

Scratch Week 3: Space invaders:

CREATE/TITLE: "SPACE MONSTER"


Spaceship:

- > Delete Sprite (Import new Sprite = Spaceship) Grow/Shrink. Place bottom/center.
- > **Events** > • When Green Flag is Clicked.
- > **Control** > • If/then (this is called a "conditional statement")
- > **Sensing** > • key *right arrow* key is pressed (place into box)
- > **Motion** > • Change x by 10
- > **Control** > • Forever Loop.
- Duplicate what you just did. 4x's
 - > • Change x by -10
- Clean Up/ Delete 'change by ___' b/c we want to go up and down. (x and y axis)
 - > **Motion** > • Change y by 10.



Spaceship Up, Down, Left & Right

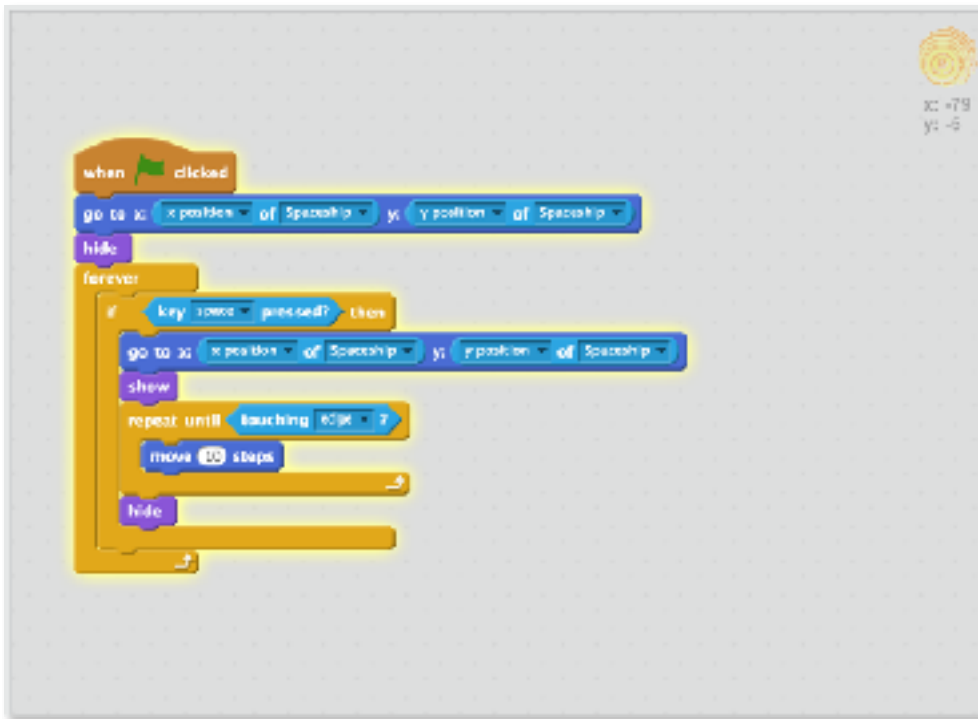
Fireball:

- > Select Paint Icon (little paintbrush icon bottom right) 
- Select the Ellipse.
- Make sure you have your fill color selected.
- Choose a color (not black).
- Make sure it's over the 'little x'
- Shrink it to get it to your desired size (should it be too big).
- Make sure fireball sprite is selected:
 - Rename it to "fireball" by selecting the "i" in the upper LH corner.
- > **Events** > • When Green Flag is Clicked.
- > **Motion** > • Go To x ___ y ____.
- > **Sensing** > • x Position of Spaceship .

- {Drag this into the “got to X “. (x position of spaceship)
- Repeat for, “y position”.
- No matter where the spaceship is, the fireball will follow.
- > Looks > • Hide
- > Control > • If/then (Conditional Statement)
- > Sensing > • Key Space is Pressed
 - Duplicate the ‘go to x.....’ statement from above. (from underneath the “When Green Flag is Clicked.”
- > Looks > • Show
 - Steps, allow you to move in the direction you are going.
- > Motion > • Move 10 Steps (place in “repeat until”)
- > Control > • Repeat Until
 - (place in “repeat until”) > • Move 10 Steps.
 - Drag into if/then conditional statement just underneath “show”
- > Sensing > • Touching the Edge
 - Connect ‘Touching the Edge’ into block in ‘Repeat Until’.
- > Control > • Forever
 - (just the if/then statement and its contents {Go to/show/repeat until/move}).

- Try it. We need to make sure the fireball moves in whatever direction your spaceship moves in.

- > Looks > • Hide (Connect to bottom of ‘repeat until’ statement wrapped inside the ‘if/else’ statement.
- Duplicate ‘go to x/y’.
- > Drag/Place between bottom ‘hide’ and ‘repeat until’.



Fireball

Spaceship: (“A” and “S”)

- > **Events** > • When Green Flag is Clicked.
- > **Motion** > • Point in the direction 90° (- Connect it to “when clicked”)
- > **Control** > • If/then - **conditional statement**.
- > **Sensing** > • Key A is pressed (- **Place into Conditional Statement Block**)
- > **Motion** > • turn L 15°
- > **Control** > • Forever
 - Slide underneath the, “point in direction 90°”.
- Duplicate for “s”.
- Delete the, “Point in the direction”.
- if the “s” key is pressed.
- > **Motion** > • turn R 15°

Fireball Duplicate these previous steps:

- Make sure the Fireball is firing in the same direction that the spaceship is flying in.
 - Duplicate/Drag (both) over Fireball.
 - Change the, “Point in direction” to 0°.
- > Looks > • Hide (- Nested between, “Repeat Until” and “Conditional Statement”.)



