

CoderDojo Athenry

"Above all, be cool"



Every week:

- ✓ Sign in at the door

If you are new:

- ✓ Fill in Registration Form
- ✓ Ask a Mentor how to get started

Make sure you are on the Athenry Parents/Kids Google Group: email coderdojoathenry@gmail.com

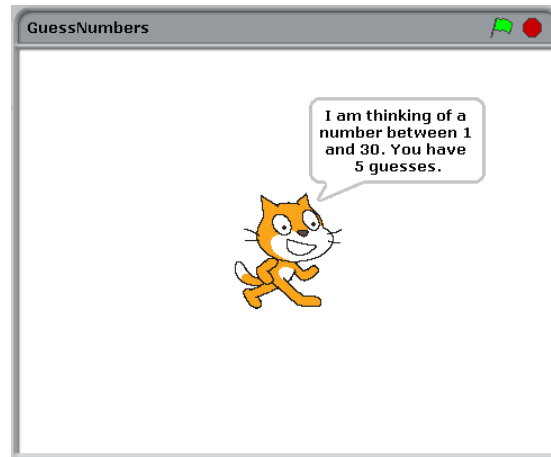
CoderDojo Athenry

Scratch Beginners



Code and notes by Michael Madden, 2012

Today's Ninja Challenge: Write a **Number Guessing Game**!



Today's **Big Ideas**

Input &
Output

Decisions &
Comparing

Variables

How to Get Started

Plan the Design

- Think first!
- Start simple: add more later

Create First Character

- Design it: appearance & behaviours
- Write script (Code) to control its behaviours

Test It

- Any bugs? (Not working as expected)
- Debug and Improve

Extend It

- More Characters, More Behaviours, More Testing!

Reminder
from last
time

How to Make Progress

Our Creative Coding Rule:
There's More Than One Way to Do It!

Try things out and iterate
Save copies: go back if it doesn't work

Talk to others, share ideas, learn from
their ideas, improve on their ideas!

Examine other people's code on the
Scratch website & upload your code

Reminder
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time

What We Need To Figure Out

Pick a random number
and store it

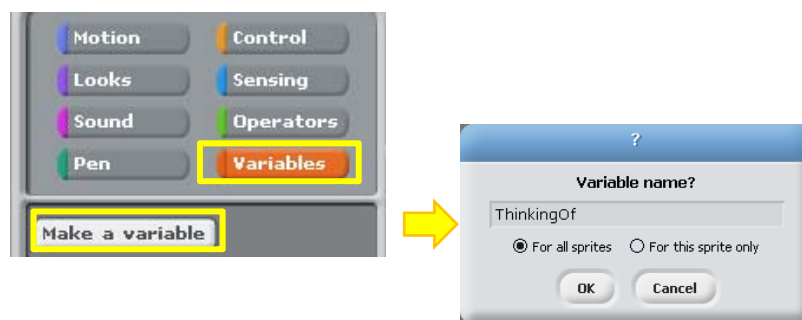
Ask the player to guess it
and store their answer

Test if it's right:
Display "Correct!" if it is

Test if it's too high or too low;
Display messages

Give them 5 guesses

Create a Variable to Hold a Random Number



Tip:
Clear this checkbox
so it is not shown
on screen



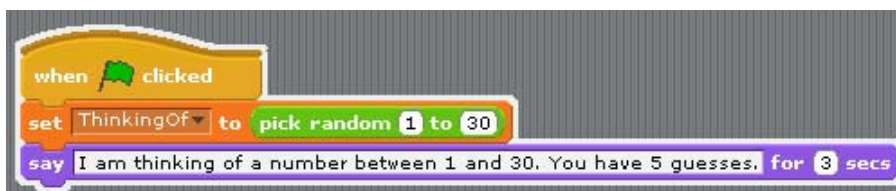
When Flag is Clicked:
Pick Random Number,
Display "I am thinking of ..."



I am thinking of a number between 1 and 30. You have 5 guesses.



When Flag is Clicked:
Pick Random Number,
Display "I am thinking of ..."



Ask Player to Guess It, Store Answer



Ask Player to Guess It, Store Answer

Need another variable!
I've called it **Guess**.



Test whether Guess is Right, Too High, Too Low



Test Whether Guess is Right, Too High, Too Low

```
if <Guess = ThinkingOf>
  say That's CORRECT! for 2 secs
  stop all
if <Guess > ThinkingOf>
  say No, that guess is too high, for 2 secs
```

You need to complete this ...

Give Player Five Guesses



Give Player Five Guesses

```
when clicked
  set ThinkingOf to pick random 1 to 30
  say I am thinking of a number between 1 and 30. You have 5 guesses. for 30 secs
  repeat 5
    ask What is your guess? and wait
    set Guess to answer
    if Guess = ThinkingOf
      say That's CORRECT! for 2 secs
      stop all
    if Guess > ThinkingOf
      say No, that guess is too high. for 2 secs
    if Guess < ThinkingOf
      say No, that guess is too low. for 2 secs
  say join Game over. The right answer was ThinkingOf for 2 secs
```

Annotations:

- Yellow arrow pointing to the `repeat 5` block.
- Yellow arrow pointing to the `say join Game over. The right answer was ThinkingOf for 2 secs` block.
- Yellow callout box: "Stop the script so that it won't ask for more guesses." pointing to the `stop all` block.
- Blue callout box: "Use Join to put a variable value in a message" pointing to the `join` block.

More Things to Try ...

1. Add sound effects!

Hint:

Go to sprite's Sound tab, import sounds

Add commands to play sounds

2. Add a timer!

Hint:

Add another variable called Timer.

Add another block:

When flag is clicked, set it to 60

Repeat until 0: change by -1, wait a second

Time up: stop all scripts.

3. Other ideas?

At the End ...

Upload your project to the Scratch Website

user: **cdatheny** password: _____

Access it
from home

Improve it

Show your
friends!

