Teachers Guide | Flappy Bird 🐦
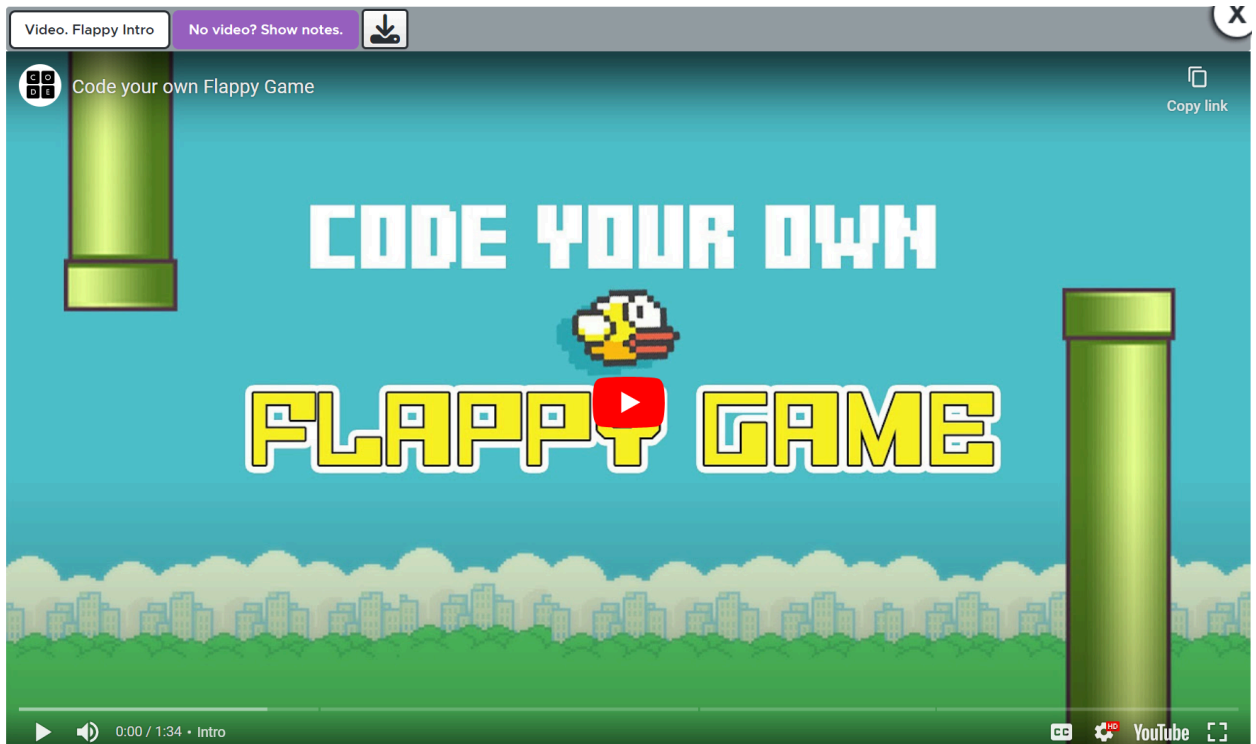
Overview

Use drag-and-drop programming to make your own Flappy Bird game.
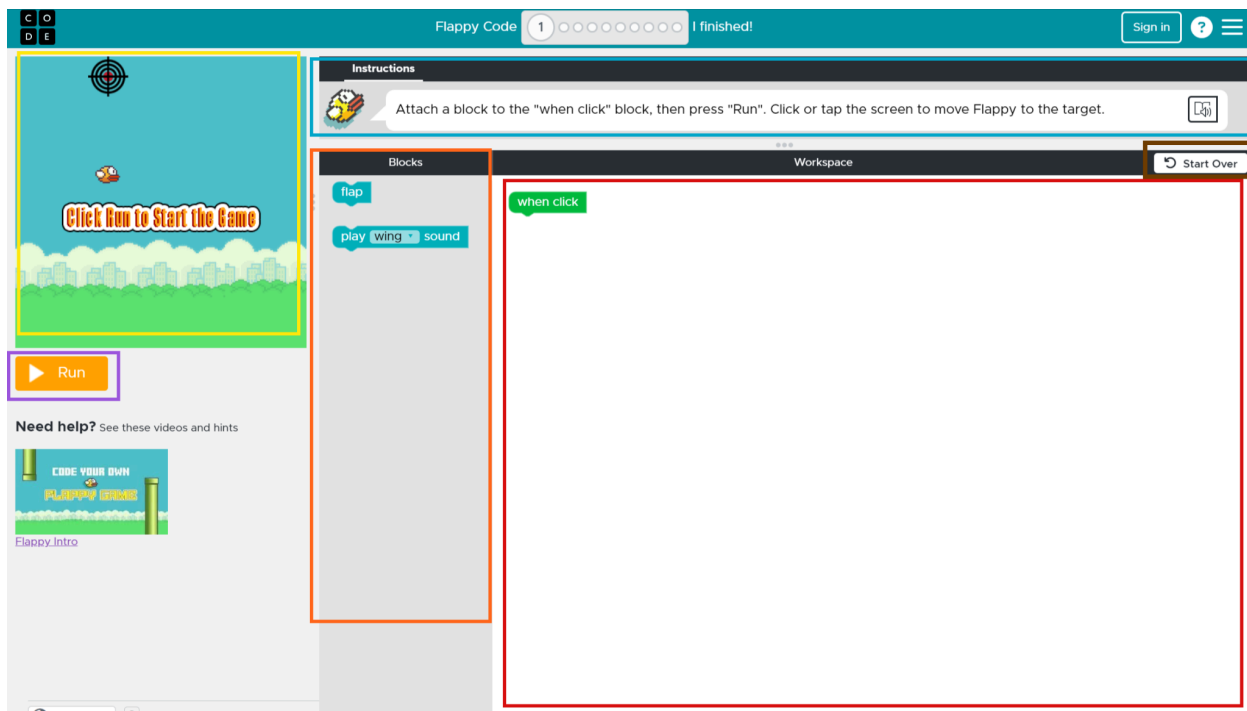**Link to the activity:** https://studio.code.org/flappy/1

Jumping into the activity

- Once students have clicked the link that has been provided, they will have to watch a quick 1 minute intro about the game.

● Now let's get your students to know the interface in front of them, colors have been labeled on each component of the screen.


● **Blue** is for the instructions for that specific question.
● **Orange** is for the blocks of code that your students will be using.
● **Red** is for the workspace where the block of code can be dragged to.
● **Brown** is to erase all the work and start the activity.
