

## Scratch Programming

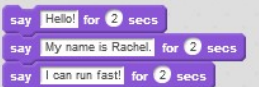
### Start Scratch

- Open Firefox Browser
- Go to <http://scratch.mit.edu/>
- Click on the Create Button in Top Left

### Hello World Program

- Put Your Name-Hello World in project title
- Go to the “Looks” blocks palette and drag three ‘say hello! for 2 secs’ block to script area

- First block says ‘Hello!’
- Second block says ‘My name is \_\_\_\_.’
- Third block says ‘I can run fast!’
- Double click to see what happens



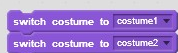
- Add the ‘forever’ block from the “Control” blocks palette



- Click on “Costumes” tab
- Click on each costume and watch the legs move



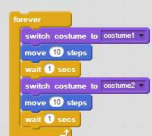
- Go to the “Looks” blocks palette and drag two ‘switch to costume’ blocks to script area




- Set the first block to ‘costume 1’
- Set the second block to ‘costume 2’

- Put a forever loop around ‘switch to costume’ blocks & run
- Add a ‘wait 1 secs’ block after each ‘switch to costume’ block

- Go to the “Motions” blocks palette
- Add a ‘move 10 steps’ block before each ‘wait 1 secs’ block

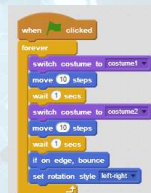


- Go to the “Events” block palette and add a  to all scripts

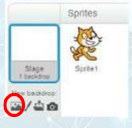


- Click green flag to start the scripts
- Click red octagon to stop the scripts

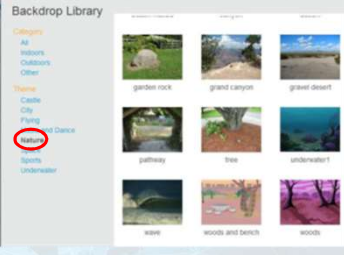
- Add ‘if on edge, bounce’ block to the walking forever loop
- Add ‘set rotation style’ block to the walking forever loop
- Set rotation style to ‘left-right’
- Run program



- Click the 'add background from file' icon that is in the lower left corner of screen



- In the backdrop library choose the "Nature" category
- Choose the 'hay field' background
- Run the final program

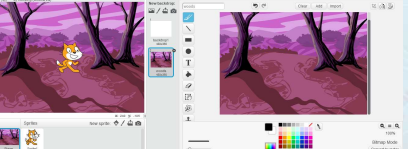


## To Save Scratch Programs

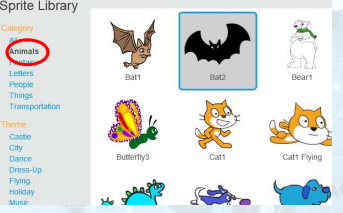
- Make sure project title has your name & the programs name
- Click on 'file' in the top left corner
- Click 'download to your computer'
- Make sure the location your saving to is your AspireIT USB
- Then click 'save'

## CatBat Program

- Put Your Name-CatBat in project title
- Click the 'add background from file' icon that is in the lower left corner of screen
- In the backdrop library choose the "Nature" category
- Choose the 'woods' background




- Click the sprite library button in the sprite system
- In the sprite library choose the "Animals" category+
- Choose the 'bat2' sprite




## Talking Bat Script

- Move the bat sprite into the opening between the trees
- Go to the "Events" block palette and add a **when clicked** to the script area
- Go to the "Looks" block palette
  - Add a 'hide' block
  - Add a 'show' block
  - Add a 'say' block & have block say 'BOO!'
- Add a 'wait 1 secs' block after the 'hide' block & change the 1 to 5




## Flying Bat Script

- Go to the "Events" block palette and add a **when clicked** to the script area
- Add a 'forever loop' block
- Inside the forever loop
  - Add a 'next costume' block
  - Add a 'wait 1 secs' block & change 1 to 0.5
- Test the bat's scripts




### Relaxed Cat Script

- Move the cat sprite into the walking path in the bottom left of the stage
- Go to the “Events” block palette and add a  to the script area
- Add a ‘repeat loop’ block & change 10 to 2
- Inside the repeat loop add
  - A ‘think’ block & have block say ‘Nice evening...’
  - Two ‘switch costume to’ blocks
  - Two ‘move 10 steps’ blocks
  - Two ‘wait 1 secs’ blocks

```

when clicked
  think Nice evening...
  repeat 2
    switch costume to costume1
    move 10 steps
    wait 1 secs
    switch costume to costume2
    move 10 steps
    wait 1 secs
  
```

### Scared Cat Script

- Go to the “Events” block palette and add a  to the script area
- Add a ‘wait 1 secs’ block & change 1 to 6
- Add a ‘say’ block & have block say ‘I’m outta here!!’
- Add a ‘forever loop’ block
- Inside forever loop add
  - Two ‘switch costume to’ blocks
  - Two ‘move 10 steps’ blocks & change 10 to 20
  - Two ‘wait 1 secs’ blocks & change 1 to 0.1
  - A ‘if on edge, bounce’ block

```

when clicked
  wait 6 secs
  say I'm outta here!!
  forever
    switch costume to costume1
    move 20 steps
    wait 0.1 secs
    switch costume to costume2
    move 20 steps
    wait 0.1 secs
    if on edge, bounce
  
```

### Talking Bat Script Timing


- Separate at ‘wait 5 secs’ block
- Remove ‘wait 5 secs’ block & replace with ‘when space key pressed’ block
- Add ‘broadcast message’ block & name message ‘BOO! Message’

```

when clicked
  hide

when space key pressed
  show
  say BOO!
  broadcast BOO! message
  
```

### Scared Cat Script Timing

- Separate at ‘wait 6 secs’ block
- Remove  block & ‘wait 6 secs’ block
- Add a ‘when I receive BOO! message’ block to top of scared cat script

```

when I receive BOO! message
  say I'm outta here!!
  forever
    switch costume to costume1
    move 20 steps
    wait 0.1 secs
    switch costume to costume2
    move 20 steps
    wait 0.1 secs
    if on edge, bounce
  
```

- Run the story to make sure final programming works
- Save story to AspireIT USB

## Create the Following in Scratch

- Animate Your Name
- Interactive Pet
- Create Your Own Story