

# SCRATCH

STAR WARS TIE FIGHTER GAME



SCRATCH-IMAGINE-CREATE-SHARE

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# Project Summary

## A Star Wars Tie Fighter game

I created a Star Wars Tie Fighter simulator game with the coding program called Scratch. I learned about Scratch from my friends, Alivia and Elliott Peterson. They invited me to a CoderDojo workshop in Warren County in January 2020. I only got to go to one meeting because of Covid-19. At CoderDojo I learned what I can do with Python, Raspberry Pi, and Scratch. I do not have internet access at home, so my parents let me download Scratch offline to create. Before I created this game, I played around and made a few chase games. This is how I taught myself how to code with Scratch.

For my 4-H project, I wanted to create a totally original game. First, I learned how to create sprites. I spent 2 hours drawing the sprites for the game including a Tie fighter, X-wing, clouds, lasers, shadows and more. I made both pixellated and vector sprites. The X-wing took the longest because of all the detail. I figured out how to make transparent pixels.

The coding for the game took me 6 1/2 hours spread out over a week since I was only allowed 1 hour a day of computer time. The goal of the game is to move your Tie fighter along the Y axis to avoid X-wings and TNT barrels. To play you press the up & down arrow keys to change the Y axis of the Tie fighter and you can press space to fire lasers. To win you have to destroy 1 X-wing and 15 TNT barrels and not collide, crash or get shot by an X-wing. One of the hardest parts was coding so the shadow moved in the opposite direction of the Tie fighter. My favorite part of making the game was the coding, drawing the sprites, and playing the final product. The hardest thing was coding the Tie fighter shadow to move just right (it still has some quirks). I plan to update the game with randomly exploding TNT barrels and another level of play.

This game is an original idea from my studio HotBrickStudios.  
The code for my game can be accessed on the Scratch website at:

<https://scratch.mit.edu/projects/398629146/editor/>

My game is posted on my friend's account (Megastarwarsfan789) since I am not allowed to have an online account with Scratch.

This is an example of some code for different Sprites that I created. A sprite is a character or object which is used for a coding projects.

```

when I receive Move
  switch costume to costume1
  wait 5 seconds
  broadcast X-wingShowing
  forever
    go to front layer
    go backward 2 layers
    wait pick random 1 to 4 seconds
    start sound WWing
    show
    set x to 308
    set y to pick random 21 to -9
    broadcast Fire
    repeat 62
      change x by -10
  
```

X-Wing flying random code

```

when I receive ShowButtons
  show
  forever
    if touching mouse-pointer then
      switch costume to button1
    if not touching mouse-pointer then
      switch costume to button2
  
```

Button code

```

when I receive Shadowlower
  forever
    repeat until not key up arrow pressed?
      change y by -2
    if y position = -168 then
      hide
    if not y position = -168 then
      show
    if y position = -92 then
      repeat until not key down arrow pressed?
        hide
    else
      if not y position = -92 then
        repeat until key up arrow pressed?
          show
  
```

Shadow Hide/Show code

```

when I receive Move
  create clone of myself
  forever
    switch costume to costume1
    if touching tie laser ? then
      change TntEXPLOS by 1
      start sound Explosion-4
      switch costume to costume2
      wait 0.1 seconds
      switch costume to costume3
      wait 0.1 seconds
      switch costume to costume4
      wait 0.1 seconds
      switch costume to costume5
      wait 0.1 seconds
      hide
  
```

X-Wing exploding code

```

when I receive Move
  switch costume to costume1
  set TieSpeed to 1
  forever
    if key up arrow pressed? then
      repeat until not key up arrow pressed?
        change y by 4
        broadcast Shadowlower
    if y position = -106 then
      switch costume to crash
      broadcast Crash
      broadcast Die
    if key down arrow pressed? then
      repeat until not key down arrow pressed?
        change y by -4
        broadcast ShadowLower
    if y position = -112 then
      start sound Crash
      switch costume to crash
      broadcast Crash
      wait 2 seconds
      switch costume to costume1
  
```

Tie Fighter code

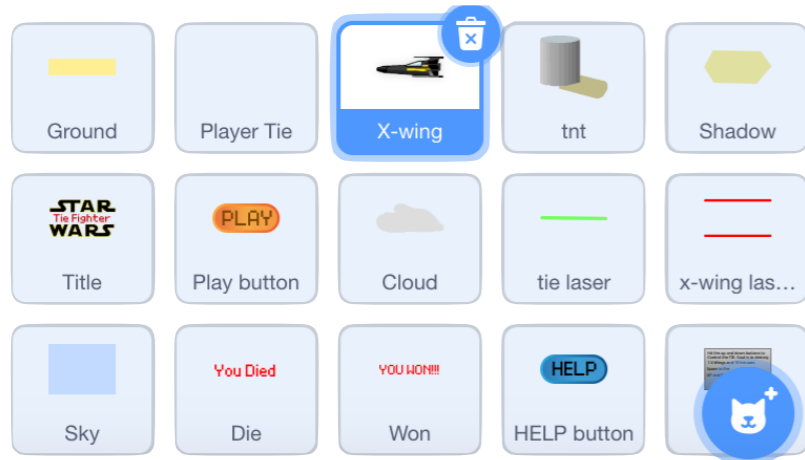
```

when clicked
  set x to 38
  set y to 37
  set size to 0%
  hide
  
```

```

when I receive Move
  forever
    go to front layer
    if TntEXPLOS = 15 and Xwingkills = 1 then
      show
      repeat 10
        change size by 10
      stop all
    if not then
      hide
  
```

You Win code



These are some sprites for the game.

# Photos of the Game

You Died

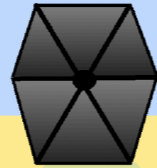


This is what happens if you crash.

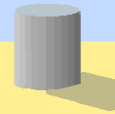
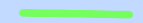
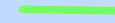
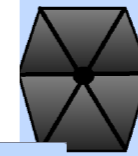
STAR  
Tie Fighter  
WARS

PLAY

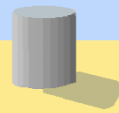
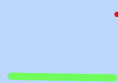
HELP



This is the menu of the game.



Playing the game



Playing the game

YOU WON!!!



This is if you win.

## **Here is the link to the game**

**For the page to the game**

<https://scratch.mit.edu/projects/398629146>

**Showing the code and commands**

[https://scratch.mit.edu/projects/398629146/  
editor/](https://scratch.mit.edu/projects/398629146/editor/)

## **References**

**Alivia Peterson and Elliott Peterson - friends**

**Coder Dojo Program**

**Help your kids with computer coding: a unique step-by-step  
visual guide, from binary code to building games. 2014. DK Publishing. New York**

**Scratch Website: <https://scratch.mit.edu/>**

## **Budget**

**I had no expenses for this project.**