

# 6 STAGE

## DESERT RALLY RACE

### ★ Chapter Objective

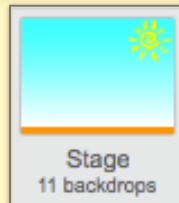
Learn how to create a scrolling game

### The Game

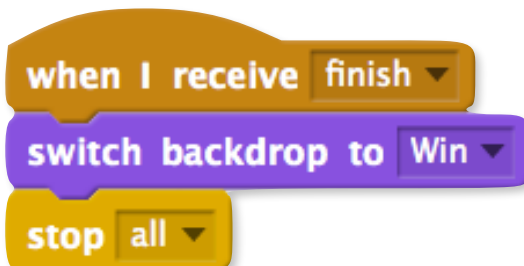
Control Scratchy's car to avoid obstacles & run away from the Dark Minions in order to reach the Great Pyramid of Giza & find Mr. Busse.

1 \* Download file "Scratch Stage 6" → [Scratch Stage 6](#)

2 Click the "Stage"



3 When the player wins by **Finishing** the game, switch the Stage background to the "Win" costume



4 Create a Timer for the Background  
• Every 1 second the "Time" will increase by 1



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# Program the background to change over time from Day to Night

**\*\*Hint, use the Duplicate tool to save some time!!!**



The image displays a Scratch script and a backdrop library. The script is as follows:

```
when green flag clicked
  forever loop
    repeat 8
      switch backdrop to Day_1
      wait 0.5 secs
      switch backdrop to Day_2
      wait 0.5 secs
      switch backdrop to Day_3
      wait 0.5 secs
      switch backdrop to Day_4
      wait 0.5 secs
    repeat 4
      switch backdrop to Night_1
      wait 0.5 secs
      switch backdrop to Night_2
      wait 0.5 secs
      switch backdrop to Night_3
      wait 0.5 secs
      switch backdrop to Night_4
      wait 0.5 secs
      switch backdrop to Night_5
      wait 0.5 secs
      switch backdrop to Night_6
      wait 0.5 secs
```

The backdrop library on the right contains 10 items:

- 1 Day\_1 480x360
- 2 Day\_2 480x360
- 3 Day\_3 480x360
- 4 Day\_4 480x360
- 5 Night\_1 480x360
- 6 Night\_2
- 7 Night\_3 480x360
- 8 Night\_4 480x360
- 9 Night\_5 480x360
- 10 Night\_6 480x360

Red arrows connect the script blocks to the corresponding backdrop items in the library.

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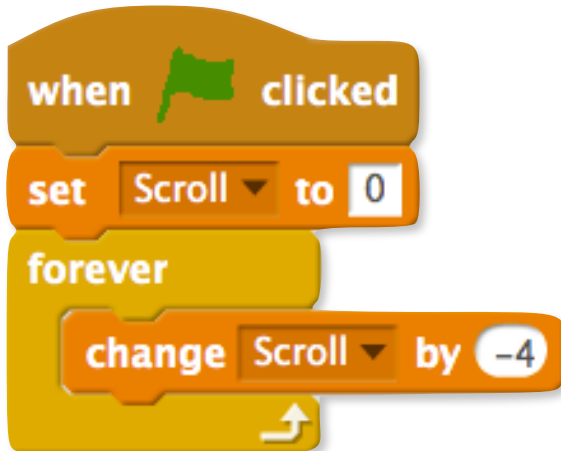
Click the "Road 1" Sprite



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Program the "Scroll" Variable

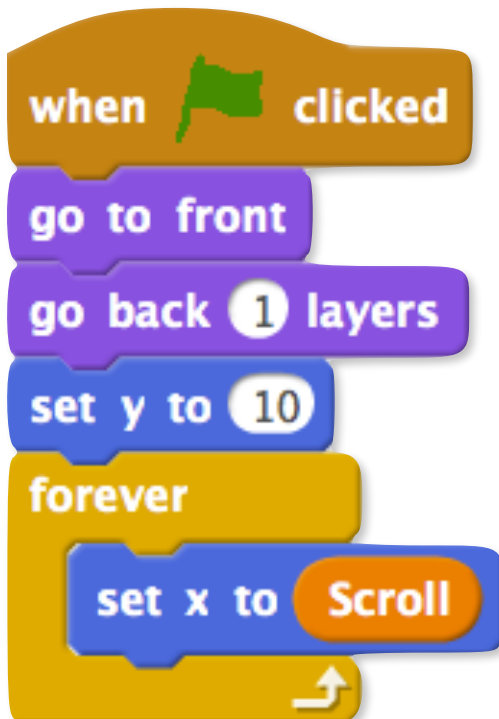
- Set Scroll to 0 when the game starts **AND** have it continuously change by -4



