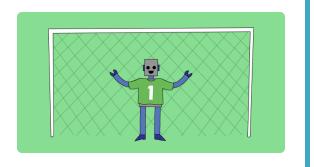


Beat the goalie

How many goals can you score in 30 seconds?





Step 1 Introduction

In this project you'll learn how to create a 2 player football game in which you have to score as many goals as you can in 30 seconds.

What you will make



a

What you will learn

- Recall how to use code to respond to key presses
- · Use sensing blocks to detect when sprites touch each other
- Use broadcast blocks to communicate between sprites



What you will need

Hardware

A computer capable of running Scratch 3

Software

Scratch 3 (either online (http://rpf.io/scratchon) or offline (http://rpf.io/scratchon)

Downloads

The starter project can be found **here** (http://rpf.io/p/en/beat-the-go alie-go).



Additional information for educators

You can download the completed project at rpf.io/p/en/beat-the-goalie-get (http://rpf.io/p/en/beat-the-goalie-get).

Step 2 Moving the football

Let's code the ball to move across the bottom of the stage.

Open the 'Beat the Goalie' Scratch starter project.



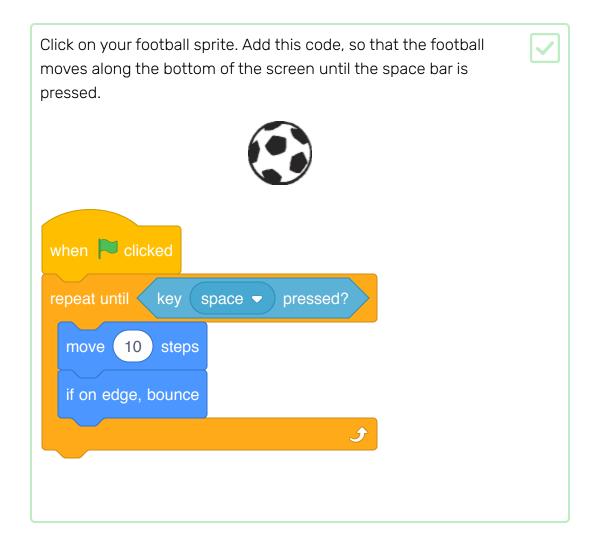
Online: open the starter project at rpf.io/beat-the-goalie-on (ht tp://rpf.io/beat-the-goalie-on).

If you have a Scratch account you can make a copy by clicking **Remix**.

Offline: open the starter project (http://rpf.io/p/en/beat-the-g oalie-go) in the offline editor.

If you need to download and install the Scratch offline editor, you can find it at **rpf.io/scratchoff** (http://rpf.io/scratchoff).

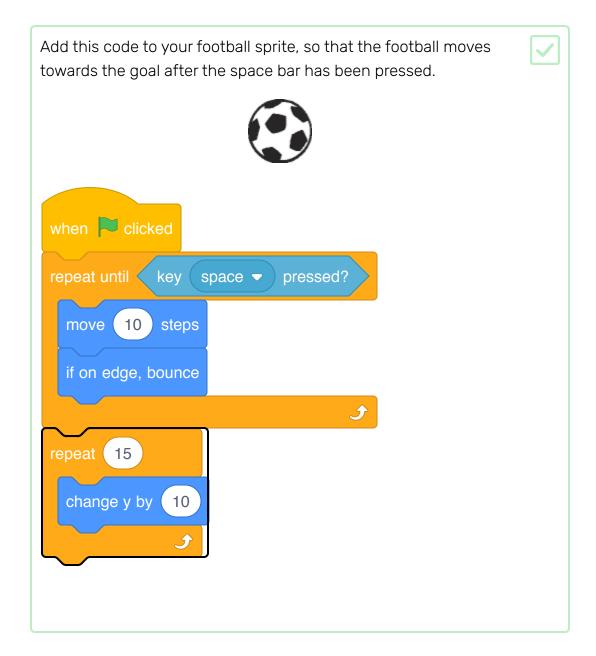
In the starter project, you should see a goal backdrop, a football and goalie sprite.



