



Safe Routes
to School
**National
Partnership**

Guide to Creating Walking Route Maps for Safe Routes to School

Walking one mile to and from school each day is two-thirds of the recommended daily physical activity for children and youth. This guide will help you create maps of recommended routes for students to walk with their families or in groups.

There are several things schools and communities can do to support walking to and around school, including developing a Safe Routes to School program, adopting policies to encourage walking before, during, and after school, and creating safe and comfortable walking routes between schools and neighborhoods. To reap the benefits of a walking school community, it is helpful to both provide route maps of where to walk and school policies and programs to support students walking.

Walking route maps can inform students and families about their options for school travel and encourage them to try walking. Route maps can also be used for organizing programs such as [walking school buses](#) where groups of students walk to and from school with adult leaders. The route mapping process can also help identify barriers to walking to school and generate ideas on how to address challenges and improve safety and comfort.

This guide provides step by step instructions for creating recommended route maps using free tools. The guide is intended to be used by schools and Safe Routes to School practitioners to develop recommended route maps for school communities, students, teachers, families, and school wellness programs.

Section 1 describes how to map off campus routes to and from school using an online tool, [Plot a Route](#). Steps include talking to school administration, students, and teachers to see if and where they currently walk, testing routes using an online walkability checklist, creating maps, and publishing and sharing routes. **Section 2** describes how to map on-campus routes.



Benefits of Walking to School

Children who walk to school have higher levels of physical activity throughout the day.^{1,2} Student health has been linked to academic performance. Walking and biking to school can help ensure students arrive ready to learn. One study found that after walking for 20 minutes, children responded to test questions with greater accuracy and had more brain activity than children who had been sitting. Children also completed learning tasks faster and more accurately following physical activity.³ To learn more about the benefits of Safe Routes to School and walking, check out our fact sheet on [The Benefits of Safe Routes to School](#).

You might create indoor or outdoor on campus routes to encourage walking before, during, and after the school day or to provide opportunities for students who are unable to walk to school. On-campus maps can be created using a tape measure or other measuring device and building blueprints.

Section 1: Mapping Off-Campus Walking Routes

Before You Start: Determine how many routes you want to map and starting points for the walking routes within the surrounding neighborhoods.

- Several students living in the same neighborhood may want to start their route to school at a central location.
- A half-mile route will take about 10 to 15 minutes walking for an older student or adult. A mile route will take about 20 to 30 minutes. This will vary based on age and ability.
- Students living within a mile of school are typically more likely to walk to school than those who live further.

Step 1: Identify Potential Routes

A. Explore existing routes

- Contact your school administration for any walking routes that have been identified in the past.
- Have students, families or staff who already walk map their routes from your school. One idea is to place large paper maps at school entrances and have walkers draw their routes when they arrive at school. Or, provide smaller map handouts for people to take home, draw their routes, and return them to the school office. Ask them to share any safety concerns or favorite features.

B. Test the route(s). Before creating your walking route map(s) online, you will want to test out the potential route(s).

1. Print out maps and hand draw potential routes. Or if you are eager to jump into the online tool, follow Step 2 to create a map of potential routes to test.
2. Walk the route yourself. We recommend doing this as a group with students or adults.
3. Assess the routes. Print and use the companion [Walkability Assessment Checklist](#) to help assess the routes you mapped. Talk with the group about how they feel along the route. Is there adequate shade or lighting? Are you comfortably separated from car traffic? Do you feel safe crossing the streets? Think about everyone who might potentially use these routes. Some people may need longer to cross streets or curb ramps to navigate the route in a wheelchair.
4. Make adjustments. As you walk the route or soon after you return to your school, identify any necessary adjustments to the routes.



Step 2: Map Routes Online

Use the online mapping tool [Plot A Route](#) to map routes and measure distances. (Note: Google Maps and Map My Run are other online mapping tools that you might want to use. We found that Plot A Route has features and functions that are useful and work well, for example it allows users to plot a route that includes portions of street, bike trail, and walking path.)

