8 STAGE

SORCERER'S CHALLENGE
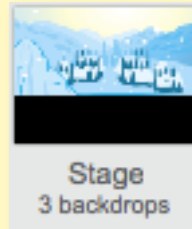
★ Chapter Objective

Learn how to control the Stage with multiple costumes & create some advance animations
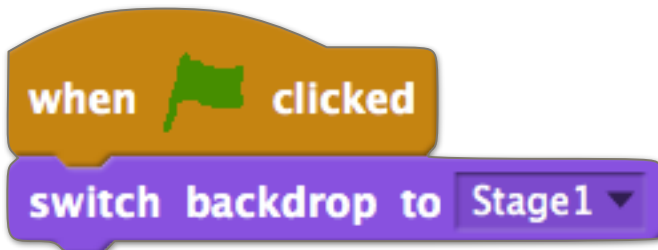
The Game

Play a "button-mashing" game to make Scratchy fly across all three levels to collect the second Magic Gem.

1 * Download file "Scratch Stage 8" → **Scratch Stage 8**

2 Click the "**Stage**" Sprite →

Stage
3 backdrops

3 Program the Background to start on "Stage 1"

when 🏴 clicked
switch backdrop to Stage1 ▾

4 Program the Game to start on "Level 1"

when 🏴 clicked
set LEVEL ▾ to 1

5 Program the Game to change levels when it receives the "next level" message

when I receive next level ▾
change LEVEL ▾ by 1

6 Make the **backgrounds change** only <u>when</u> the game receives the message **"next level"**

```
when I receive next level ▼
next backdrop
wait 1 secs
```

7 Set the **Game Timer to 15.0 seconds**

```
when 🚩 clicked
set TIME ▼ to 15.0
```

8 When the game starts:

- **Reset the Timer** →

- **Create a Clock countdown** →

- **If Time is 0 seconds, Broadcast "LOSE" screen** →

```
when I receive Start ▼
reset timer
forever
    set TIME ▼ to 15 – timer
    if TIME < 0 then
        broadcast LOSE ▼
```

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9 Click the **"Harry-Catter"** Sprite →

Harry-Catter

10 Set Scratchy's:
- **Starting Position**
- **Costume**

```
when 🚩 clicked
go to x: -135 y: 65
switch costume to HarryCatter2 ▼
go to front
```

11 Program Scratchy to **float up & down.**

```
when 🚩 clicked
forever
    change y by 2
    wait 0.3 secs
    change y by -2
    wait 0.3 secs
```

12 Program the controls of how Scratchy moves.

```
when I receive Start
forever
    if < key [left arrow] pressed? > and < key [right arrow] pressed? > then
        move (0) steps

    if < key [left arrow] pressed? > and < not < key [right arrow] pressed? > > then
        switch costume to [HarryCatter1]
        move (10) steps
        wait until < key [right arrow] pressed? > and < not < key [left arrow] pressed? > >
        switch costume to [HarryCatter2]
        move (10) steps
```

13 When Scratchy **touches the "Magic" Sprite the FIRST & SECOND times:**
- • Play sound "Fairydust"
- • Play sound "Zoom"
- • Broadcast next level
- • Set Scratchy's Starting position
- • Have Scratchy say. "Next Level"

When Scratchy touches the "Magic" Sprite the **THIRD** time:
- • Broadcast **"WIN"** screen

```
when I receive Start
repeat (2)
    wait until < touching [Magic] ? >
    play sound [Fairydust]
    play sound [Zoom]
    broadcast [next level]
    go to x: (-135) y: (65)
    say [Next Level!] for (0.5) secs

say [Get the Magic Gem] for (1) secs
wait until < touching [Magic] ? >
broadcast [WIN]
```

14 Click the **"Magic"** Sprite ➡️

Magic

15 Set Magic Sprites:
- **Starting Position**
- **Costume**
- **Color Effect animation**

```
when 🏳 clicked
go to x: 0 y: 0
switch costume to Magic Gate1 ▾
forever
    change color ▾ effect by 10
```

16 Change the costume of the "Magic" Sprite when the level changes
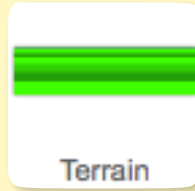
```
when I receive next level ▾
next costume
```

17 Program the Magic Sprite to **float up & down.**

```
when 🏳 clicked
forever
    change y by 2
    wait 0.3 secs
    change y by -2
    wait 0.3 secs
```

18 Click the **"Terrain"** Sprite →

Terrain

19 Program the **Starting Point** of the Terrain and a changing costume effect

```
when [green flag] clicked
go to x: 0 y: 0
switch costume to Terrain_1
forever
    wait 0.05 secs
    switch costume to Terrain_2
    wait 0.05 secs
    switch costume to Terrain_3
    wait 0.05 secs
    switch costume to Terrain_1
```

20 Create a **Color Changing** effect for the Terrain

```
when [green flag] clicked
forever
    change color effect by 1
```

21 Click the **"Titles"** Sprite →

Titles

22 Program the **Starting Point** of the Titles sprite and the **sound effects** of the Game

```
when 🏳 clicked
go to x: 0 y: 0
switch costume to Instruction ▼
repeat 3
    play sound Pop ▼
    show
    wait 0.4 secs
    hide
    wait 0.1 secs
switch costume to Ready ▼
show
play sound WaterDrop ▼ until done
wait 0.5 secs
set instrument to 87
switch costume to Countdown_3 ▼
play note 60 for 0.8 beats
switch costume to Countdown_2 ▼
play note 60 for 0.8 beats
switch costume to Countdown_1 ▼
play note 60 for 0.8 beats
switch costume to Go ▼
play note 72 for 0.8 beats
wait 0.5 secs
hide
broadcast Start ▼
forever
    set volume to 50 %
    play sound Xylo1 ▼ until done
```

23 Program the **WIN** screen

```
when I receive [WIN ▾]
switch costume to [Win ▾]
show
stop [all ▾]
```

24 Program the **LOSE** screen

```
when I receive [LOSE ▾]
switch costume to [Lose ▾]
show
stop [all ▾]
```

Get Ready for a Race
      and get the Second Magic Gem!!!