

Seattle Coder Dojo Scratch Drawing Programming Challenges

<http://scratch.mit.edu>

- (1) Draw a triangle, a pentagon, an octagon, a circle.
- (2) Draw a house.
- (3) Draw a smiley face. Pen up. Pen down.
- (4) Draw a sun, a circle with detached “rays” coming out.
- (5) Draw a row of houses, with a space between each house.
- (6) Using “ask” and “answer” blocks, write a program that asks the user to enter a number and then draws a square of that size.
- (7) Using “ask” and “answer” blocks, write program that asks the user a trivia question, gets their answer, and tells them if they are right or wrong.
- (8) **CHALLENGE OF THE DAY** Draw an 8x8 chess/checkers board, with the dark squares filled in.
- (9) Using a variable, draw a “square spiral”, where each side is a 10 pixels longer than the last. Make your square spiral fill the screen.
- (10) Using a variable, draw a set of “nested” squares, with each square inside the previous one.
- (11) Using a variable, draw a stack of boxes, with each box smaller than the one below it.

More!

Some people at the Dojo asked me for more exercises in Scratch. We’ll have more exercises at future Dojo’s but there are a huge number of Scratch tutorials on the web where you can learn lots of things. I did a quick search on YouTube and found a series of tutorials that I think are pretty good. The guy is using an older version of Scratch so some parts look a bit different, but it’s really the same as the one you’re using. As a warm-up, look at this short video of a bouncing ball. Can you make a program to do this?:

http://www.youtube.com/watch?v=BJSR80Apz-g&list=PLuHwEBfarFA2yYrPLLLsykEp1VVR6_J5d

You can watch this video to learn how to make a whole pong game:

http://www.youtube.com/watch?v=9TYA3XTpYGM&list=PLuHwEBfarFA2yYrPLLLsykEp1VVR6_J5d

Watch the video carefully and listen carefully. You may have to watch the video several times. Follow along by doing what he does, and you will learn a lot about making a game.

Here's another one he did where you can learn about variables (very important!):

http://www.youtube.com/watch?v=9X5uFaMRWkE&list=PLuHwEBfarFA2yYrPLLLsykEp1VVR6_J5d

Here's another where you learn how to make a ball bounce realistically:

http://www.youtube.com/watch?v=4YoGkwV7D9c&list=PLuHwEBfarFA2yYrPLLLsykEp1VVR6_J5d

Don't worry if you don't understand these videos right away. But watch them a few times and you will learn a lot.

Also, don't forget that if you haven't done these code.org exercises yet they are very good for getting started. Even if you are already into Scratch I recommend doing these:

Great exercises for beginners: <http://learn.code.org/s/1/level/2>