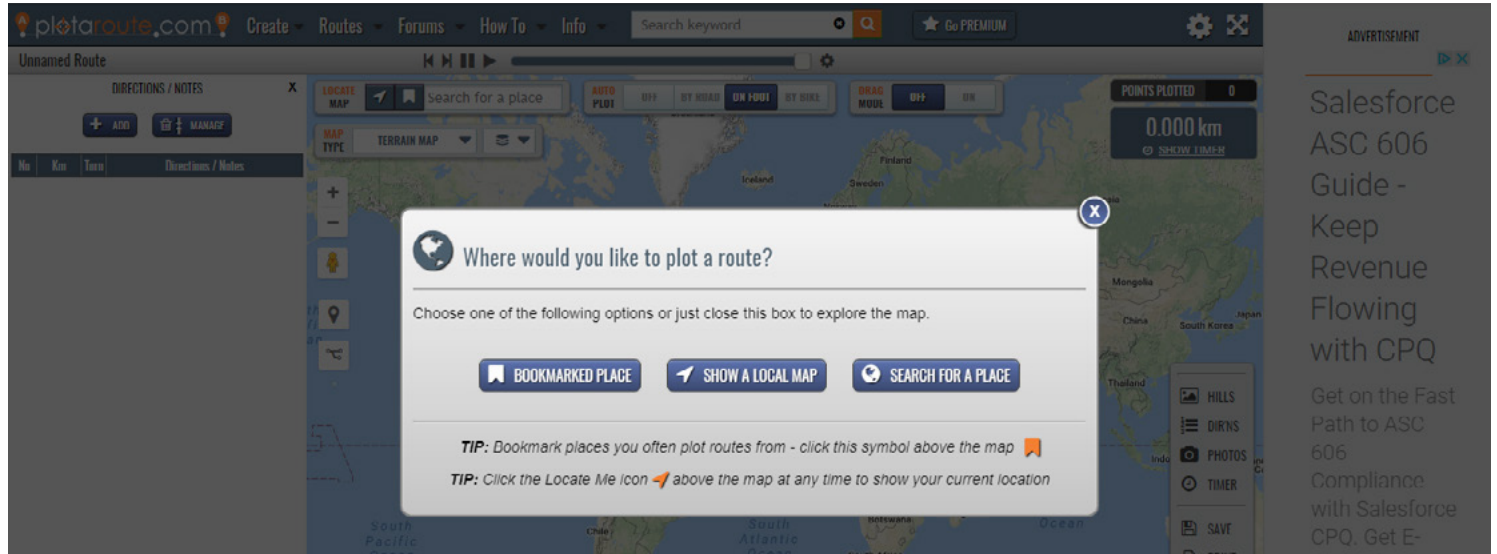
A. To get started, create an account:

1. Visit www.plotaroute.com
2. Click “Plot A Route Now”. If it is your first time using the site and you’d like to be able to save the routes you create, you must first create an account. Click “Create a Free Account” and then follow instructions. After you create an account, when you visit the site you will click “Plot a Route Now.”

