



# Reflector 2<sup>®</sup>

**USING REFLECTOR 2, REFLECTOR DIRECTOR<sup>®</sup>  
AND REFLECTOR STUDENT<sup>™</sup> IN THE CLASSROOM**



**SQUIRRELS<sup>®</sup>**

A teacher with long dark hair and glasses is standing in a classroom, pointing her right index finger towards a large screen. The screen displays a math problem. In the foreground, the backs of students' heads and shoulders are visible as they sit at their desks. Two tablets on stands are visible on the desks, showing the same math problem as the screen. The classroom has several rows of desks and chairs.

## ABOUT THIS GUIDE

This guide explains several important components of Reflector 2 in the classroom, including:

- Accessing and managing preferences
- Customizing student devices
- Recording device screens with student or teacher voice-over
- Connecting Chromebooks, Android devices, iPads and iPhones
- Emphasizing a connected student or teacher device
- Connecting multiple devices simultaneously

This guide will also explain how to use Reflector Director and Reflector Student in the classroom.

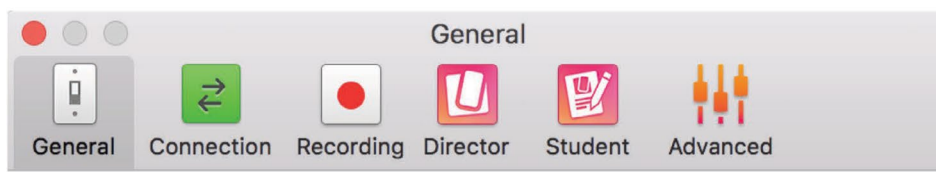
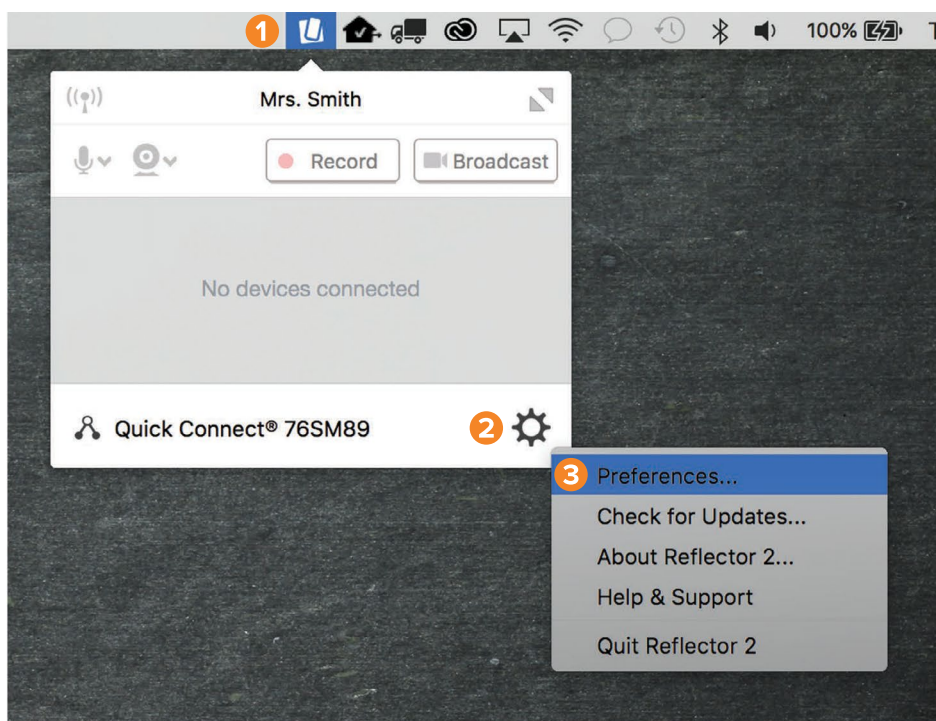
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# REFLECTOR 2 PREFERENCES

## ACCESSING PREFERENCES

1. Click the Reflector 2 icon near your clock
  - Mac - Located in the toolbar at the top right of screen
  - Windows - Located in the toolbar at the bottom right of screen
2. Click on the gear icon at the bottom right of the menu
3. Select Preferences
  - The preferences window will be displayed





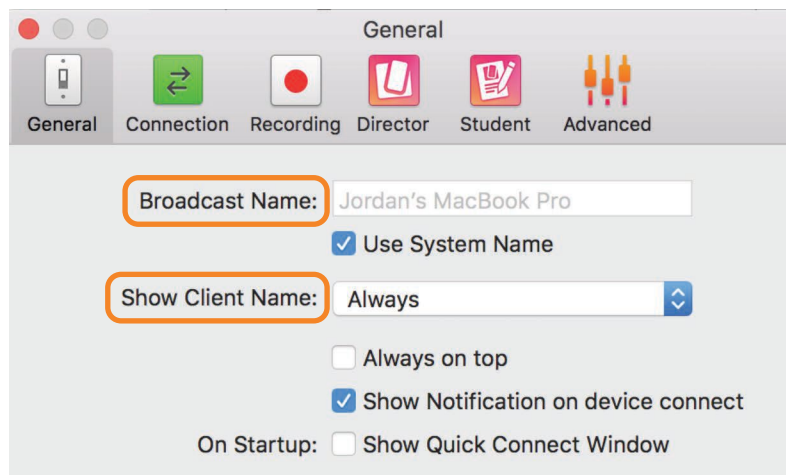
# GENERAL PREFERENCES

The General tab allows a teacher to set a broadcast name and choose how and when to show connected device names. These options work for every device attempting to connect.

