

Getting started.

```
int x, y;  
  
void setup() {  
    size(640, 240);  
}  
  
void draw() {  
    ///???  
}
```

## Circle

```
int x, y;
int ballSize = 40;

void setup() {

    size(640, 240);
    x = width/2;
}

void draw() {

    background(#92CFED);
    fill(216, 7, 21);
    ellipse(x, y, ballSize, ballSize);
}
```

Move it move it

```
float x, y;
float ballSize = 40;
float speed = 5;

void setup() {

    size(640, 240);
    y = ballSize * 1.5;
    x = width/2;
}

void draw() {

    background(#92CFED);
    fill(216, 7, 21);
    ellipse(x, y, ballSize, ballSize);

    y = y + speed;
}
```

Move it move it

```
float x, y;
float ballSize = 40;
float speed = 5;

void setup() {

    size(640, 240);
    y = ballSize * 1.5;
    x = width/2;
}

void draw() {

    background(#92CFED);
    fill(216, 7, 21);
    ellipse(x, y, ballSize, ballSize);

    if (y + ballSize/2 < height) {
        y = y + speed;
    }
}
```

# Don't fall off the world

```
float x, y;
float ballSize = 40;
float speed = 5;
boolean movingUp = false;

void setup() {
    size(640, 240);
    y = ballSize * 1.5;
    x = width/2;
}

void draw() {
    background(#92CFED);
    fill(216, 7, 21);
    ellipse(x, y, ballSize, ballSize);

    if (y + ballSize/2 >= height) {
        movingUp = true;
    }

    if (movingUp) {
        y = y - speed;
    } else {
        y = y + speed;
    }
}
```

# Don't fall through the sky

```
float x, y;
float ballSize = 40;
float speed = 5;
boolean movingUp = false;

void setup() {

    size(640, 240);
    y = ballSize * 1.5;
    x = width/2;
}

void draw() {

    background(#92CFED);
    fill(216, 7, 21);
    ellipse(x, y, ballSize, ballSize);

    if (y + ballSize/2 >= height) {
        movingUp = true;
    } else if (y - ballSize/2 <= 0) {
        movingUp = false;
    }

    if (movingUp) {
        y = y - speed;
    } else {
        y = y + speed;
    }
}
```

## Move it move it (revisited).

```
float x, y;
float ballSize = 40;
float xSpeed = 5, ySpeed = 5;
boolean movingUp = false, movingLeft = false;

// keep setup() the same as before

void draw() {

    background(#92CFED);
    fill(216, 7, 21);
    ellipse(x, y, ballSize, ballSize);

    if (y + ballSize/2 >= height) {
        movingUp = true;
    } else if (y - ballSize/2 <= 0) {
        movingUp = false;
    }

    if (x + ballSize/2 >= width) {
        movingLeft = true;
    } else if (x - ballSize/2 <= 0) {
        movingLeft = false;
    }

    if (movingUp) {
        y = y - ySpeed;
    } else {
        y = y + xSpeed;
    }

    if (movingLeft) {
        x = x - xSpeed;
    } else {
        x = x + xSpeed;
    }
}
```