Spaceship “a” & “s” keys.

Monster:

- > Sprite > Choose New
 - **Adjust Size (If needed)** (- Make sure the “Monster” is selected.)
- > **Events** > • When Green Flag is Clicked.
- > **Motion** - Drag ‘Monster’ to a central place > • Go To x/y (**Because it changes our coordinates as we move our sprite around the page**).
- If your monster is going to the same place every time it’s going to get too predictable.
- > **Operators** > • Pick Random - Drag into x block. Change numbers to -220/+220
 - Change y block to +155
- > **Motion** > • Glide 1.5 secs.
 - Duplicate: Pick Random insert into the x block. Change y -135 (or bottommost #).
 - Connect these boxes.
- > **Looks** > • Show (- b/c we’ll want to hide him later. Between ‘go to’ & ‘flag’)
- > **Control** > Forever (wrap all).



Monster

Monster Win:

- > **Events** > • When Green Flag is Clicked.
- > **Control** > • If/then “conditional statement”.
- > **Sensing** > • Touching Spaceship (- insert into “if” conditional statement block).
- > **Control** > • Stop all. (- For ‘then’ conditional statement block.)
- > **Control** > • Forever Loop.



Monster Win



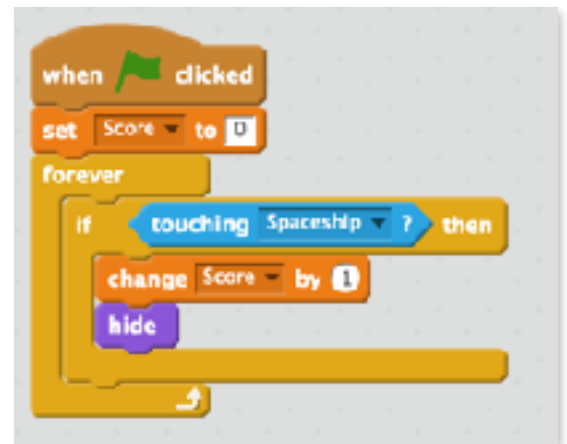
Monster Defeat

Defeat:

- To make sure the monster defeats you or you defeat it.
- > **Events** > • When Green Flag is Clicked.
- > **Control** > • If/then
- > **Sensing** > • Touching Spaceship
- > **Control** > • Forever Loop (- Place “conditional statement” inside ‘forever’).
- Then we want to hide it
- > **Looks** > • Hide


Score: (Monster Selected)

- > **Data** > • “Make a new Variable”.
- Name it “Score” (**for all sprites*) drag out.
- > • Set Score to 0
- Drag underneath “When Green Flag is Clicked” (within the code we just wrote “hide”).
- > • Change score by 1
- If able to shoot ‘Monster’ we want to change score by 1. (Nest within “conditional statement”).
- Drag entire code snippet over to the “Fireball” and copy it to that. (change the “touching” portion to “Monster”).
- *Note: Score will reset to 0 when green flag is clicked. The score is only kept for the spaceships “hits”.




Monster Score

Background:

- > Select “stage” where assets are stored.
- > Go to “Backdrops” tab.
- > Select Pic icon. 
- > Choose Background. (Can be accessed faster within the “Theme” then “Space” menu items.)
- > Hit “ok”.

Sound (Monster Selected):

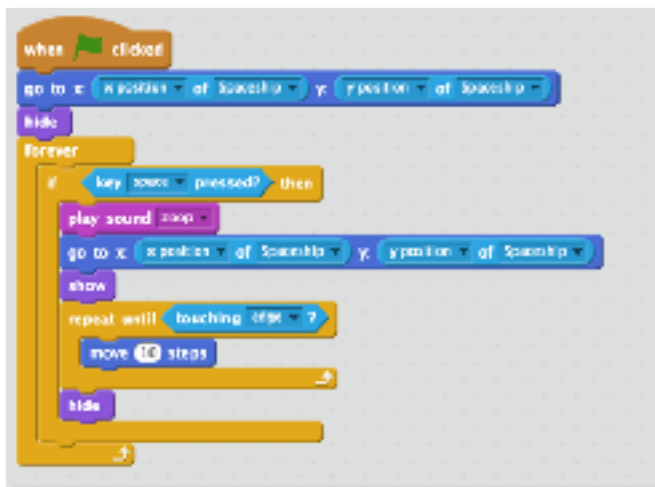
- > Select “Sounds” tab from the menu navigation.
- > Click on the speaker icon. 
- > Select “Music Loops” in the Category menu.
 - Music Loops (find one for the theme music that you may like).
- > Select “Scripts” tab in the navigation menu.
- > Events > • When Green Flag is Clicked.
- > Control > • Forever
- > Sound > • Play Sound sound you chose Until Done.



Sound (Monster)

Sound (Fireball Selected):

- > Repeat “Sounds Monster Selected” Steps for choosing a sound.
- > Sound > • Play sound you chose Sound.
- Place underneath first code block, first line within the ‘conditional statement’.



Sound (Fireball)