## BROADCAST NAME

This setting changes the computer's name that is shown in the list of available destinations for students to connect to. We recommend setting this to the teacher's name or something the students will associate with this teacher. For example, "Mrs. Smith" or "4th Grade Math."

1. Uncheck Use System Name
2. Enter the desired name into the Broadcast Name field



## SHOWING CLIENT NAME

This setting allows teachers to show or hide device names when students connect devices.

We recommend using "Show Always." When a device connects, the device name will appear on the teacher's screen. For example, when Jon B. connects his device to the teacher's computer, the device name will appear on the teacher's screen.

- Select Always from the Show Client Name dropdown menu

# CONNECTION PREFERENCES 1

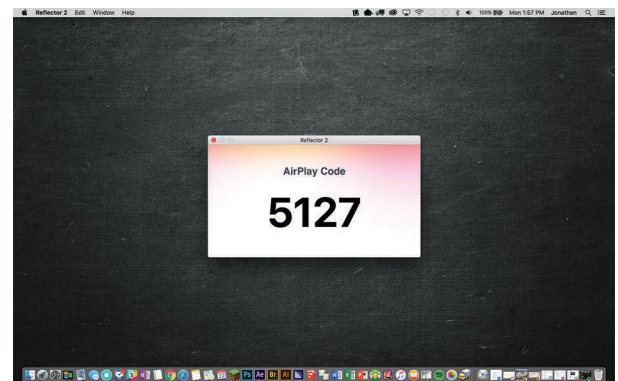
The Connection tab allows a teacher to set security preferences along with other connection-specific options.

## AIRPLAY SECURITY

Reflector 2 offers several security options to keep students from “breaking in” to a classroom display. The following two options work only when iPads, iPods or iPhones are connecting and will be ignored if a Chromebook or Android device attempts to connect.

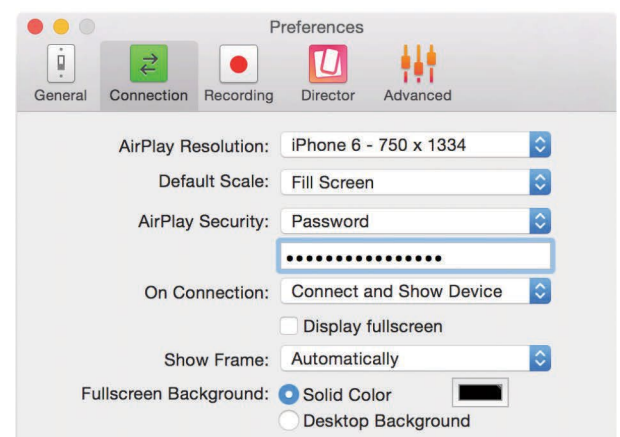
## ON-SCREEN CODES

On-screen Codes require an in-room presence from the student wanting to share from their device. When this option is enabled, the student must enter a code that appears on the teacher’s computer screen. The code is random, and it changes on every connection request. Upon requesting to share their screen, the student will be prompted to enter the code.



## PASSWORD

A second option for security allows teachers to create a password for connecting to their computer. Unlike on-screen codes, this password does not change. Once it is set, a student needs to remember the password to access screen sharing via Reflector 2.

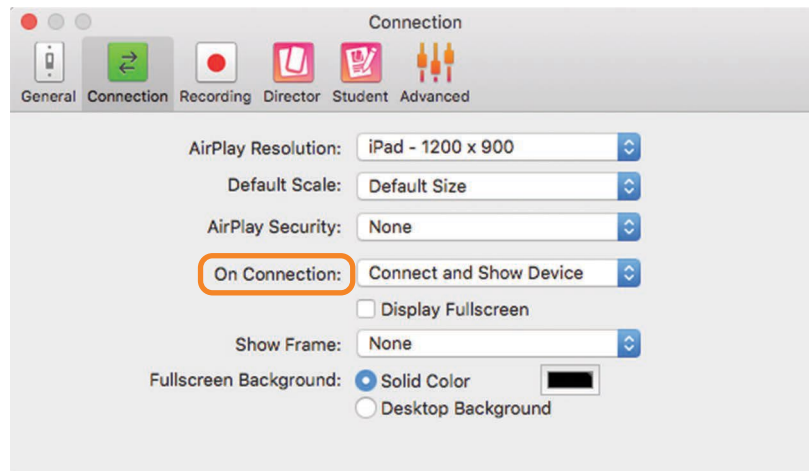


We recommend using On-Screen Codes to prevent students from remembering the password and mirroring undesirable or unwanted content. This option prevents students outside the room from sharing.

# CONNECTION PREFERENCES 2

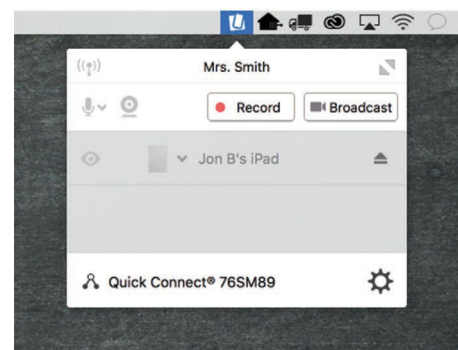
## ON CONNECTION SECURITY

Reflector 2 also offers other in-room security options that prevent students from immediately connecting and displaying their screen.