Click the green flag to test your project. Your football should bounce along the bottom of the screen until the space bar is pressed.



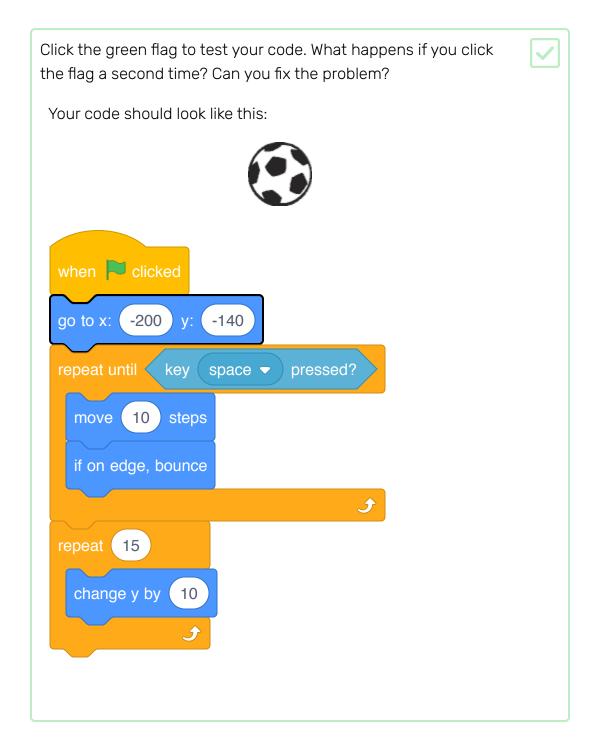




Click the green flag to test your code. This time, press the space bar and your football should move towards the goal.

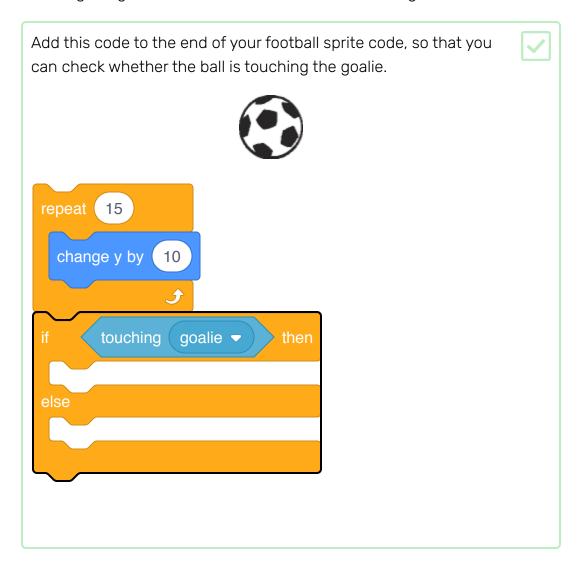




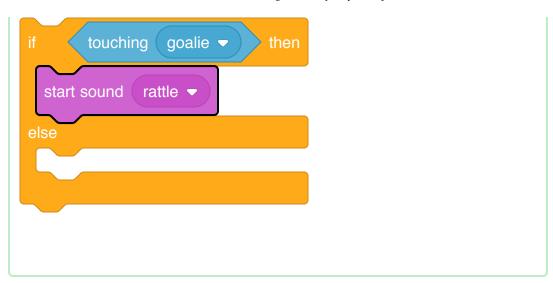


Step 3 Was it a goal?

Once the ball has reached the goal, there's a decision to make. **If** the ball is touching the goalie then it has been saved, **else** it's a goal.







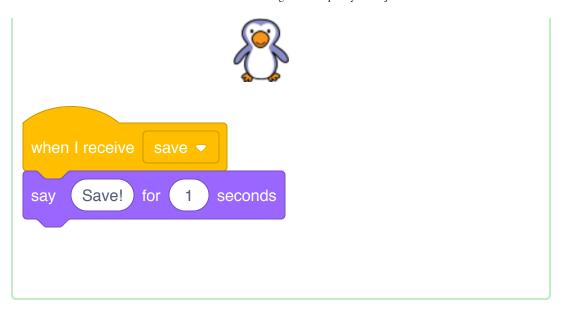
You can also broadcast a message to the goalie, so that they can tell you that the ball has been saved.

