



# Activity

## Game

### Beetle in the Maze



In this activity you will make an animated game in PictoBlox where beetle needs help to come out of the maze without touching the boundaries using evive's navigation keys.

### STEP-BY-STEP

1. Open **PictoBlox**, connect evive to your computer, and select the Board as evive.
2. Once you've selected the board, click on the **Connect** tab and connect the board. Click on **Upload Firmware** button.

### SETTING UP THE STAGE

3. Add the **Beetle** sprite from the sprite library by clicking on **Choose a Sprite**. Delete the Tobi sprite.
4. Add the **Maze** backdrop from the backdrop library by clicking on **Choose a Backdrop**.

### GIVING THE BEETLE ITS MOVES

5. To move the beetle, we will use the navigation key is in state () block to detect the state of the navigation key and act accordingly. Make the code to move the beetle in the up direction using when flag clicked block and if block.

**STEP 5**

```

when flag clicked
  forever loop
    if navigation key is in state up ? then
      point in direction 0
      move 10 steps
  
```

6. Update the previous script for other directions as well:
  - a. For 'up', set the direction as 0.

STEP 3

Choose a Sprite



STEP 4

Choose a Backdrop



```

when flag clicked
  forever loop
    if navigation key is in state up ? then
      point in direction 0
      move 10 steps
    if navigation key is in state down ? then
      point in direction 180
      move 10 steps
    if navigation key is in state left ? then
      point in direction -90
      move 10 steps
    if navigation key is in state right ? then
      point in direction 90
      move 10 steps
  
```

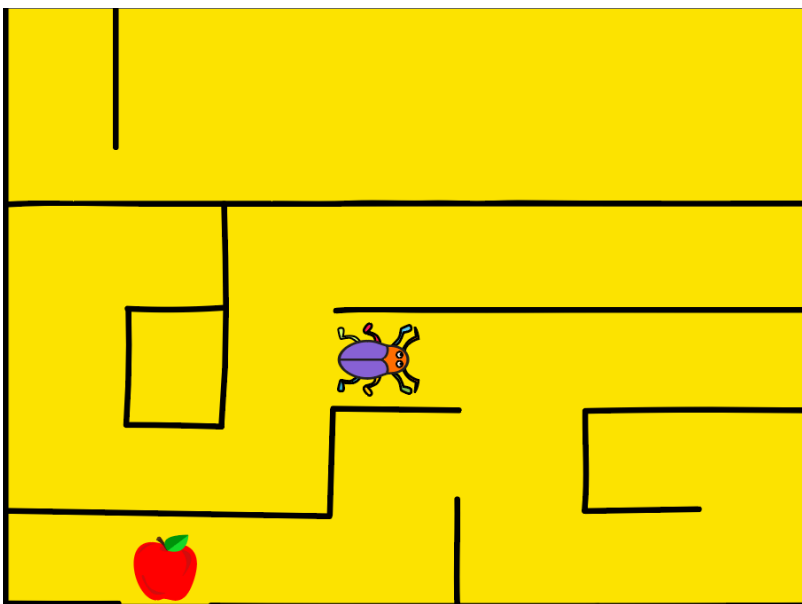
STEP 6



- b. For 'down', set the direction as 180.
- c. For 'right', set the direction as 90.
- d. For 'left', set the direction as -90.

## SENSING THE ENVIRONMENT

7. Make the script to initialize the game, so that every time game starts the beetle is at one position.
8. Now we will add the condition when the beetle touch maze, it will go back to its original position. For this we will use touching color ()? block from Sensing.
9. Update the previous script to implement the above stated condition. Select the color using the color picker and pick the wall color which is black. Whenever the beetle touches the wall it should go back to the original location.
10. Now we will add the condition to end the game. Game ends when the beetle touches the apple. Game ends when the beetle touches the apple.
11. Update the previous script to implement the above stated condition. Select the color using the color picker and pick the apple color which is red. Whenever the beetle touches the apple, we will stop all the scripts.



12. Click on the Green Flag to play the game.

```

when green flag clicked
  point in direction 0
  glide 0.5 secs to x: -150 y: -150
  set size to 50 %

```

STEP 7

```

when green flag clicked
  point in direction 0
  glide 0.5 secs to x: -150 y: -150
  set size to 50 %
  forever
    if touching color black ? then
      glide 0.5 secs to x: -150 y: -150
      point in direction 0

```

STEP 8-9

```

when green flag clicked
  point in direction 0
  glide 0.5 secs to x: -150 y: -150
  set size to 50 %
  forever
    if touching color black ? then
      glide 0.5 secs to x: -150 y: -150
      point in direction 0
    if touching color red ? then
      stop all

```

STEP 10-11