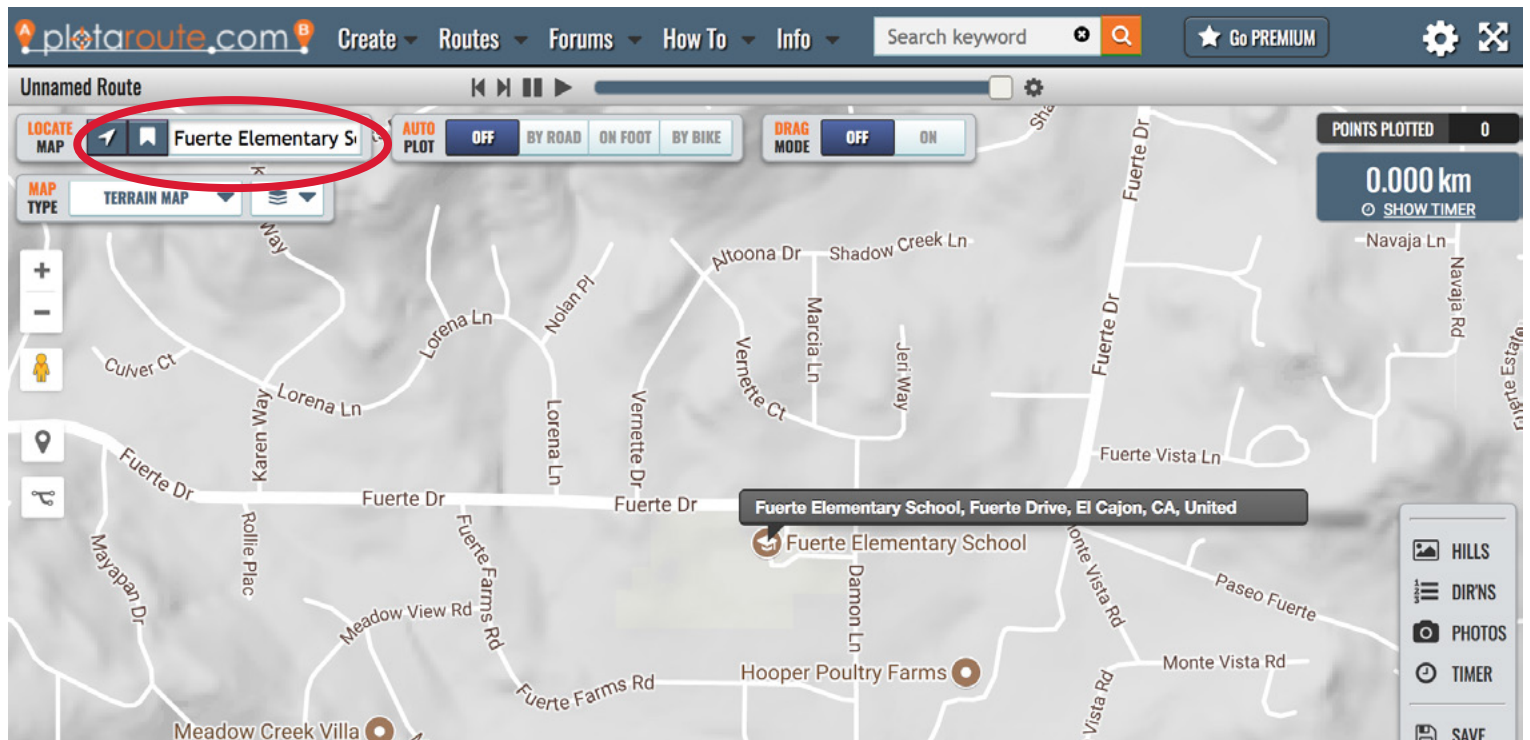
The screenshot shows the homepage of www.plotaroute.com. The header includes the site logo, a search bar, and social media links. The main banner features a photograph of two hikers on a trail. Overlaid on the right side of the banner is the text "Plot and share your routes" followed by "Map and measure your walks, runs, bike rides and more, with directions and elevation profiles". Below this text are two buttons: "Plot a route now!" (highlighted with a red circle) and "Create a free account". Further down, it says "Save routes and share them with friends with a free account" and lists icons for GLOBAL, PLOT, SHARE, FIND, PRINT, and DOWNLOAD. A testimonial from "Gary on the Forum" is displayed below the banner. At the bottom, there is a cookie notice and a Windows taskbar showing the time as 10:45 AM on 5/26/2016.

