

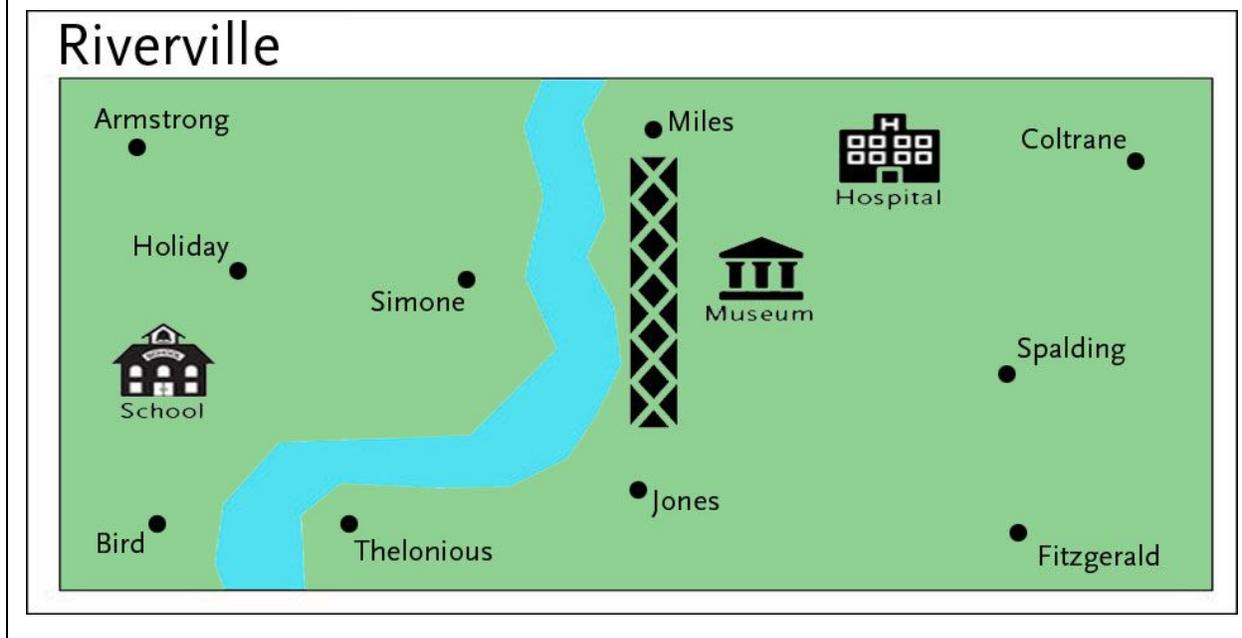
Subways - Lesson 1 - Make A Map - Student Doc

Introduction

In this lesson you will create a subway map in Choreo Graph. In the map below there are several subway stations, it is your task to connect all of them using two different subway lines. Follow the directions below to get started.

This is the starter map. You will find this map picture in Choreo Graph and use it to create a subway map as the background.

One unit on the grid in Choreo Graph = $\frac{1}{4}$ mile = .25 mile

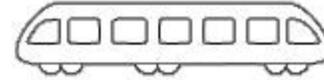
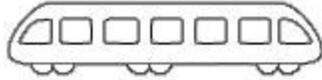


Creating your own subway map in Choreo Graph

To Do:

- 1) Open Choreo Graph, tap "Make Some Moves."
- 2) In the selection of images on the bottom of the screen look for the Riverville Map. Hold your finger on the map image and choose "Set Background."
- 3) Now you need 2 trains! Either draw your own, or use the train image shown here, add some color first! After you snap pics, trace the trains one at a time, and accept them as

separate objects.



- 4) NOTE: To re-size trains, pinch and pull on the Build Screen.
- 5) Now that you have your map and two trains, you are ready to tap “Animate,” drag your map into the center of the screen, and then drag each train to their “starting stations.”
- 6) Tap the wrench icon on the lower left and toggle on “Grid” and “Translation.”
- 7) Each keyframe sets a location of the train. Tap the second keyframe in the graphs below, and drag a train to a station, notice the translation line that is automatically drawn. Tap the third keyframe, drag the train to the next station.
- 8) NOTE: The rectangular barrier CANNOT be crossed.
- 9) Draw lines using both trains until you have connected all the stations on the map. A citizen of Riverville should be able to get from one station to any other station on the subway. (Transferring trains is ok!)
- 10) Below is a sample subway map. Be creative and draw your own design! Be sure to use two trains and connect every station.

The map you create will look something like this map. Be creative and design your own system of lines around the city! Tap the play button and watch as your trains slide across the map. Play around with the animation, and get familiar with your new map.

PROJECTS

BUILD
ANIMATE

↑

Riverville

0°

0°

What's next?

In the following lessons, it will be helpful to have a list of the coordinates of each station. You will be doing things like finding slopes, equations of lines, distances etc. Write the coordinates for each station in the table below:

Coordinates of Riverville Subways Stations

Armstrong (,)	Simons (,)	Miles (,)
Holiday (,)	Thelonious (,)	Spalding (,)
Bird (,)	Jones (,)	Fitzgerald (,)
Coltrane (,)		

It will also be helpful to make note of the coordinates of the landmarks listed below.

To easily see the coordinates for the landmarks, drag a train to each.

School (,)	Hospital (,)	Museum (,)
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Your map is complete, you've recorded all the important coordinates, and you're ready to go on to Lesson 2.