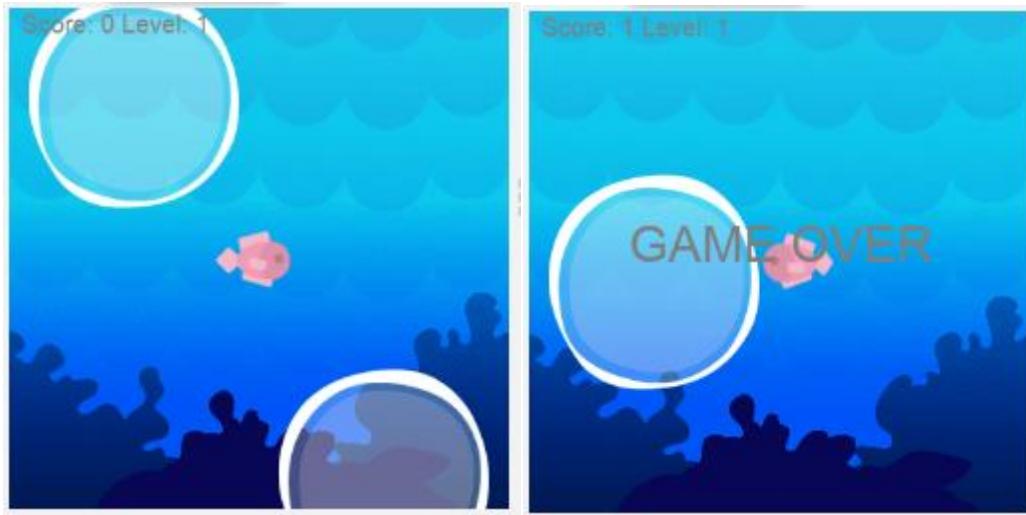


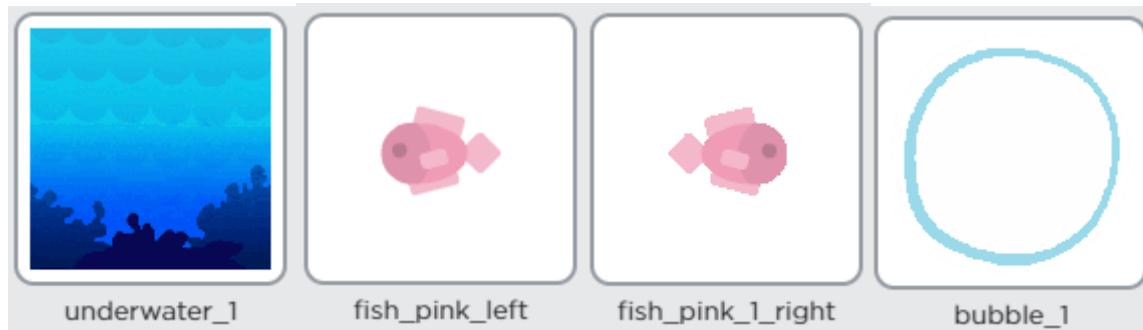
## Level-up Swimmer



The bubbles float down from the top. The fish swims left and right to avoid them.

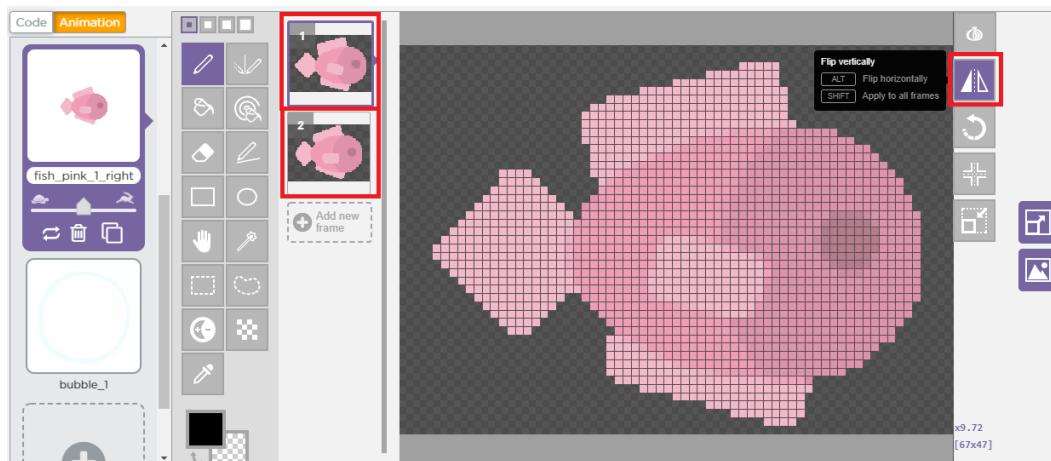
- If the fish hits a bubble, it dies.
- When the fish avoids 5 bubbles, it levels up. It swims faster AND the bubbles move quicker.