● **Purple** is for the run button where students can test out their blocks of code to see if it works.
● **Yellow** is for the game interface where students can see their blocks of code in action.

# Answer Key to each question of this activity

- **Question 1**.
  Attach a block to the "when click" block, then press "Run". Click or tap the screen to move Flappy to the target.
  Students after hitting the run button must repeatedly tap or click on the trackpad of their laptop in order to make the flappy bird fly up.
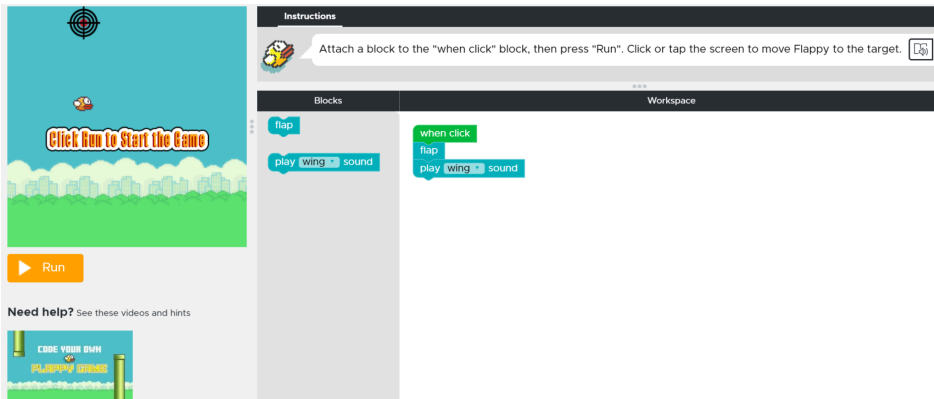
  After the first question, they will then click on the continue button, this will be a consistent action after each question.
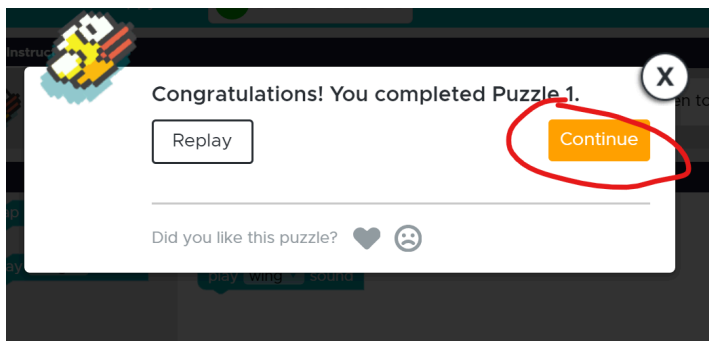
- **Question 2.**

