

GETTING STARTED

Scratch allows creating games, animations and stories. It is possible to install Scratch as a program on your computer so if you are using a CoderDojo computer or Raspberry Pi you should be able to find Scratch in the programs menu.

Alternatively you can use Scratch directly on the Scratch website at:

<https://scratch.mit.edu/>

When you first start scratch there will be one 'Sprite' (or object) on the stage - Scratchy the cat. For this exercise we will not need Scratchy the cat so you can delete him by clicking the 'scissors' icon and then clicking on Scratchy the cat.

UPLOAD NEW SPRITES

We will need three images for this exercise:

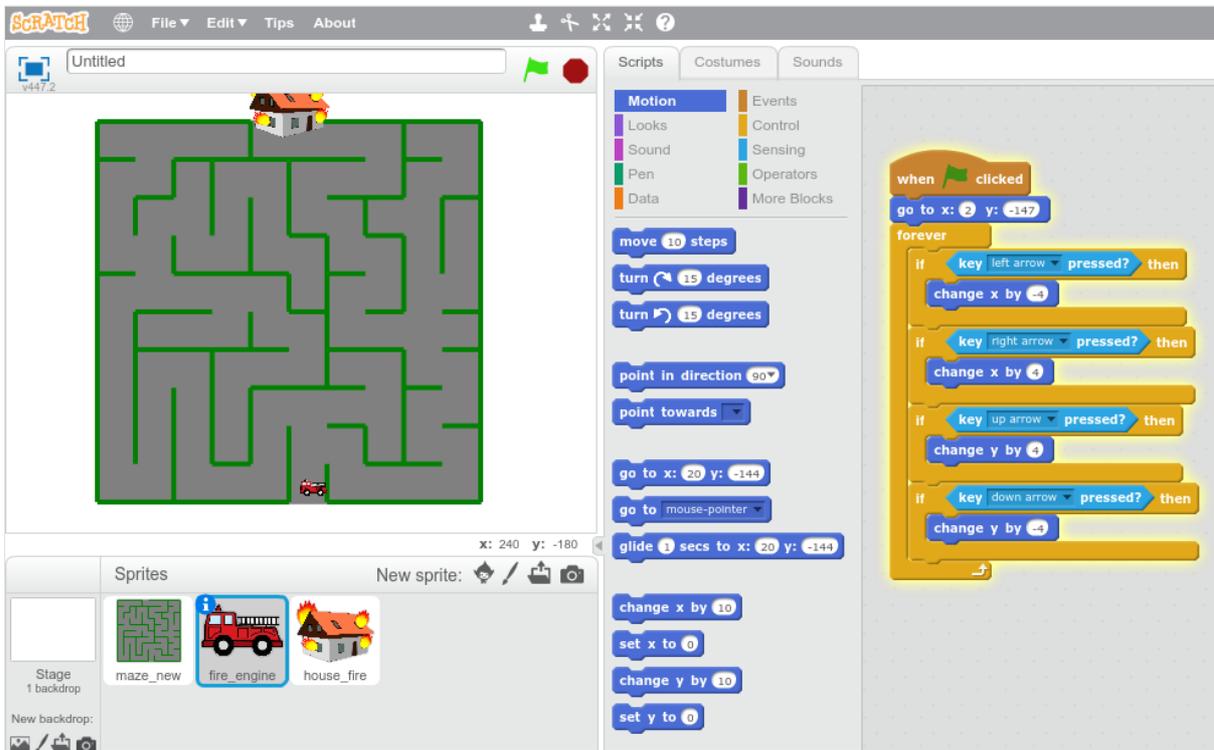
- Maze
- Fire Engine
- House on Fire

You can locate these images on the internet or ask a CoderDojo mentor for the images. Click the upload button



to choose images from your computer to upload.