You need these 4 animations:



The bubble will look clear on your animations. If you squint, you can sort of see it.

For my right fish, I made a copy of the right fish and I use the flip vertically tool on BOTH frames.



Start by making some variables to track the speeds (fish and bubble), score and levels.

```
1 //level, points and speed variables
2 var amount = 5;
3 var bubbleSpeed = 2;
4 var score = 0;
5 var level = 1;
```

Make the background first,

```
6
7 //game sprites
8 var background = createSprite(200, 200);
9 background.setAnimation("underwater_1");
10
```

Then, the fish,

```
11
12 var fish = createSprite(300, 200);
13 fish.setAnimation("fish_pink_left");
14 fish.velocityX = -amount;
```

Then, the two bubbles,

```
15
16 var bubble1 = createSprite(300, -100);
17 bubble1.velocityY = bubbleSpeed;
18 bubble1.setAnimation("bubble_1");
19 bubble1.scale = 0.8;
20
21 var bubble2 = createSprite(100, -400);
22 bubble2.velocityY = bubbleSpeed;
23 bubble2.setAnimation("bubble_1");
24 bubble2.scale = 0.8;
```

Make your draw loop.

```
25 function draw() {
26   drawSprites();
27 }
```

RUN YOUR CODE.

- Do two bubbles float down from the top?
- Is there a background?
- Is there a fish?

Display the score:

```
28 //display score
29 textSize(20);
30 text("Score: "+score+" Level: "+level, 10, 20);
31 |
```

Make the fish swim back and forth. This is exactly how animated walker moved (but now there are only 2 directions).

```
31 |
32 //move the fish
33 if (keyDown("left") || fish.x>380) {
34   fish.setAnimation("fish_pink_left");
35   fish.x -= 5;
36   fish.velocityX = -amount;
37 }
38 else if (keyDown("right") || fish.x<20) {
39   fish.setAnimation("fish_pink_right");
40   fish.x += 5;
41   fish.velocityX = amount;
42 }
```

RUN YOUR CODE.

- Can you press the right and left button and move the fish?
- When the fish hits the edge, does it switch direction?
- Do the score and level appear on the screen?

When the bubbles reach the bottom, we need to:

1. Increase the score
2. Respawn the bubble at the top

```
43
44 // respawn the bubbles
45 if( bubble2.y >500 ) {
46     score++;
47     bubble2.y =-100;
48 }
49 if( bubble1.y >500 ) {
50     score++;
51     bubble1.y =-100;
52 }
```

#### RUN YOUR CODE

- You don't need to move the fish. Death isn't possible yet.
- Do the bubbles respawn when they get to the bottom of the screen?
- Does the score increase when the bubble gets to the bottom of the screen?

#### Level up

When the score is the level \*5 (- every 5 points, we level up!)

- Increase the level
- Increase the speeds of the fish and bubbles

```
53
54 //level up every 5 points
55 if( score> (level*5) ) {
56     level++;
57     amount++;
58     bubbleSpeed++;
59     bubble1.velocityY = bubbleSpeed;
60     bubble2.velocityY = bubbleSpeed;
61 }
```

## RUN YOUR CODE

- Because you can't die, just make the fish sit there and do nothing
- Wait for a while. When you have 6 bubbles, did it level up? Did the text change? Did the speed change?
- When you have 11 bubbles, did it level up again?

## Game Over

If we hit a bubble,

- Everything (fish and two bubbles) stops.
- Game Over appears

```
63 // touch a bubble and lose
64 if( fish.isTouching(bubble1) || fish.isTouching(bubble2) ) {
65     bubble1.velocityY=0;
66     bubble2.velocityY=0;
67     fish.velocityX=0;
68     textSize(40);
69     text("GAME OVER", 80,200); }
70 }
71 }
```