  Now we've added some ground. Attach a block to the "when hit the ground" block. Your code needs to 'END GAME' when Flappy crashes.

  Students can decide to add the play wing block or not, the answer will be correct; we added the play wing sound block.

  ```
  when click
  flap
  play  wing ▾  sound
  ```

  ```
  when hit the ground
  end game
  ```
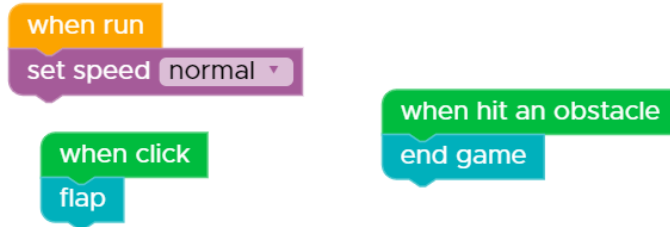
- **Question 3.**

  The "when run" block allows you to run code when your game starts. Try setting the level speed and flapping to the target.

  Students can set the speed to whatever they want and it will still be correct; we set the speed to normal.

  ```
  when run
  set speed  normal ▾
  ```

  ```
  when click
  flap
  ```
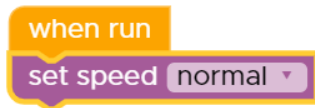
- **Question 4.**

  Flappy will fly through obstacles unless you write code to make him crash. Attach a block to the "when hit an obstacle" block. Your code needs to 'END GAME' when Flappy crashes into the first set of pipes.

  ```
  when run
  set speed (normal ▾)
  ```

  ```
  when click
  flap
  ```

  ```
  when hit an obstacle
  end game
  ```

- **Question 5.**

  Let's add a scoreboard, and count points when Flappy makes it past obstacles. Add to the "when pass an obstacle" block, and then score a point by flying Flappy through the first set of pipes.

  ```
  when run
  set speed (normal ▾)
  ```
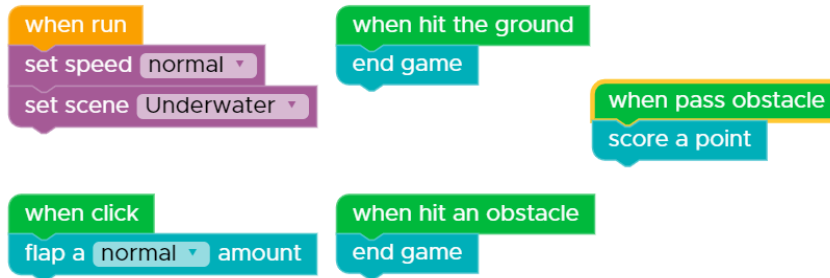
  ```
  when pass obstacle
  score a point
  ```

  ```
  when click
  flap
  ```
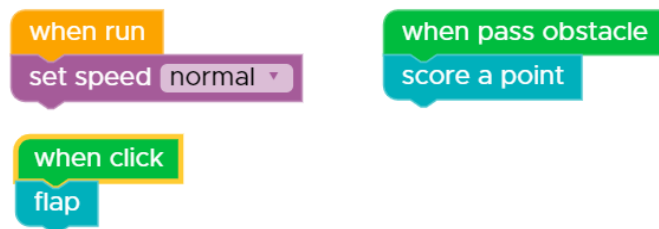
- **Question 6.**

