SCRATCH Scratch Invaders 1



Register/login at https://scratch.mit.edu

Make the invaders shuffle left and right in a row.



- 1) Download **squid**, **crab**, and **octopus** graphics from: https://codeclub67.github.io/images/invader.gif
- 2) Create a new sprite by uploading the *invader* images.

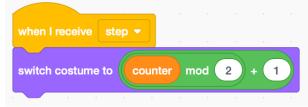
To make all the invaders move together, they need a clock to keep them in time.

- 3) Add code to the **stage** that beats out the **steps**, and keeps count (make a **counter** variable, available to all).
- 4) The squid costume is number 1. Rename the sprite as squid.
- 5) Add code to the Invader sprite to **switch costumes** based on the counter.

Counter mod 2 is 0 or 1 for even and odd counts (the remainder after dividing by 2).

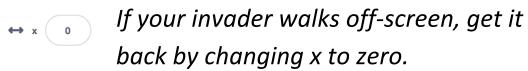
Add this to the squid costume number 1 (3 or 5 for crab and octopus).







6) Add code to make it move.



7) Add code to detect the **edge** and **turn** the invader around 180°, and set the invader Direction to *reflect*.

Instead of making more sprites, clone the original and then hide it.

- 8) Create a **local** variable (this sprite only) to tell if a sprite **is clone** ('yes' for clones)
- 9) Create a **global** variable (for all sprites) squid, crab, or octopus to position them.

Try it! See how they pile up at the edge – now make them all turn at once.

- 10) Change the **step** code, as below, to **broadcast** a turn instruction instead.
- 11) Add code to receive the turn instruction

```
touching (edge ▼ )? then
turn 5 180 degrees
move 20 steps
when Dicked
switch costume to invader
     is clone ▼ to no
     squid ▼ to (-150)
repeat 10
 create clone of myself ▼
hide
  when I start as a clone
       is clone ▼ to yes
  go to x: squid y: 115
          squid ▼ by 35
  change
  show
```

```
when I receive step v

if is clone = yes then

switch costume to counter mod 2 + 1

move 20 steps

if touching edge v ? then

broadcast turn v

when I receive turn v

if is clone = yes then

turn b 180 degrees

move 20 steps

change y by -20
```

Try adding crab and octopuses on rows lower down.

Save your code.