Cats and Dogs Game (arrow-keys version)

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The *CatsAndDogs* Game

Lives 0  Points 320

Game Over -- Points: 320
The CatsAndDogs Game

### Code Snippet

```plaintext
when [green] clicked
    set [green] Points [yellow] to [green] 0
    set [green] Lives [yellow] to [green] 5
    go to x: [green] pick random [-100] to [green] 100 [yellow] y: [-100]

repeat until [green] Lives = 0
    repeat until touching [Cat1 Flying]
        if [green] key [right arrow] pressed?
            change x by 4
        end if
        if [green] key [left arrow] pressed?
            change x by -4
        end if
        change [green] Points [yellow] by 1
        change [green] Lives [yellow] by -1
        start sound [dog1]
        broadcast [contact!]
        say [join Game Over -- Points: [green] Points]
    end repeat
    broadcast [done!]
```
The *CatsAndDogs* Game

**when** clicked
- **hide**
- **set** NumCats **to** 5
- **repeat** NumCats
  - **create clone of** myself
- **forever**
  - **hide**

**when I start as a clone**
- **forever**
  - **StartCat**
  - **show**
  - **repeat until** y position < -140
    - **change x by** pick random -2 to 2
    - **change y by** pick random -4 to -1

*Here’s what each cloned cat is supposed to do*
Define StartCat

Here's what to do if a cat needs to start

Hide

Wait pick random 0 to 1 seconds

Set size to pick random 30 to 80%

Go to x: pick random -220 to 220 y: pick random 60 to 120

Show

When I receive contact!

StartCat

If a cat hits a dog, the cat gets to start over
Game Screen
Make the Cats Fall Faster When a Cat Falls All the Way Through

- Set `FallSpeed` to 0
- Repeat `NumCats`
  - Create clone of `myself`
  - Go to x and y positions
  - Wait for random time
  - Set size to random size
- Hide

- When I start as a clone
  - Stop other scripts in sprite
  - Show `StartCat`

- Repeat until `y position` < -140
  - Change `x` by random
  - Change `y` by random `FallSpeed`
- Set `FallSpeed` to `FallSpeed` + 0.25

- Define `StartCat`
- When I receive `done`
- When I receive `contact`

Oregon State University
Computer Graphics
Make the Cats Fall Faster When the Dog Reaches Multiples of 100 Points (100, 200, 300, …)
The Game Development Challenge:

“Make the game easy to play, but difficult to master.”

Things to Try Changing:

1. Start with a different number of cats
2. Change the range of cat sizes
3. Change the range of X and Y that each cat moves as it falls (vertical speed and horizontal weaving)
4. Change the size of the dog
5. Give the dog less or more lives to start
6. Change how much the dog moves when the Left or Right Arrow is pressed
7. When a cat hits a dog, what other sounds could you play besides “woof”?
8. Where else could you add sounds?

What makes the game harder to play? What makes it easier?