  See if you can still score a point after making Flappy flap either a smaller or larger amount.

  ```
  when run
  set speed (normal ▾)
  ```

  ```
  when pass obstacle
  score a point
  ```

  ```
  when click
  flap a (very small ▾) amount
  ```
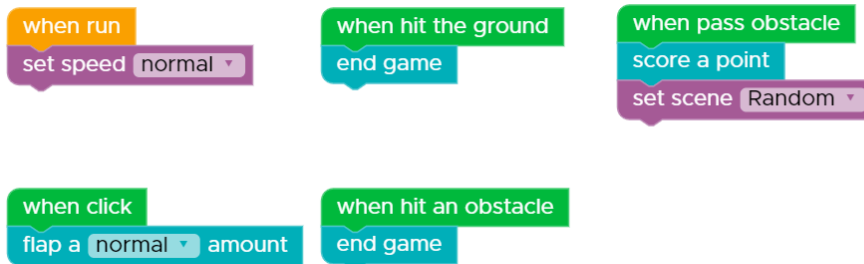
- **Question 7.**
  Next, try changing the scene by attaching another block to the "when run" block.

  Students can add any set scene they want, for this key, we chose an underwater scene.

  ```
  when run
  set speed  normal ▼
  set scene  Underwater ▼

  when hit the ground
  end game

  when pass obstacle
  score a point

  when click
  flap a  normal ▼  amount

  when hit an obstacle
  end game
  ```
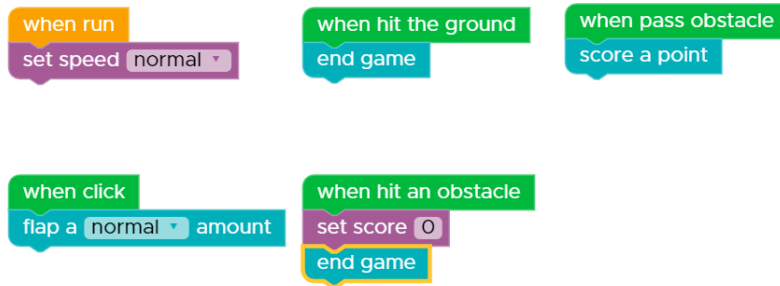
- **Question 8.**
  You can set visuals anytime, not just when the game starts. Try setting a RANDOM scene when other events happen, for example, when passing an obstacle.

  ```
  when run
  set speed  normal ▼

  when hit the ground
  end game

  when pass obstacle
  score a point
  set scene  Random ▼

  when click
  flap a  normal ▼  amount

  when hit an obstacle
  end game
  ```

- **Question 9.**

  To mix things up, when hitting an obstacle, instead of ending the game try setting the score back to 0.

  ```
  when run
  set speed [normal ▾]

  when hit the ground
  end game

  when pass obstacle
  score a point

  when click
  flap a [normal ▾] amount

  when hit an obstacle
  set score (0)
  end game
  ```
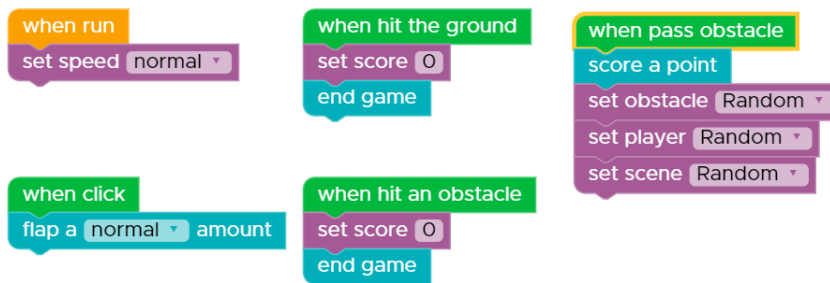
- **Question 10.**

