



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences –particularly students of color and girls – by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at www.projectexploration.org/stemathome.

In this activity, you will:

learn about computer programming and code your own Angry Birds game on Code.org



Supplies Required:

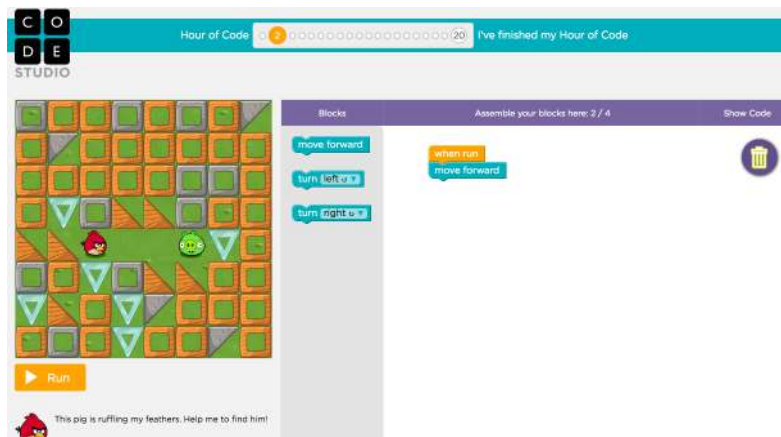
Computer
Keyboard

Video

Watch this video to learn about what coding is: <https://tinyurl.com/y36wscnx>

Overview

As computers get more powerful, they can complete even more complex tasks. Behind the apps on your phone, the videos you watch, your favorite games and websites exists a set of instructions and rules that the computer follows to make it all possible. Software engineers are people who study how computers work and coding is the language they use to create the programs we use. Most programming languages are written with text, block coding uses separate blocks that contain a piece of instruction for the computer. Have you played Angry Birds? Now you will learn to write block code to make your own Angry Birds game!



Instructions

1. Watch this introduction video to learn about block coding and how to use it <https://tinyurl.com/y6kw2w57>
2. Go to the [Code.org](https://code.org) website for the activity <https://tinyurl.com/npgsm7d>
This is where you will be writing your code and making your game.
3. **Problem** - What do we want to solve? Can you help me catch the naughty pig? Stack a couple of "move forward" blocks together and press "Run" to help me get there.
4. **Hypothesis** - Make a prediction! What do you think will happen when using the different "Move Blocks"? Draw out your prediction.
5. **Experiment** - Test it out and make observations! Drag the blocks into place and connect them. Try to solve the challenges.
6. **Analysis** - Based on your observations what do we know now? What do you know about coding that you didn't know before?
7. **Conclusion** - Was your hypothesis correct or incorrect? Can you complete the other Angry Bird challenges?

Additional Resources

1. There are more coding challenges to explore at [Code.org](https://code.org)!
Like Minecraft? Try these: <https://code.org/minecraft>
Or code a dance party here: <https://code.org/dance>
2. Check out Scratch for more block coding fun: <https://scratch.mit.edu/>

Share It Out

Share on social media: Share your game with your friends and family! Record a video of them playing and share on social media.

#Coding
#HourofCode
#ProjectExploration
#STEMatHome

For more activities like this one, go to www.projectexploration.org/stemhome. If you're interested in learning more about Project Exploration and our free events, programs, and activities, please find us on social media and be sure to follow!



Call or text us for help: 312-772-6634

www.projectexploration.org