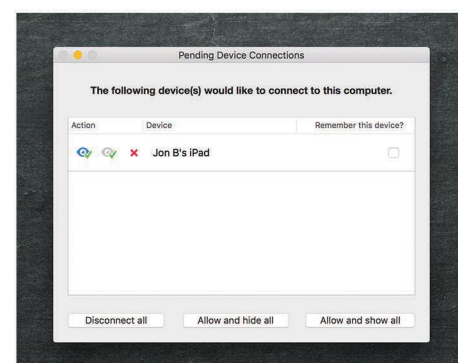
## CONNECT AND HIDE DEVICES

This option will connect a student, but their screen will be hidden immediately. No primary indication is made that a student has connected. To begin displaying the hidden screen, the device must be selected from the Reflector 2 menu.



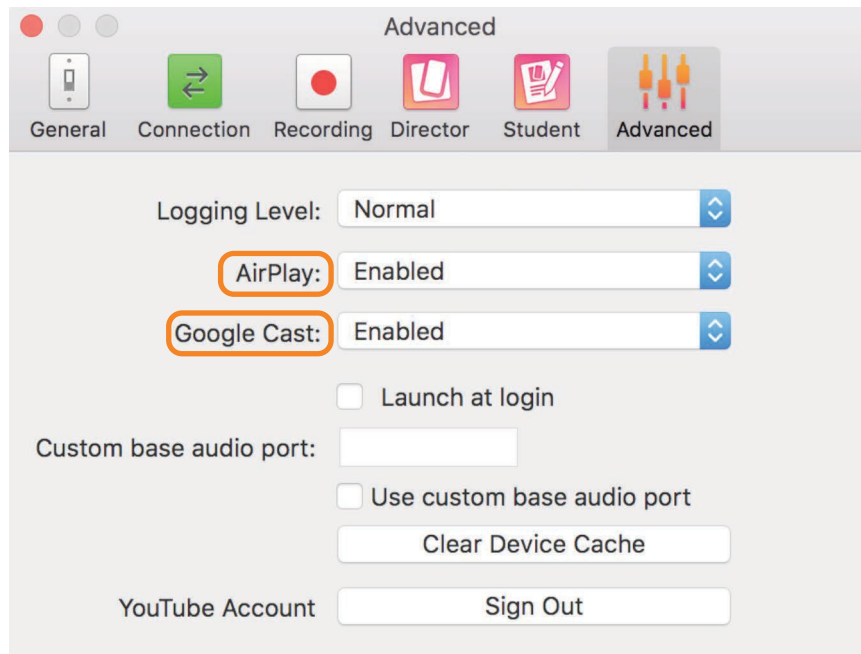
## PROMPT TO APPROVE

When a student connects, Reflector 2 will ask the teachers what they would like to do with the connecting device. Options include connecting and showing the device, connecting and hiding the device or rejecting the connection altogether.



# ADVANCED PREFERENCES

The Advanced tab allows a teacher to allow only iOS or Chromebook/Android devices to connect. This can be useful when a classroom only has iPads, but other rooms have Android devices or Chromebooks.



## AIRPLAY

Enable this option if you or your students are using iPads, iPods or iPhones.

## GOOGLE CAST

Enable this option if you or your students are using Android tablets, Android phones or Chromebooks.

We recommend leaving both enabled unless you are experiencing network issues or would like to “lock out” certain types of devices.



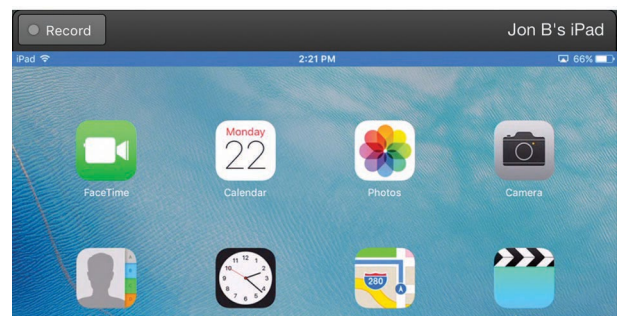
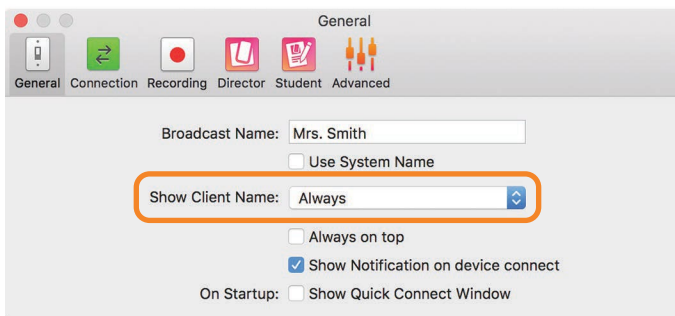
# RECORDING

Reflector allows teachers to record any devices connected to their computer. Teachers can record student presentations for later viewing, or they can record classroom instructions for students who missed class. Teachers can even include their voice in recordings for instructional videos or app tutorials.

Reflector 2 also supports YouTube Live Streaming. Teachers and students can stream their screens directly to YouTube and invite others to watch live from anywhere in the world.

## HOW TO RECORD CONNECTED STUDENT AND TEACHER DEVICES

1. In the Reflector 2 Preferences, if you have “Show Client Name” set to “Always” or “Hover”, you will see the option to start recording at the top of the mirrored screen on your computer.