B. Create a new walking route

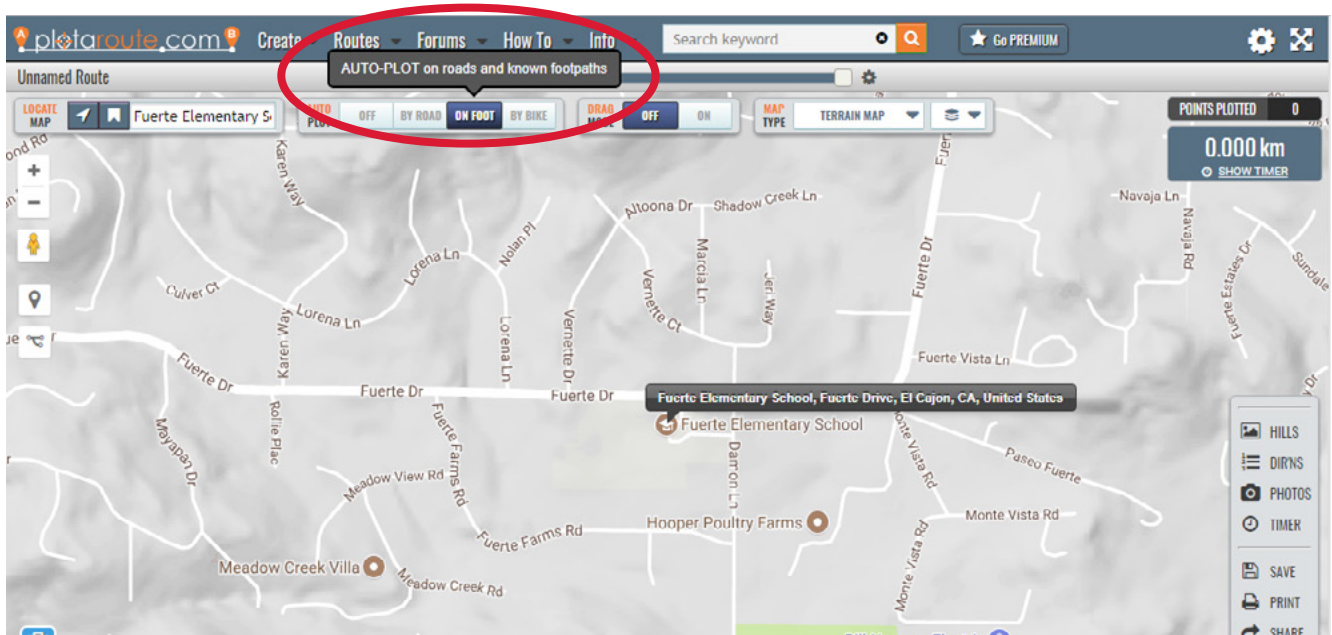
1. Select your starting area. You can either start at your school or a point within the neighborhood. You have two options:
 - Show Local Area – using your IP address, it will display the area around you currently. You can move the map area and zoom in to where you would like to begin.
 - Show World Map – you can search for a place by address and your route will start at the address you input.



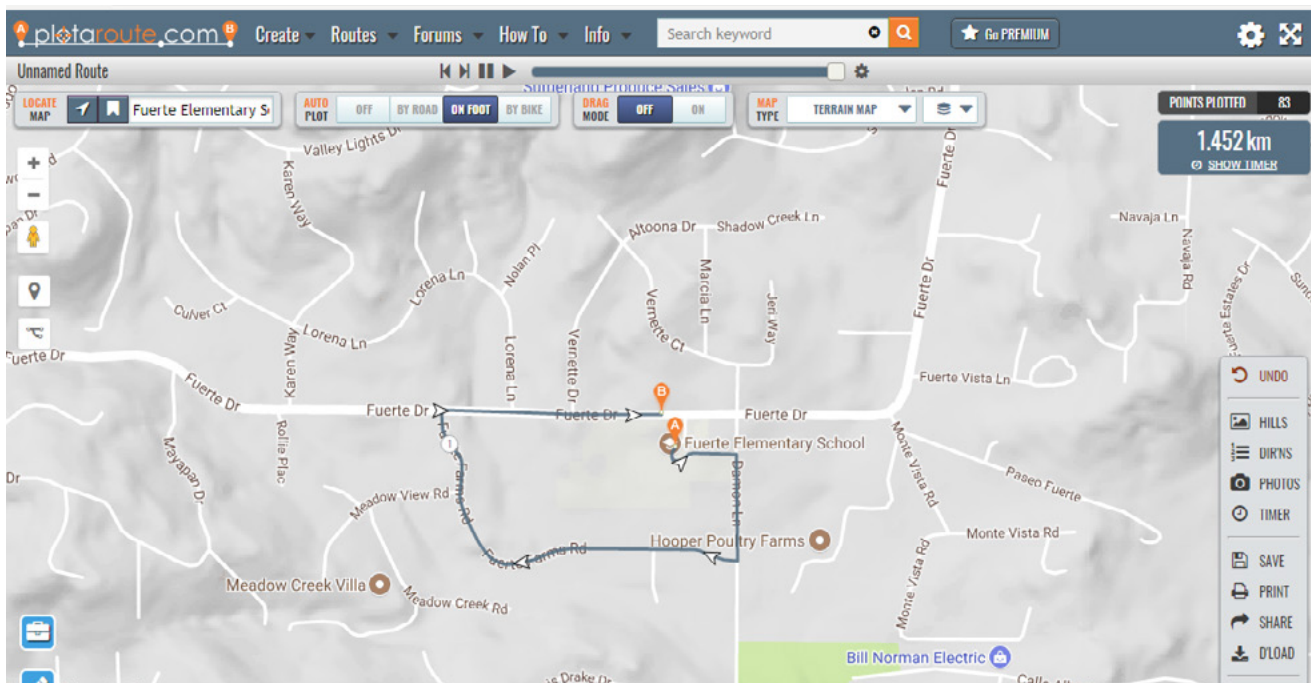
2. In the search bar, where it says “Search For a Place,” type the starting address (such as the location of your school).



