## Positioning

## Sprites start off in the center of the screen. Let's look at how to put them in different places!

There are two main ways: setting the $\mathrm{X} / \mathrm{Y}$ co-ordinate of its center, or setting the $X / Y$ co-ordinate of one of its edges.

## Setting the center

We can change the position of a sprite on the screen using the posX and pos $Y$ attributes. These are the co-ordinates of the center of the sprite, starting from the bottom-left corner of the screen.


Center your sprite on the $\mathrm{X} / \mathrm{Y}$ co-ordinate (100, 200).

```
player.posX = 100
player.posY = 200
```

Check the sprite is no longer in the middle of the screen.

## By the edges

We can also set the $X / Y$ position of edges of the sprite, using the attributes .top, bottom, .left, and .right.

The left edge of the screen has an X co-ordinate of zero.

Move the player to touch the left edge of the screen.
player.left = 0

The right edge of the screen has an $X$ co-ordinate equal to the width of the world.

Now move the player to the right edge of the screen, instead. (You can delete the line setting its left edge, since we're not using that anymore.)

```
player.right = world.width
```

The bottom edge of the screen has an Y co-ordinate of zero.

Move the player to touch the bottom edge of the screen.
player.bottom = 0

The top edge of the screen has a Y co-ordinate equal to the height of the world.

Now move the player to the top edge of the screen, instead. (You can delete the line setting its bottom edge, since we're not using that anymore.)

```
player.top = world.height
```

$\rightarrow$
Now, let's introduce a little randomness...