2. You can also use key commands to begin recording.

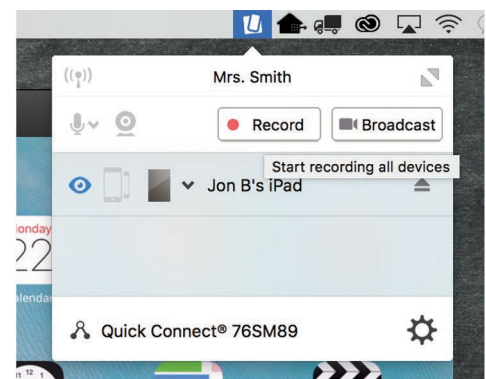
### On Mac

Press Command and R to begin or end a recording.

### On Windows

Press ALT and R to begin or end a recording.

3. In the Reflector 2 menu, click the record button to begin recording all connected devices.



# EMPHASIZING A CONNECTED DEVICE

At times, many students may be sharing their screen at the same time. You may want to emphasize one student's screen over the others.

To emphasize a screen:

1. Open the Reflector 2 menu
2. Click the emphasize button directly to the left of the device you wish to emphasize



Emphasizing a device makes the selected device much larger than the other devices. This alerts students to pay attention to the larger device without disconnecting everyone from the teacher's computer.

# CONNECTING IPADS AND IPHONES

Reflector 2 is the only piece of software required to mirror iPads and iPhones to a teacher's computer. It is not necessary to install apps or software on the student and teacher mobile devices.

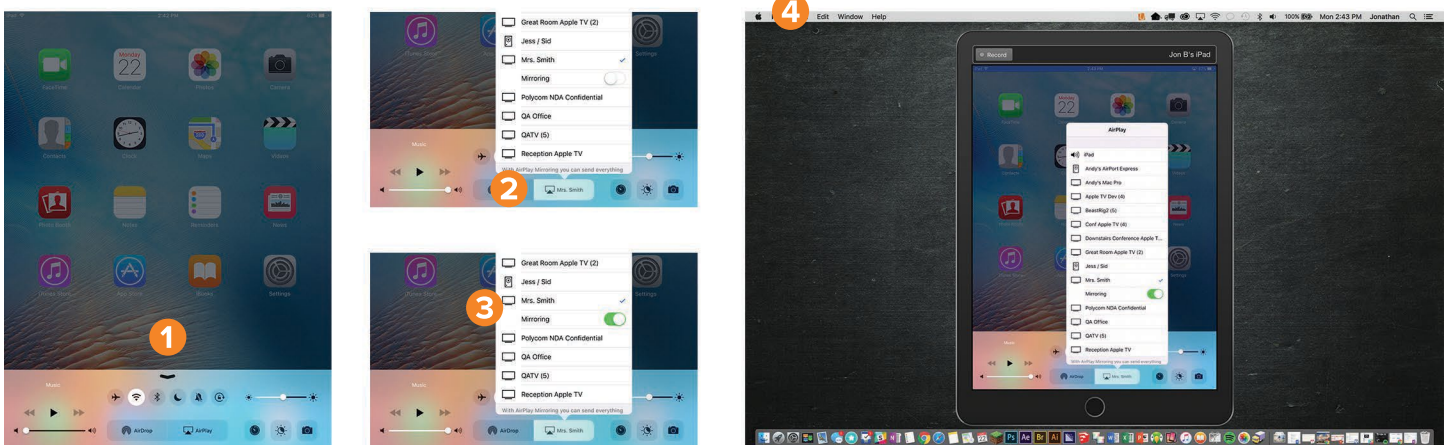
AirPlay is a wireless screen-mirroring technology available on iPads, iPhones and iPods. Any mobile device with AirPlay can connect to any Apple TV or Reflector-enabled computer on the same network.

## TO CONNECT ON IPADS OR IPHONES:

1. Swipe up from the bottom of the device to open the Control Center
2. Select AirPlay, a menu of eligible AirPlay destinations will appear

When Reflector 2 is running on the teacher's computer, the computer will appear as a destination

3. To connect, simply select the teacher's computer from the list and toggle the mirroring switch
4. You are now connected and should see your iOS device screen on the teacher's computer



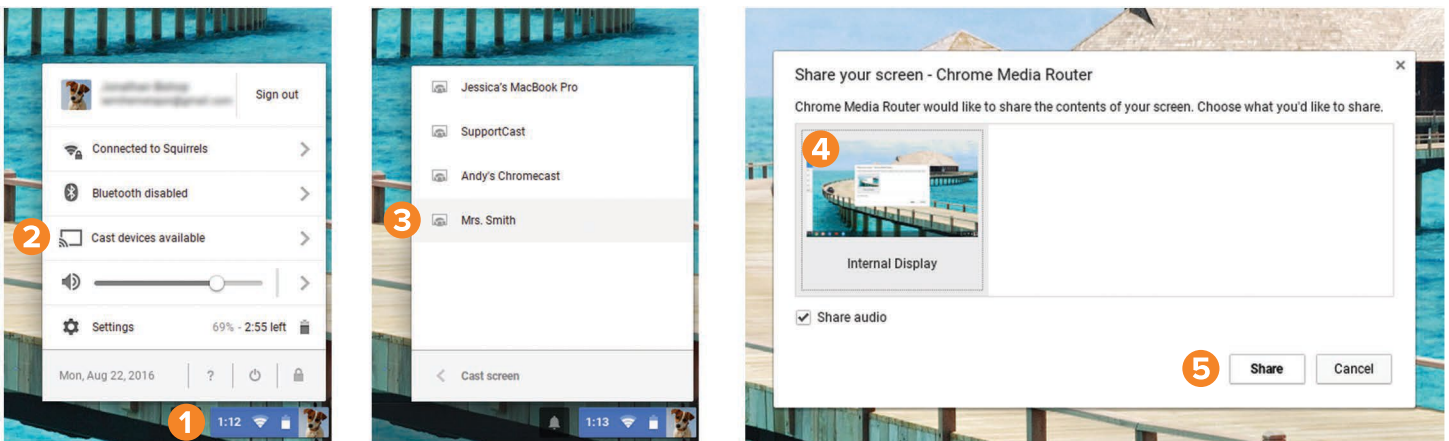
If you do not see the teacher's computer as an option, check to ensure that Reflector 2 is running on the computer and that the devices are on the same network.