Broadcast a 'save' message when the ball has been saved.

if touching goalie then start sound rattle broadcast save else

You can now code your goalie to say 'Save!' when they receive the message.





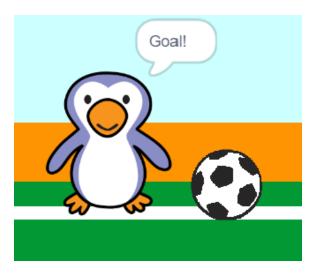


Step 4 Goal!

Can you play a sound and code your goalie to say 'Goal!' when a goal has been scored?

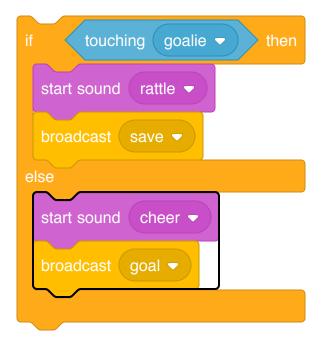


Remember that a goal has been scored if the ball is not touching the goalie.

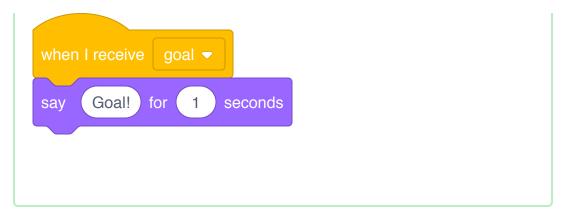


Your code should look like this:



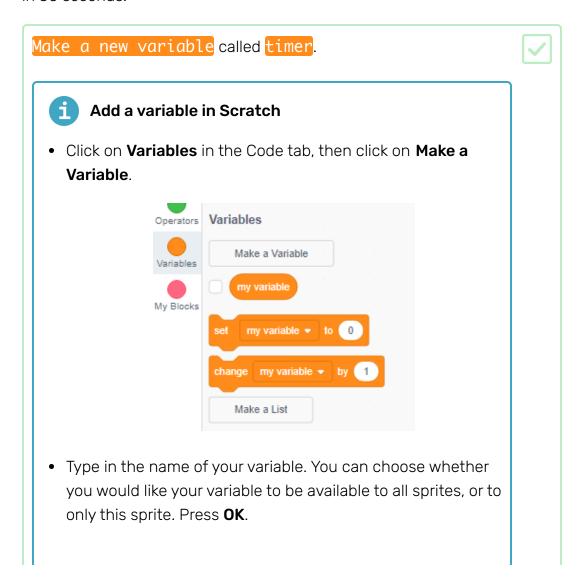


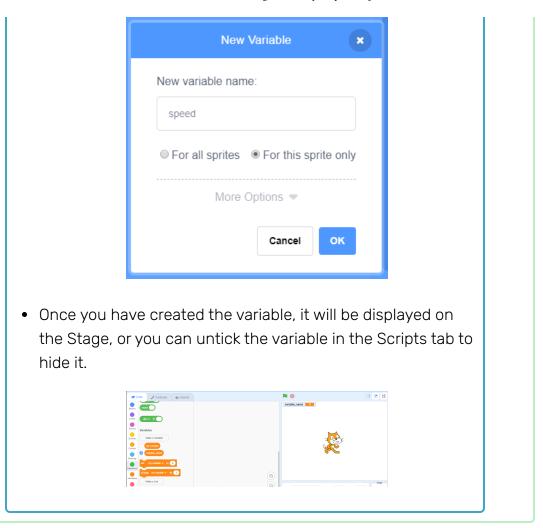


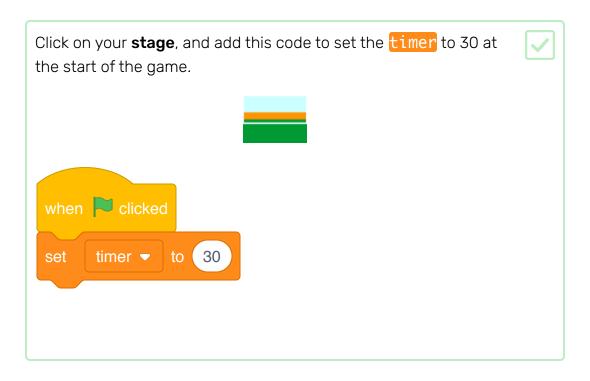


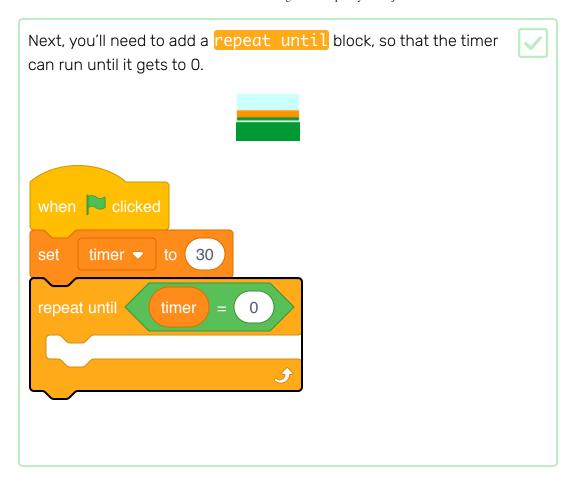
Step 5 Adding a timer

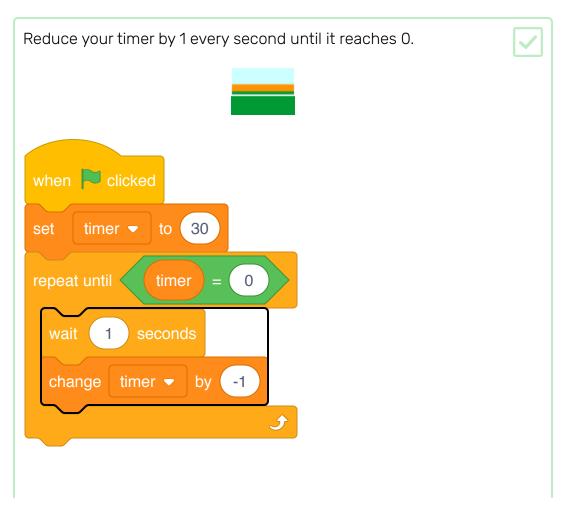
Let's add a timer, so that the player has to score as many goals as they can in 30 seconds.