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Set the position of "Road 1"

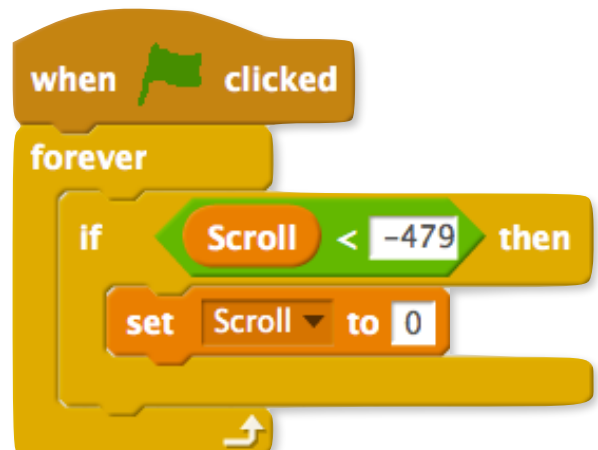
- Set "Y" to 10 so the road does not move up or down
- Set "X" to **Scroll**



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Program the Scroll to restart

- Once "Scroll" reaches the number "-479" it will restart to 0.



10

Click the "Road 2" Sprite



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Program "Road 2" to follow right behind "Road 1"

- The number "480" is the entire length of Scratch.

```
when green flag clicked
  go to front
  set y to 10
  forever
    set x to Scroll + 480
```

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Click the "Car" Sprite



13

Set the

- **Costume**
  - **Size**
  - **Starting Point**
- of "Car" at the beginning of the game

when clicked

switch costume to Car

set size to 60 %

go to front

go to x: -150 y: -105

If the car touches the Black color of the road it will increase height by +10.

\*This will make it look like the car is bouncing on a bumpy road

forever

change y by -5

if touching color ? and y position &lt; -105 then

change y by 10

wait 0.05 secs

When the "up arrow" is pressed then the car will "jump"

if key up arrow pressed? then

broadcast jump and wait

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Program the "Jump" Command

- Jump will make the car jump in the air by  $10 \times 15 (=150)$  and then fall back down until it touches the black color of the road.

when I receive jump

repeat 15

change y by 10

repeat until touching color ? and y position &lt; -105

change y by -5

15

### Program the Car to move Right or Left

```

when green flag clicked
  forever loop
    if key right arrow pressed? then
      move 5 steps
    if key left arrow pressed? then
      move -5 steps
  
```

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### Add Instructions for the player at the beginning of the game:

```

when green flag clicked
  say Press Left or Right arrows to move, UP key to jump! for 3 secs
  say Avoid the obstacles! for 2 secs
  
```

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### Create a New Variable called "Life"

- When the game starts, set the player's life to "4"
- When the player has less than 1 life, switch the car's costume to "Boom!"

```

when green flag clicked
  set Life to 4
  wait 1 secs
  forever loop
    if Life < 1 then
      switch costume to Boom!
      stop all
  
```

18

Click the "Gobo" Sprite



19

Set the

- Size
- Starting Point
- Starting Angle
- and uses the "Go To" block so Gobo always follows the car sprite

```

when green flag clicked
  set size to 30 %
  go to front
  go back 1 layers
  show
  point in direction 90
  go to Car
  
```

Once the player's life is LESS THAN 4 lives

```

forever
  repeat until Life < 4
  
```

Gobo will bounce up by "10" and will then continue to fly upward in the air randomly

```

    change y by 10
    wait 0.05 secs
    go to Car
    point in direction pick random 15 to 345
    glide 1 secs to x: pick random 250 to -250 y: 180
  
```

When Gobo touches the top of the screen (y position = 180) make him disappear with the "Hide" block

```

if y position = 180 then
  hide
  hide
  
```

20 Click the "Fabu" Sprite



21 Duplicate Gobo's program and drag it into "Fabu's" Sprite



22 Change from "1" layer to "2" layers

```
when clicked
  set size to 30 %
  go to front
  go back 2 layers
  show
  point in direction 90
  go to Car
```

```
forever
  repeat until Life < 3
    change y by 10
    wait 0.05 secs
    go to Car
  point in direction pick random 15 to 345
  glide 1 secs to x: pick random 250 to -250 y: 180
  if y position = 180 then
    hide
  hide
```