# CONNECTING CHROMEBOOKS

Google Cast is a wireless screen-sharing technology built into Chromebooks. Google Cast can be used from specific apps and browsers on non-Google products.

## TO CONNECT A CHROMEBOOK:

1. Click the control menu in the bottom right corner of your Chromebook screen (near the clock)
2. Select “Cast devices available” to see a list of available teacher computers
3. Select the teacher’s computer that you would like to mirror the Chromebook to
4. Select “Internal Display” from the Google Cast window
5. Select Share



Your entire Chromebook display is now wirelessly mirrored to the teacher’s computer.



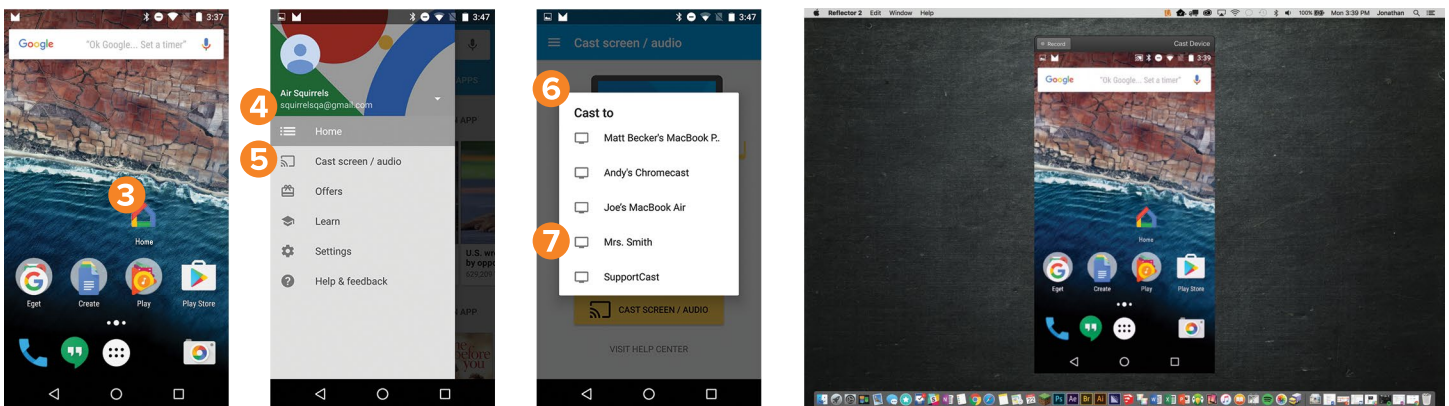
# CONNECTING ANDROID DEVICES 1

In order to mirror Android devices to the teacher's computer, the device will need to meet specific requirements. Casting Android screens is currently in beta from Google, and is available on devices running Android 4.4.2 and higher.

Different steps are required for mirroring Android 4.4.2 devices and Android 5.0+ devices.

## CONNECTING AN ANDROID 4.4.2 DEVICE:

1. Be sure the Android device is connected to the same WiFi network as the teacher's computer running Reflector 2
2. Launch Reflector 2 on the teacher's computer
3. Launch the Google Home app on the Android device
4. Open the menu at the top left of the screen
5. Tap the "Cast Screen / Audio" menu
6. You will be presented with a list of available teacher computers
7. Tap the name of the desired computer from this list



The Android device should now be mirroring to the teacher's computer.



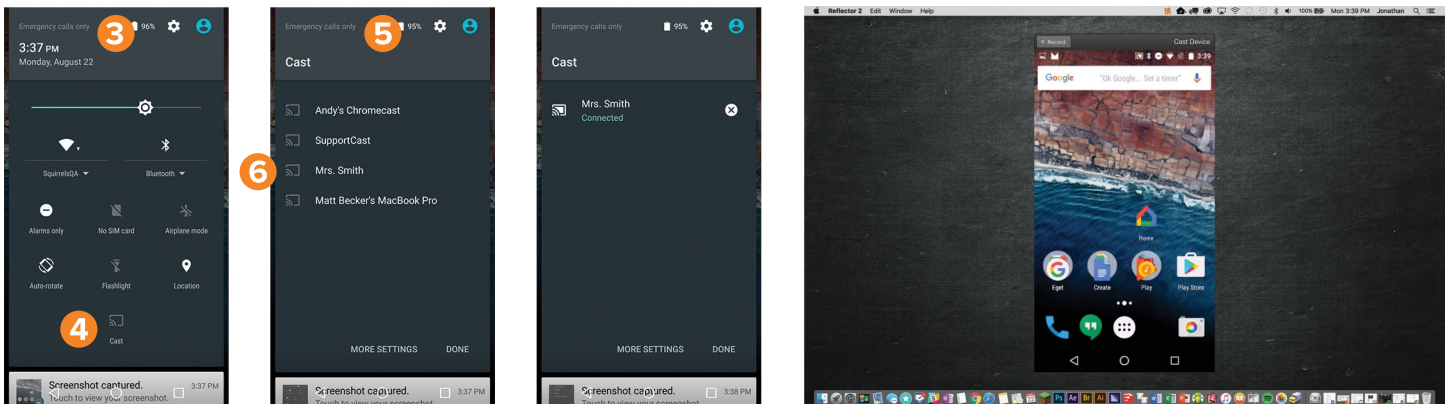
# CONNECTING ANDROID DEVICES 2

## CONNECTING AN ANDROID 4.4.2 DEVICE:

1. Be sure the Android device is connected to the same WiFi network as the teacher's computer running Reflector 2
2. Launch Reflector 2 on the teacher's computer
3. Pull down from the top of the Android phone or tablet screen to open the notification tray and reveal quick settings
4. Tap the "Cast screen" option