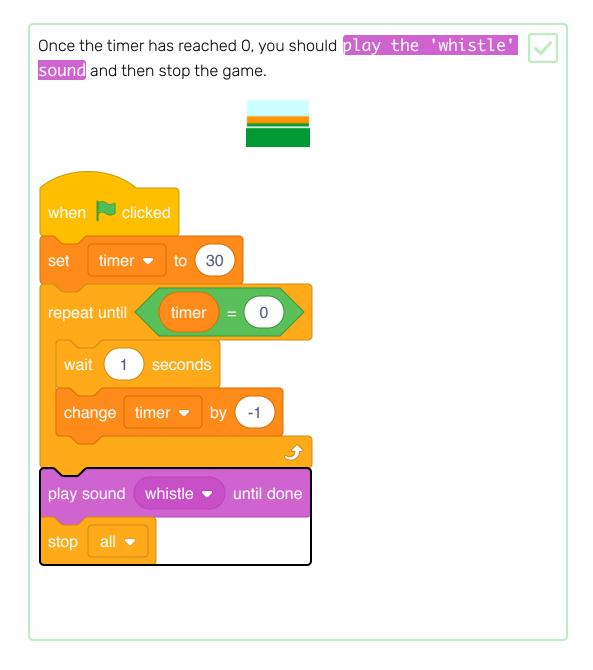


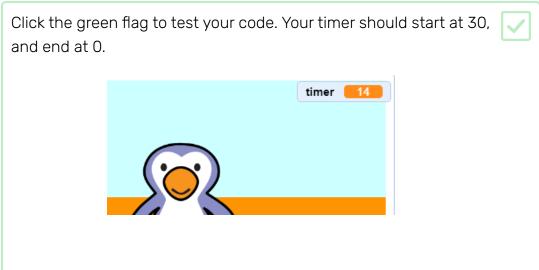










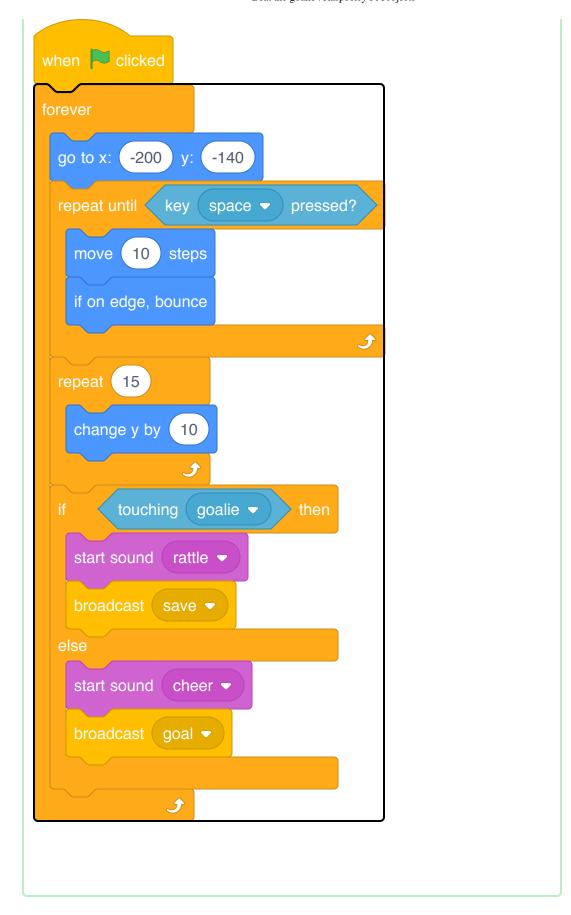


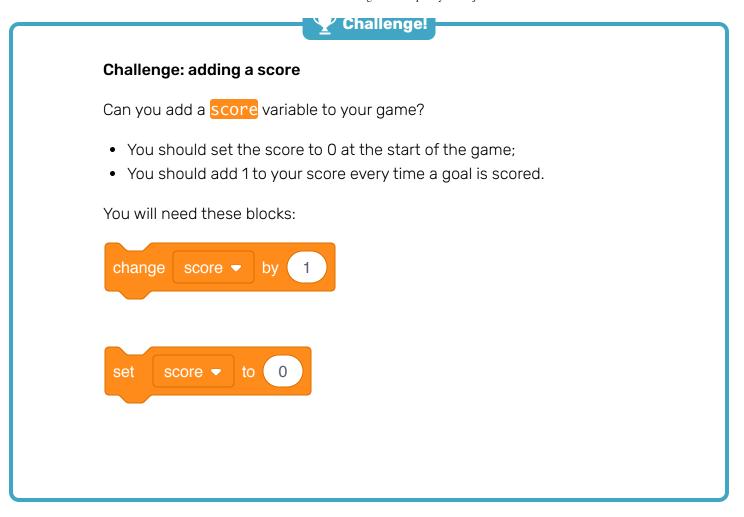
You can change your timer to start at 10 if you don't want to wait for 30 seconds!

You only have the chance to score 1 goal! To have more than 1 chance, add a **forever** block around your **football** code. You can also add a **wait** block between attempts.