Change from "4" lives to "3" lives



23 Click the "Pele" Sprite



24 Duplicate Gobo's program and drag it into "Pele's" Sprite



25 when clicked

Change size from "30%" to "25%"

set size to 25 %

go to front

Change from "1" layer to "3" layers

go back 3 layers

show

point in direction 90

go to Car

forever

Change from "4" lives to "2" lives

repeat until Life < 2

change y by 10

wait 0.05 secs

go to Car

point in direction pick random 15 to 345

glide 1 secs to x: pick random 250 to -250 y: 180

if y position = 180 then

hide

hide

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Click the "Bush" Sprite



when clicked

switch costume to Bush1

hide

27

Set the Starting Point of the bush and have it spawn every 8 seconds

forever

wait 8 secs

go to x: 230 y: -130

show

Program the Bush to move left (at a speed of -4) until it touches the end of the screen (-230)

repeat until x position < -230

change x by -4

Program the Bush to hide when it touches the left edge of the screen

hide

next costume

28

Add a program so if the Car touches the Bush sprite, the player losses 1 life.

when clicked

wait 1 secs

forever

if touching Car ? and not Life = 0 then

change Life by -1

wait 6 secs

29

Program the Bush to disappear when it receives the "Finish" signal.

when I receive finish

hide

30

Click the "Tower" Sprite



31

Duplicate all of the Bush Scripts and drag them into the "Tower" Sprite



32

Change costume from "Bush1" to "Tower1"



```

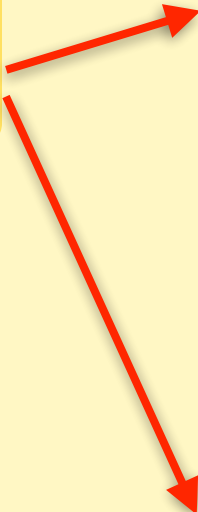
when clicked
  switch costume to Tower1
  hide
  forever
    wait 18 secs
    go to x: 230 y: -130
    show
    repeat until x position < -230
      change x by -4
    hide
    next costume
  
```

Change from "8" secs to "18" secs



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Keep these two programs the same



```

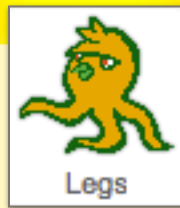
when clicked
  wait 1 secs
  forever
    if touching Car ? and not Life = 0 then
      change Life by -1
      wait 6 secs
  
```

```

when I receive finish
  hide
  
```

34

Click "Legs" Sprite



35

Program "Legs" to forever change between his 2 costumes



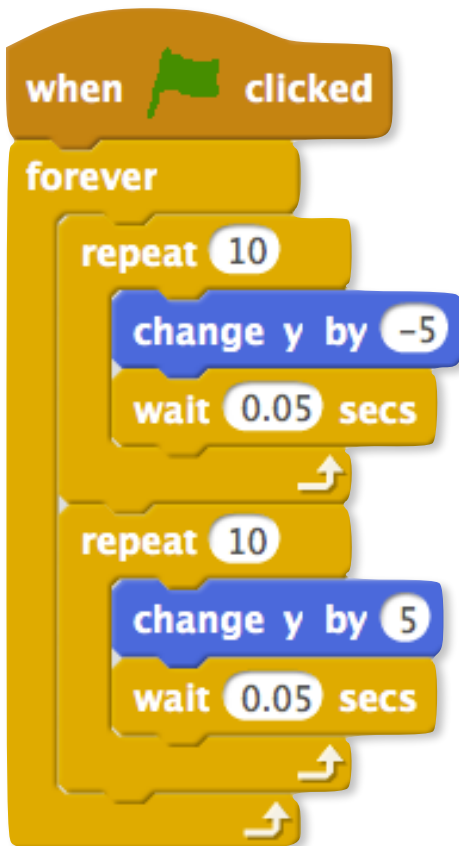
36

Program the Bush to disappear when it receives the "Finish" signal.



37

Program a floating effect for Legs.