Note: Some devices may require this setting to be added to the tray. The Cast screen option may also be named differently

5. You will be presented with a list of available teacher computers
6. Tap the name of the desired computer from this list



The Android device should now be mirroring to the teacher's computer.

# REFLECTOR 2 PRESENTATION OPTIONS

REFLECTOR 2 PROVIDES MULTIPLE OPTIONS TO CONTROL HOW DEVICES ARE PRESENTED



# REFLECTOR DIRECTOR

Turn your iPad or iPhone into a remote control for Reflector 2.

## WHAT IS REFLECTOR DIRECTOR?

Reflector Director is an iOS companion app for Reflector 2. It turns iPhones and iPads into a remote control for Reflector 2. Teachers can control Reflector 2 from anywhere in the classroom using an iPhone or an iPad. This means there's no need for a teacher to be anchored to a desk.

With Reflector Director, teachers can remotely:

- Show, hide, emphasize and disconnect student devices
- Start and stop recording connected devices
- View a preview of connected student device screens



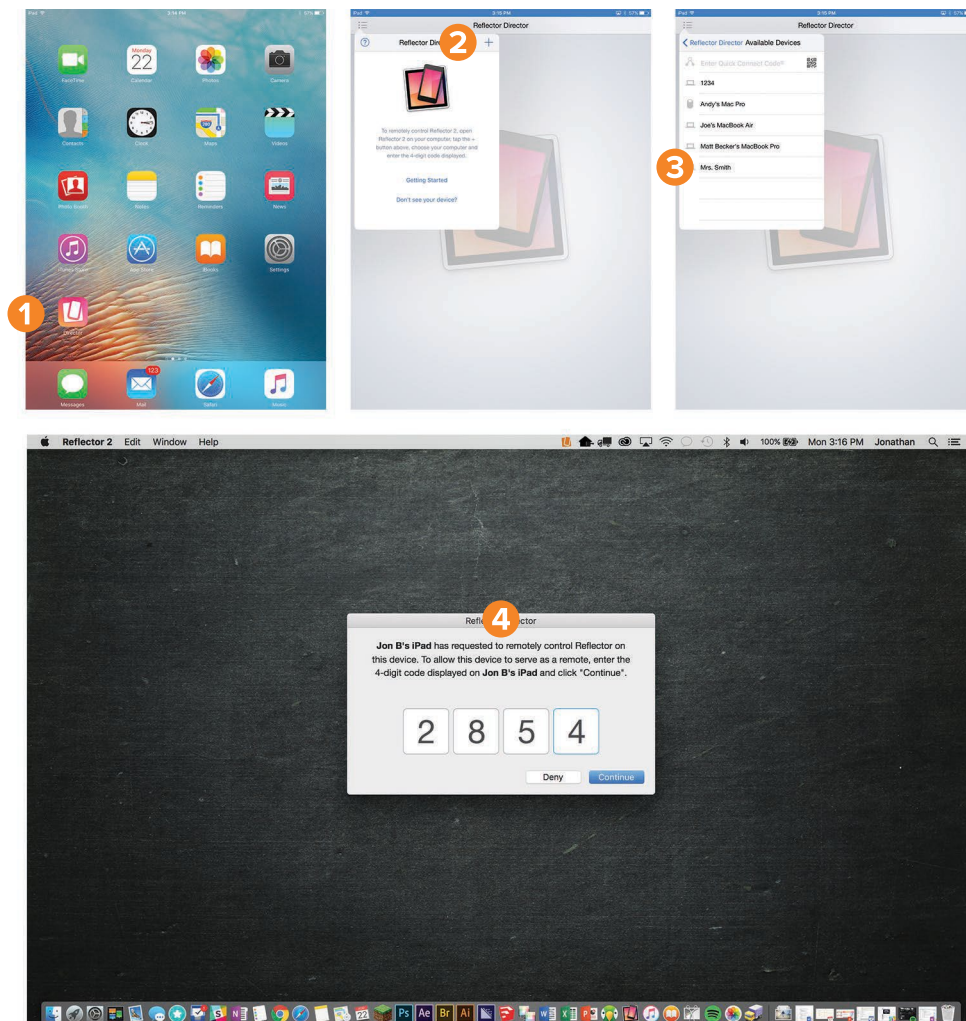


# CONNECTING DIRECTOR TO REFLECTOR 2 PART 1

There are three ways to connect Reflector Director to Reflector 2. For each method, ensure Reflector 2 is open on the teacher's computer before following the steps below.