1. Place the three sprites onto the stage as shown in the image below.



2. You may need to change the size of your sprites using the grow



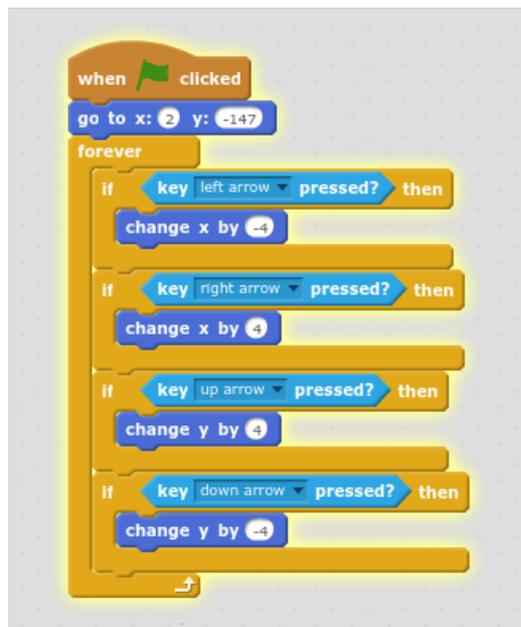
and shrink



buttons.

ADD CODE BLOCKS

1. When you are happy with the position of your sprites on the stage click the Fire Engine sprite and add some code blocks as shown below. You may want to ask a mentor to help you locate the appropriate code blocks.



```
when green flag clicked
  go to x: 2 y: -147
  forever loop
    if key left arrow pressed? then
      change x by -4
    if key right arrow pressed? then
      change x by 4
    if key up arrow pressed? then
      change y by 4
    if key down arrow pressed? then
      change y by -4
```

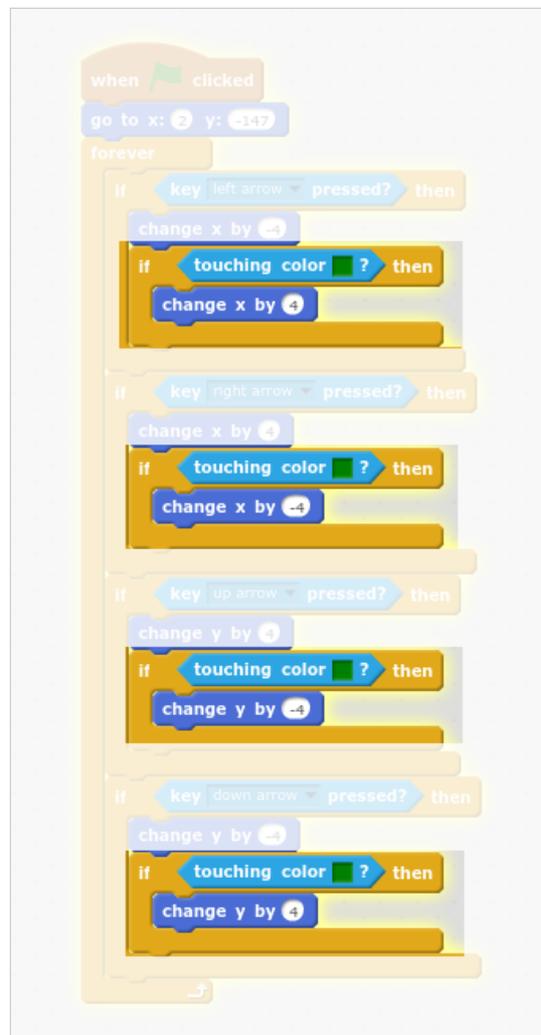
Those code blocks will enable the fire engine to move when you press the corresponding arrow key on the keyboard

2. Test your game by clicking the start button



ENABLE THE WALLS

1. You should have noticed that your fire engine can drive through the walls of the maze. Add the code blocks below to your program to control that:



ADD A WIN MESSAGE

1. If you try playing your game you should notice that now the Fire Engine must stay on the roads. Let's now add a message when the Fire Engine reaches the Fire:

```
when green flag clicked
  go to x: 2 y: -147
  forever
    if key left arrow pressed? then
      change x by -4
      if touching color ? then
        change x by 4
    if key right arrow pressed? then
      change x by 4
      if touching color ? then
        change x by -4
    if key up arrow pressed? then
      change y by 4
      if touching color ? then
        change y by -4
    if key down arrow pressed? then
      change y by -4
      if touching color ? then
        change y by 4
    if touching house_fire ? then
      say You Win !!!!! for 4 secs
```

2. Test your winning message by clicking the start button



3. Think about how you can improve this game.