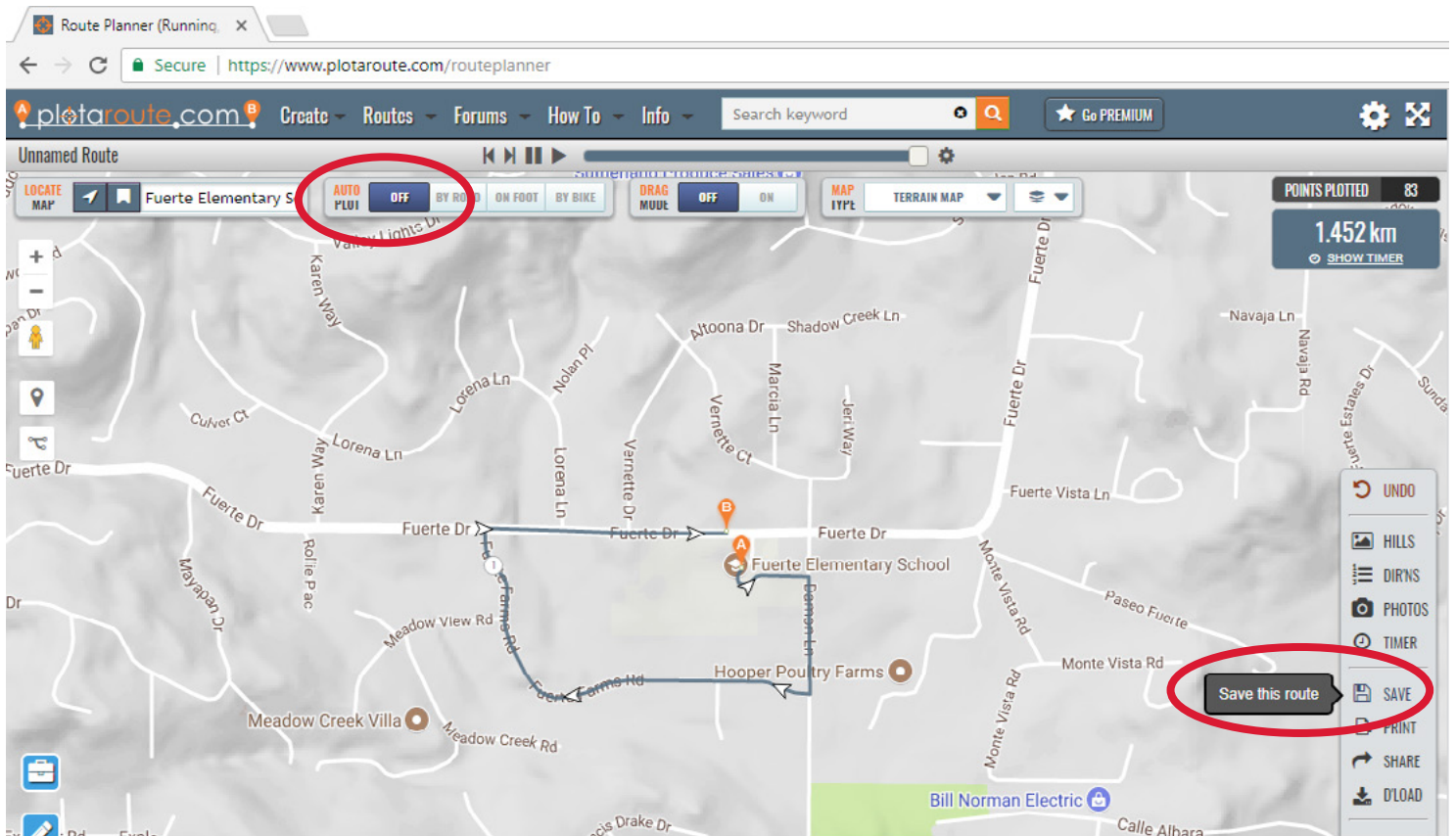
3. Set AutoPlot to “On Foot” and Map Type to “Paths,” and check the image of the bicyclist. This ensures that you can see streets, walking paths, and recommended bike lanes. *Note: In urban areas, choosing “Paths” may make your map appear cluttered.* Experiment with the different map types to find the one that works best for you.