## METHOD 1 – CHOOSE THE TEACHER'S COMPUTER FROM A LIST

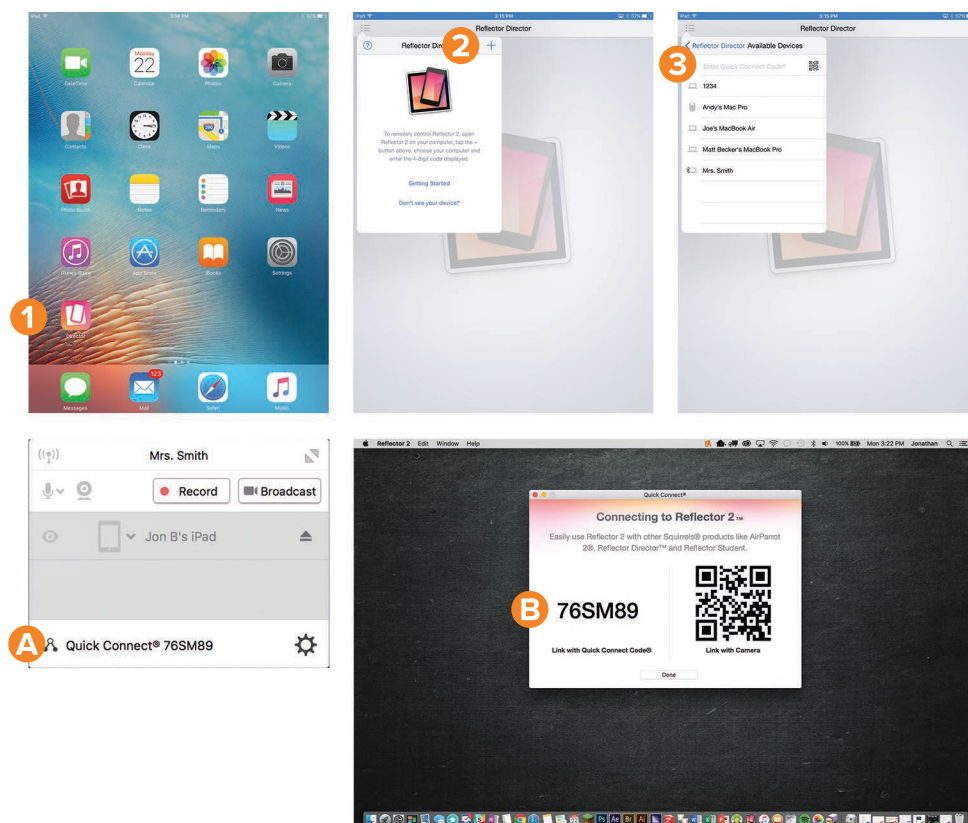
1. Open Reflector Director on the iPhone or iPad
2. Tap the plus icon at the top right of the iPhone or the menu button at the top left of the iPad
3. Select the teacher's computer you would like to connect to
4. Enter the 4-digit code that appears on the teacher's computer



# CONNECTING DIRECTOR TO REFLECTOR 2 PART 2

## METHOD 2 – ENTER THE TEACHER’S QUICK CONNECT CODE®

1. Open Reflector Director on the iPhone or iPad
2. Tap the plus icon at the top right of the iPhone or the menu button at the top left of the iPad
3. Enter the teacher’s Reflector 2 Quick Connect Code® in the Reflector Director drop down menu
  - A. The Quick Connect Code is at the bottom of the Reflector 2 drop down menu on the teacher’s computer
  - B. Click the code to access the Quick Connect window for easy viewing

