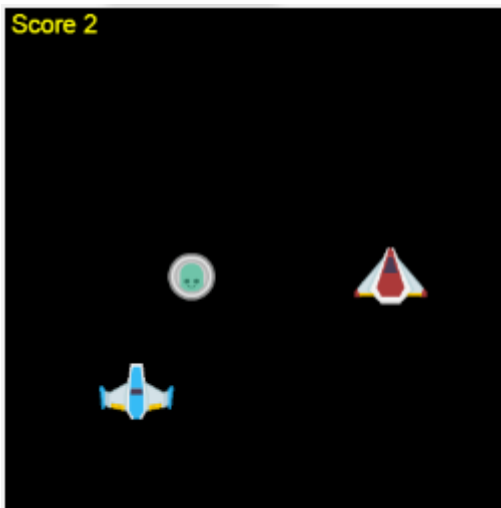


## Fly Away



In this game, the player's space ship (blue) is trying to move around to pick up as many aliens as they can.

If the alien isn't picked up in a certain length of time, they move around on the screen.

The enemy ship (red) after the player's ship. If they catch the ship, the score decreases.

Three animations are needed:



We need a time variable and one for score.

```
1 //score and timer counter patterns
2 var time = 0;
3 var score = 0;
```

The user's blue ship will move using the arrow keys.

```
5 //the ship the user moves, using arrow keys
6 var ship = createSprite(100, 300);
7 ship.setAnimation("playerShip1_blue_1");
8 ship.scale = 0.6;
```

The alien will jump around the screen:

```
10 //the alien the user picks up
11 var alien = createSprite(300, 300);
12 alien.setAnimation(▼"alienGreen_badge_1");
13 alien.scale = 0.8;
14
```

The enemy (red) ship will chase after the blue ship.

```
15 //the enemy who chases the user ship
16 var enemy = createSprite(400, 400);
17 enemy.setAnimation(▼"playerShip3_red_1");
18 enemy.scale = 0.6;
19 enemy.velocityX = 0;
20 enemy.velocityY = 5;
21
```

The top of the draw loop:

- Makes a black background
- Draw the sprites
- Draw the score on the screen

```
21
22 function draw() {
23   background(▼"black");
24   drawSprites();
25
26   //print score
27   textSize(20);
28   fill(▼"yellow");
29   text("Score "+score, 5, 20);
30
```

We will use the left/right/up/down arrow keys to move the ship:

```
30
31 //To move the user's ship with arrow keys
32 if ( keyDown(▼"left") || ship.x > 380 ) {
33     ship.x -= 5;
34 } else if ( keyDown(▼"right") || ship.x < 20 ) {
35     ship.x += 5;
36 } else if ( keyDown(▼"up") || ship.y > 380 ) {
37     ship.y -= 5;
38 } else if ( keyDown(▼"down") || ship.y < 20 ) {
39     ship.y += 5;
40 }
41
```

When the ship reaches an alien:

- The score increases
- The timer resets
- The alien gets a new random location

```
41
42 //If ship reaches alien, pick it up & move alien
43 time++;
44 if ( ship.isTouching(alien) ) {
45     score++;
46     time=0;
47     alien.x = randomNumber(10, 380);
48     alien.y = randomNumber(10, 380);
49 }
50
```

If the alien isn't caught, it will still move after 100 microseconds.

```
50
51 //After a certain time, move the alien
52 if (time >=100) {
53     time=0;
54     alien.x = randomNumber (10, 380) ;
55     alien.y = randomNumber (10, 380) ;
56 }
57
```

(You can speed this up if it is too slow for you; pick a different number than 100)

If the player hits the enemy, they lose a point and the enemy moves.

```
58 //If enemy reaches alien, lose point & move ship
59 if (ship.isTouching(enemy)) {
60     score--;
61     enemy.x = randomNumber (10, 380) ;
62     enemy.y = randomNumber (10, 380) ;
63 }
64
```

Randomly, the ship will move towards the ship. This gives them a chance to get away.

```
65 //Some of the time, move enemy towards alien
66 var rand = randomNumber (1, 40) ;
67 if (rand<=1) {
68     if (ship.x < enemy.x) {
69         enemy.velocityX = -3;
70     } else {
71         enemy.velocityX = 3;
72     }
73     if (ship.y < enemy.y) {
74         enemy.velocityY = -3;
75     } else {
76         enemy.velocityY = 3;
77     }
78 }
79
80
```

The if (rand<=1) determines the "skill" of the enemy ship. If you increase the 1 to 2 or even 3, the ship will follow more closely.

Another thing you can switch is the var rand = randomNumber(1, 40); To make it easier (increase to 60) or harder (decrease to 30)