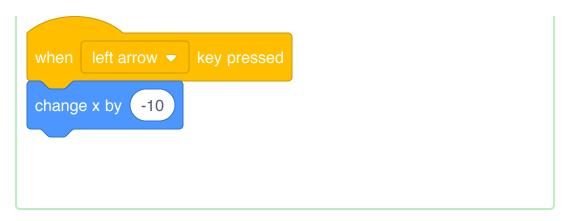
Step 6 Control the goalie

It's far too easy to score a goal! Let's allow a second player to try and save goals.

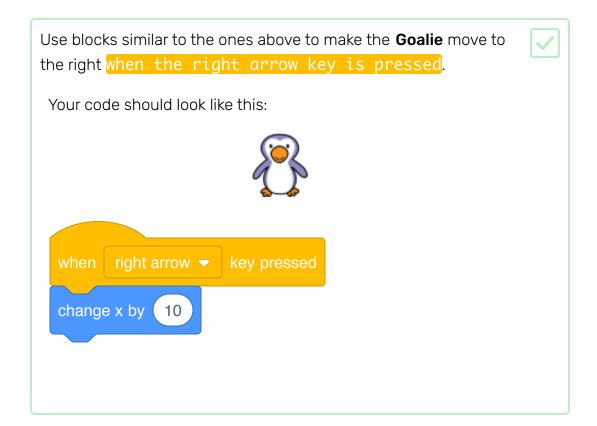
Click on your **Goalie** sprite and add this code to change the goalie's x position when the left arrow is pressed.









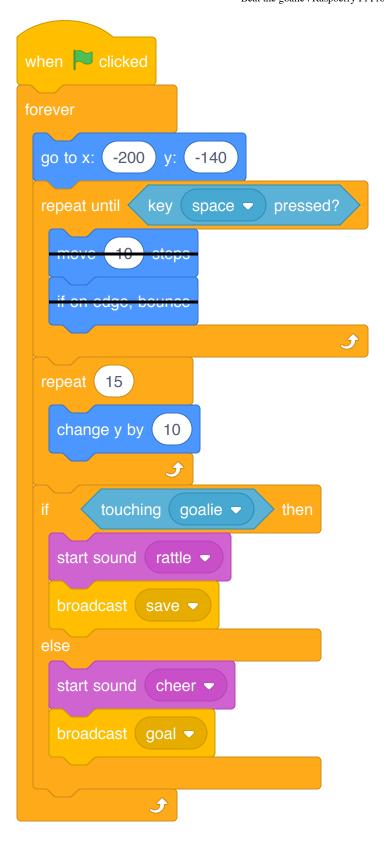




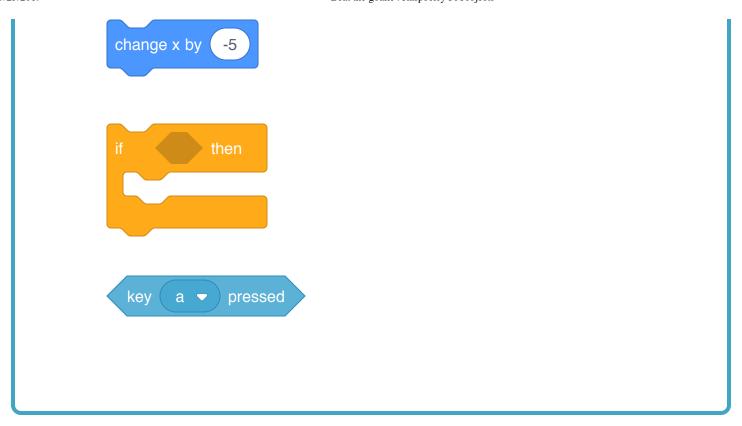
Challenge: manual control

Instead of the ball moving left and right automatically, can you allow your player to control the ball with the ${\tt a}$ and ${\tt d}$ keys?

To do this you'll need to remove the code for moving the ball left and right.



You can then add code to move the ball when the keys are pressed. Here are some code blocks to help you:



Step 7 What next?

Take a look at the **Ada's Poetry Generator** (https://projects.raspberrypi.gov/projects/poetry-generator) Scratch project.



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View project & license on GitHub (https://github.com/RaspberryPiLearning/beat-the-goalie)