  Create your own Flappy game. You can change all the visuals and all the rules, even the gravity. When you're done, click Finish.
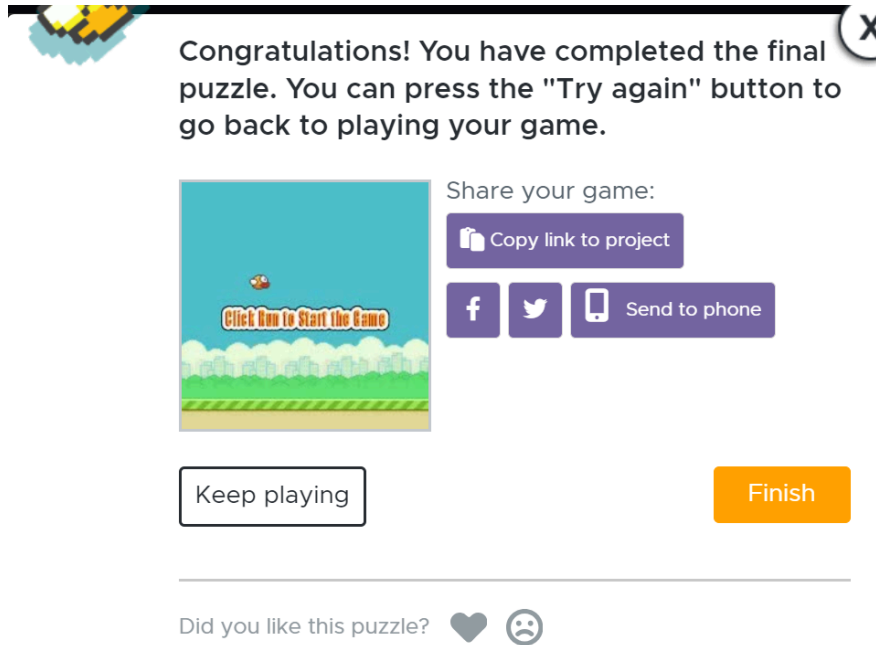
  Students can now be as creative as they want to be with this question.They do not need to follow the image below.

  If students are having an issue figuring out something to create, we have something they can develop here.

  ```
  when run
  set speed [normal ▾]

  when hit the ground
  set score (0)
  end game

  when pass obstacle
  score a point
  set obstacle [Random ▾]
  set player [Random ▾]
  set scene [Random ▾]

  when click
  flap a [normal ▾] amount

  when hit an obstacle
  set score (0)
  end game
  ```

End of Activity

- Students have now completed the activity. Once they click the finish button, they will then see this:

Congratulations! You have completed the final puzzle. You can press the "Try again" button to go back to playing your game.
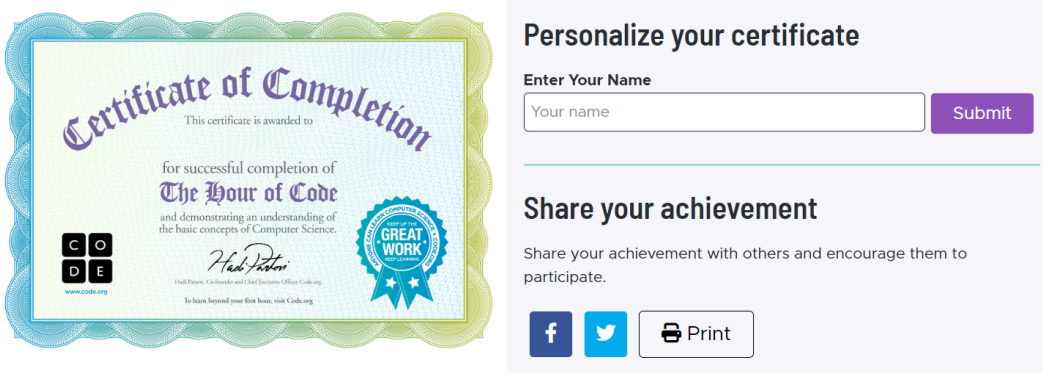
Share your game:

Copy link to project

Send to phone

Keep playing   Finish

Did you like this puzzle?

- They can once again click on the finish button and they will see this screen where they can get their certification of completion.

‹ Back to activity

Personalize your certificate

Enter Your Name

Your name   Submit

Share your achievement

Share your achievement with others and encourage them to participate.

Print

Options for students

Students can add their game to their phone and share with friends and family through the share your achievements section of the certificate of completion page.