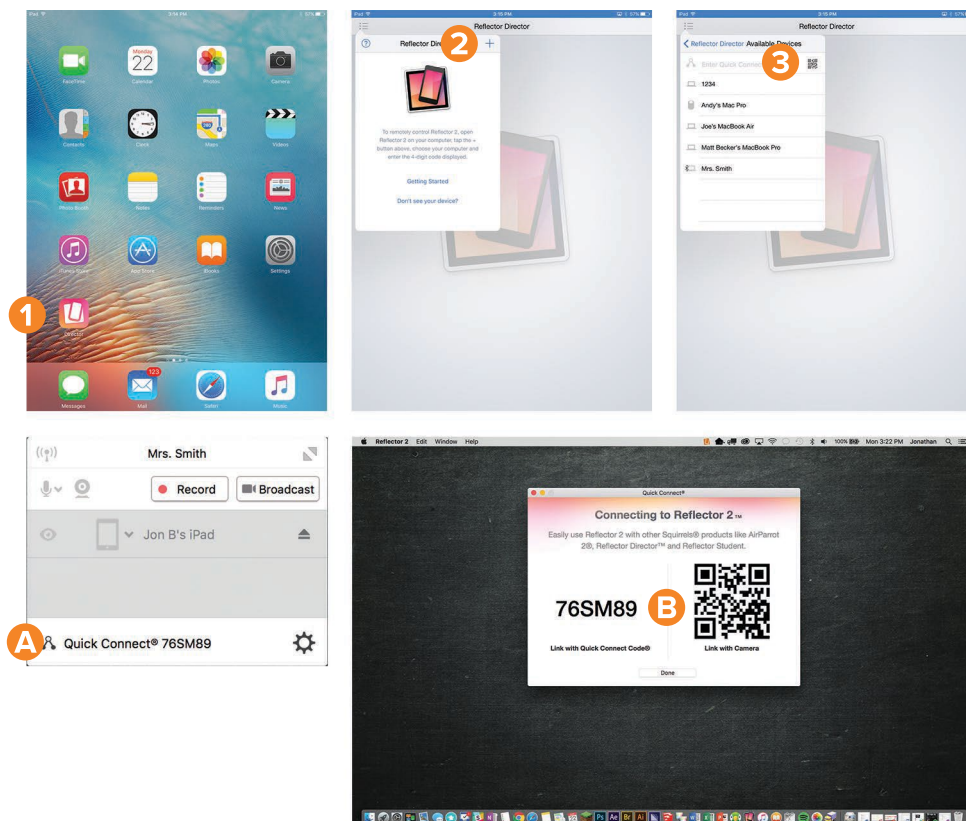




# CONNECTING DIRECTOR TO REFLECTOR 2 PART 3

## METHOD 3 – SCAN A QR CODE

1. Open Reflector Director on the iPhone or iPad
2. Tap the plus icon at the top right of the iPhone or the menu button at the top left of the iPad
3. Use the scan feature to scan a Reflector 2 Quick Connect QR Code
  - A. To view the Reflector 2 Quick Connect QR code, open the Reflector 2 menu on the teacher's computer
  - B. Click the Quick Connect Code at the bottom of this window and the QR code will appear



# PREVIEWING STUDENT SCREENS

Once Reflector Director is connected to Reflector 2, a preview of every connected student and teacher device will appear within Reflector Director. This allows teachers to preview student devices before showing them to the entire class.

Teachers can also use Reflector Director as a way to monitor student activity.

Screens will refresh every few seconds.



# REFLECTOR STUDENT

## WHAT IS REFLECTOR STUDENT?

Reflector Student allows students to connect their iPhones or iPads to Reflector 2 on restrictive school networks. Students can view real-time content from teacher and peer devices on their iPhones and iPads. Any device connected to Reflector 2 will appear in Reflector Student.

Reflector Student is a free download in the App Store and can be pushed to thousands of student devices with the Volume Purchase Program.

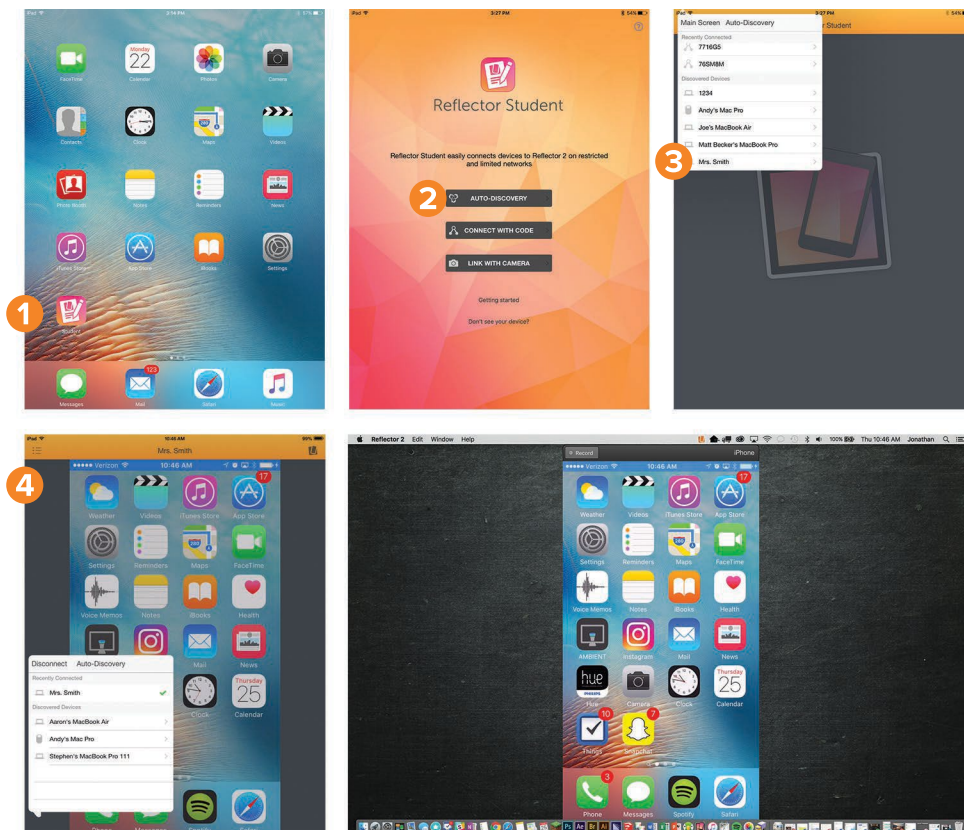


# CONNECTING STUDENT TO REFLECTOR 2 PART 1

When opening Reflector Student, students will be prompted with three options to pair to the teacher's computer.

## METHOD 1 – AUTO DISCOVERY

1. Open Reflector Student on the iPhone or iPad
2. Tap the Auto-Discovery button
3. Select the teacher's computer you would like to connect to
4. A preview of any devices connected to that computer will appear on the student's device





# CONNECTING STUDENT TO REFLECTOR 2 PART 2

## METHOD 2 – ENTER THE TEACHER'S QUICK CONNECT CODE

1. Open Reflector Student on the iPhone or iPad
2. Tap the Connect With Code button
3. Enter the teacher's Reflector 2 Quick Connect Code
4. A preview of any devices connected to that computer will appear on the student's device





# CONNECTING STUDENT TO REFLECTOR 2 PART 3

## METHOD 3 – LINK WITH CAMERA

1. Open Reflector Director on the iPhone or iPad
2. Tap the Link with Camera button
3. Use the Link with Camera feature to scan a Reflector 2 Quick Connect QR Code
  - A. To view the Reflector 2 Quick Connect QR code, open the Reflector 2 menu on the teacher's computer
  - B. Click the Quick Connect Code at the bottom of this window and the QR code will appear

