

EDUCATOR GUIDE

Pong Game

With this guide, you can plan and lead a one-hour workshop using Scratch. Participants will gain experience with coding as they design a bouncing ball game.



Workshop Overview

Here's a suggested agenda for a one-hour workshop:



IMAGINE
10 minutes

First, gather as a group to introduce the theme and spark ideas.



CREATE
40 minutes

Next, help participants as they make games, working at their own pace.



SHARE
10 minutes

At the end of the session, gather together to share and reflect.

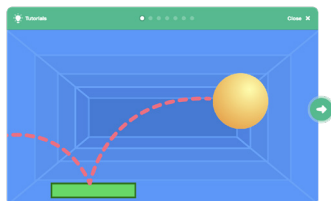
Get Ready for the Workshop

Use this checklist to prepare for the workshop.

Preview the Tutorial

The *Pong Game* tutorial shows participants how to create their own projects. Preview the tutorial before your workshop and try the first few steps:

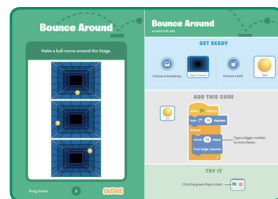
scratch.mit.edu/pong



Print the Activity Cards

Print a few sets of *Pong Game* cards to have available for participants during the workshop.

scratch.mit.edu/pong/cards



Make sure participants have Scratch accounts

Participants can sign up for their own Scratch accounts at scratch.mit.edu, or you can set up student accounts if you have a Teacher Account. To request a Teacher Account, go to:

scratch.mit.edu/educators

Set up computers or laptops

Arrange computers so that participants can work individually or in pairs.

Set up a computer with projector or large monitor

You can use a projector to show examples and demonstrate how to get started.

Imagine

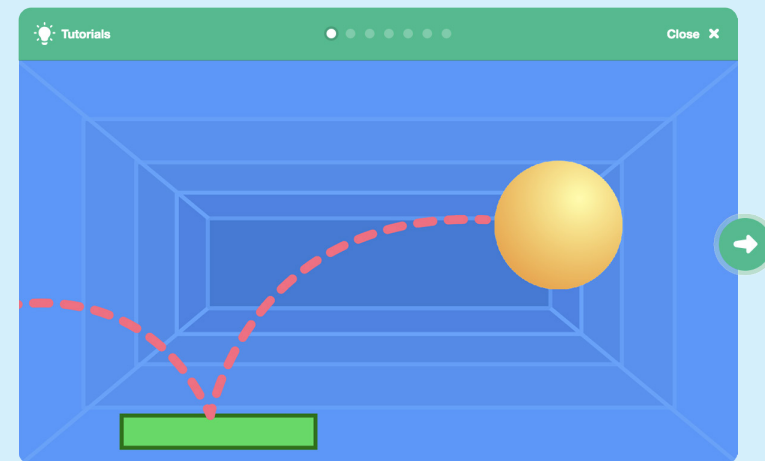


IMAGINE

Begin by gathering the participants to introduce the theme and spark ideas for projects.

Provide Ideas and Inspiration

Show the introductory video for the *Pong Game* tutorial. The video shows pong games with a variety of themes, including everything from soccer to a magic potion-themed Pong game.



View at scratch.mit.edu/pong or vimeo.com/llk/pong

Warm-up Activity: Bouncing Ideas

To get participants thinking about a theme for their game, take turns calling out a theme, such as pizza pong or flower pong and brainstorming ideas for the type of images they could use to represent the theme.

Demonstrate the First Steps



Demonstrate the first few steps of the tutorial so participants can see how to get started.

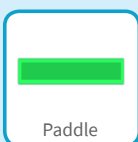
Go to the Scratch website. Click Create.
Choose a new backdrop:



Choose a ball sprite and make it bounce around:



Add a paddle sprite and control it with the mouse:



Create



Support participants as they create pong games, on their own or in pairs.

Start with Prompts

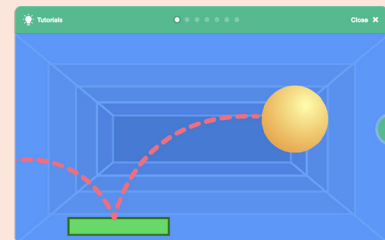
Ask participants questions to get started

What background do you want for your game?

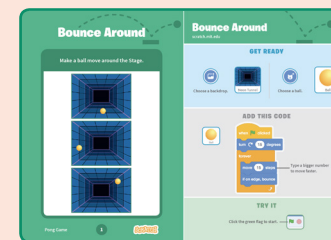
What color or type of ball?

Provide Resources

Offer options for getting started



Some participants may want to follow the online tutorial:
scratch.mit.edu/ideas



Others may want to use the printed activity cards:
scratch.mit.edu/ideas

Suggest Ideas for Starting

- Choose a backdrop
- Choose or draw a ball sprite and make it bounce around
- Add a paddle sprite that you can control
- Make the ball bounce off the paddle



CREATE

More Things to Try

- Add sounds and color effects
- Keep score by adding a variable
- Add a way to win or lose the game
- Change the backdrop when you reach a certain number of points
- Duplicate the ball for an added challenge



Offer strategies for problem solving

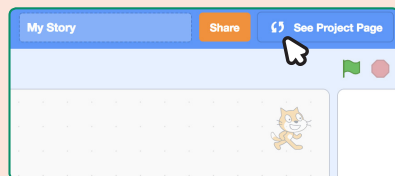
- Talk out what you're working on with someone
- Try out small bits of code at a time to figure out what's happening at each step
- Look closely at the blocks on the tutorial or activity cards to see if they are the same or different from the blocks you're using
- Look at the code for other pong games on the Scratch site



Prepare to Share

To add instructions and credits to a project, click the button: "See project page".

Then click the Share button if you want the project visible to others online.



SHARE

Share

Have participants share their projects with others in the room.

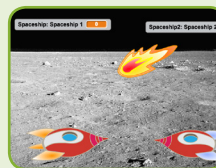
Ask questions to encourage reflection:

What did you notice about the games you tried?

What ideas might you add to your game?

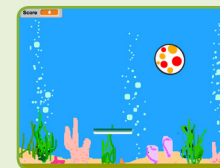
What's Next?

Here are a couple of other directions you could suggest:



Two-Player Game

For a more advanced project, try making a two-player game. To make a new version of your own project, click **File > Save as a Copy**.



Remix a Game

A different way to make a pong game is to remix someone else's project, adding images and ideas. Find a project to remix in the **Pong Game Studio**: scratch.mit.edu/studios/644508/ Click 'See inside', then click the 'Remix' button.

Scratch is a project of the Lifelong Kindergarten Group at the MIT Media Lab.