38

Make **Legs** move appear and move randomly in the game

```

when green flag clicked
  set size to 50 %
  hide
  forever
    wait pick random 15 to 20 secs
    go to x: 230 y: 70
    show
    repeat until x position < -230
      change x by -5
    hide
  
```

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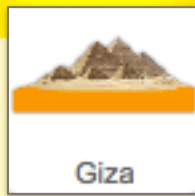
Add a program so if the **Car** touches the **Legs** sprite, the player loses 1 life.

```

when green flag clicked
  wait 1 secs
  forever
    if touching Car ? and not Life = 0 then
      change Life by -1
      wait 6 secs
  
```


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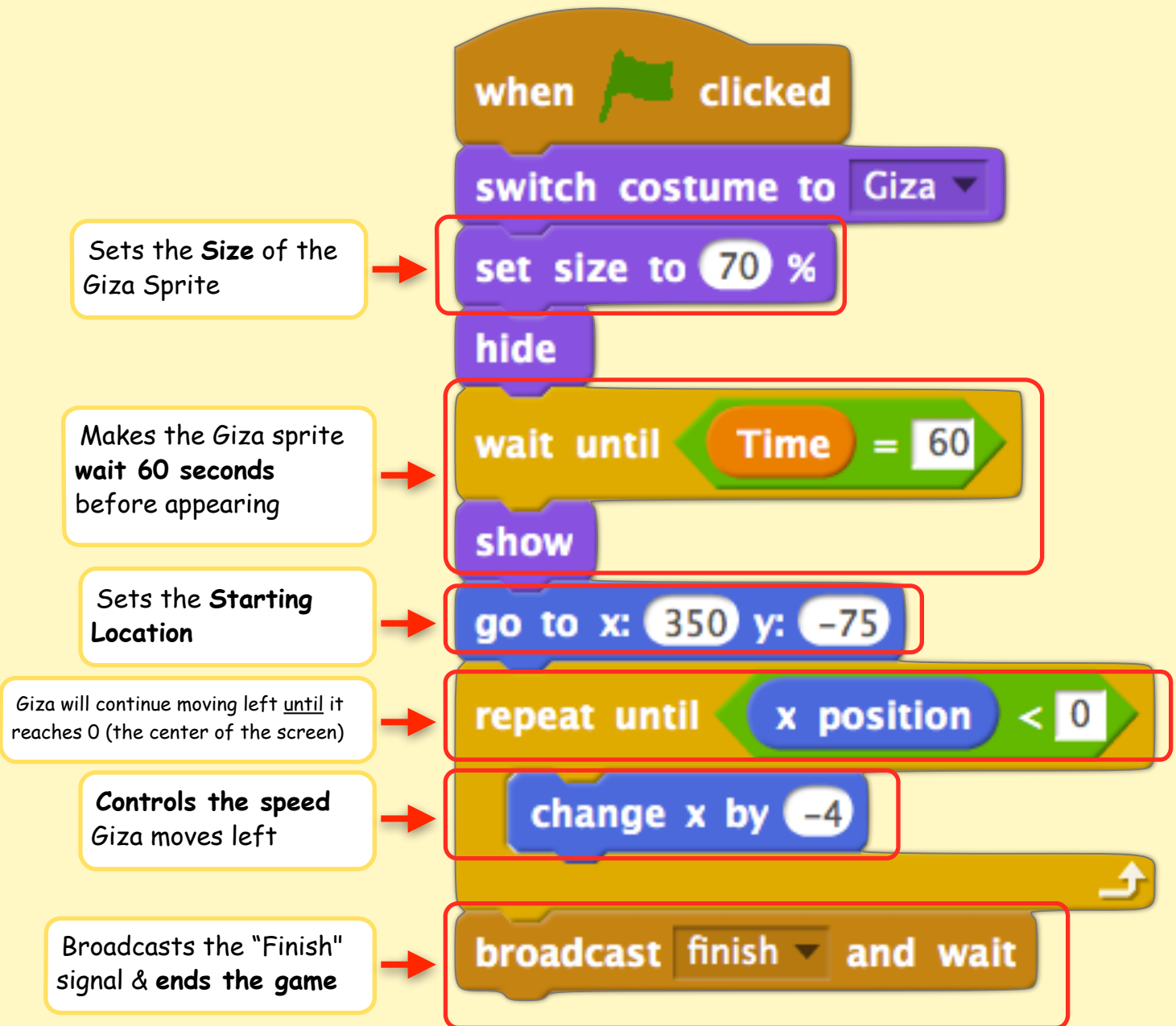
Click "Legs" Sprite



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Write a script so the Pyramids of Giza will appear from the right after 60 seconds.

- Once Giza reaches the middle of the screen , it broadcasts the "Finish" signal and ends the game.



You just created a driving obstacle game, now drive to the Pyramids of Giza!!!!