4. To start mapping your route, place your cursor at your starting point and click to start mapping a route. Click along the streets that the route will follow. You can see the distance is tracked in the top right corner.



5. Turn the Auto Plot to “Off” to shift easily between streets and paths. This is a unique function of this mapping site.
6. Click along the path until you reach your end point. Make sure to save your map on the lower left corner.



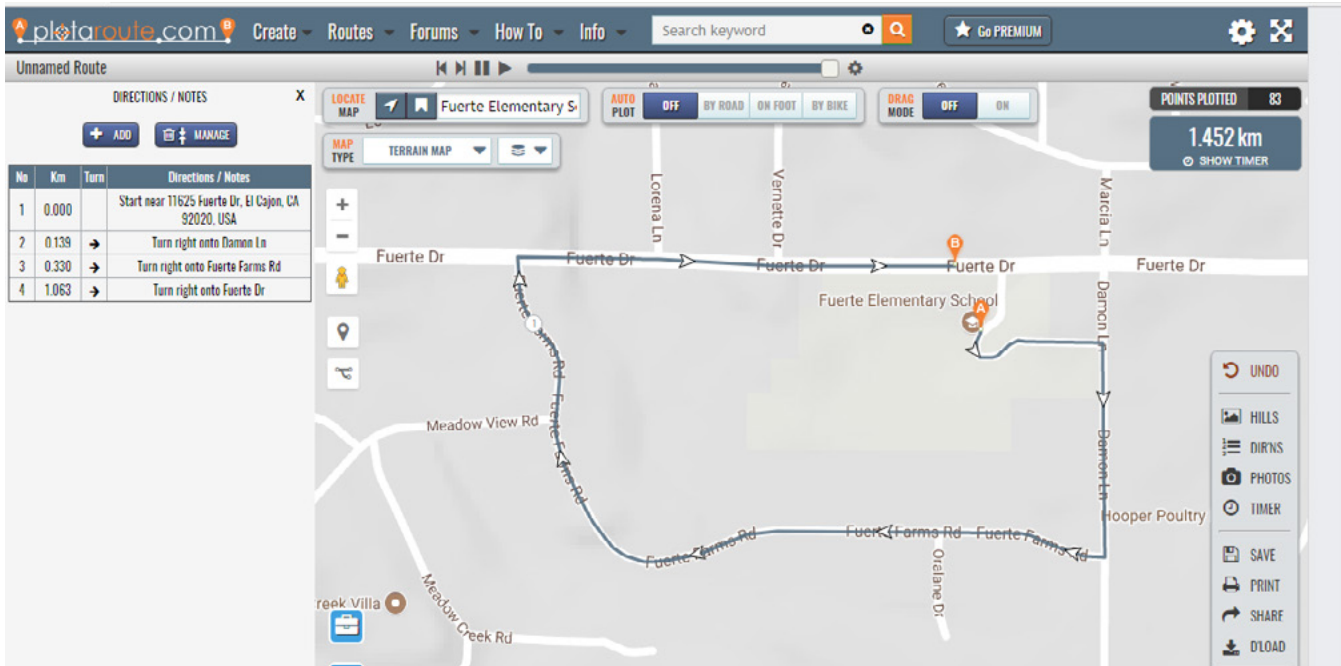
7. Ready to create another map? To begin a new route, click the “plotaroute.com” logo in the top left corner. This will bring you to your saved page, where you can begin to plot a new route by clicking “plot a route”, see your saved routes, and explore route suggestions.

Step 3: Finalize and Share the Route.

Now that you've created the routes, you will want to share or print the routes so that students, families, and staff can use them. (Note: Refer to the screen shot on the next page for help with the following steps.)

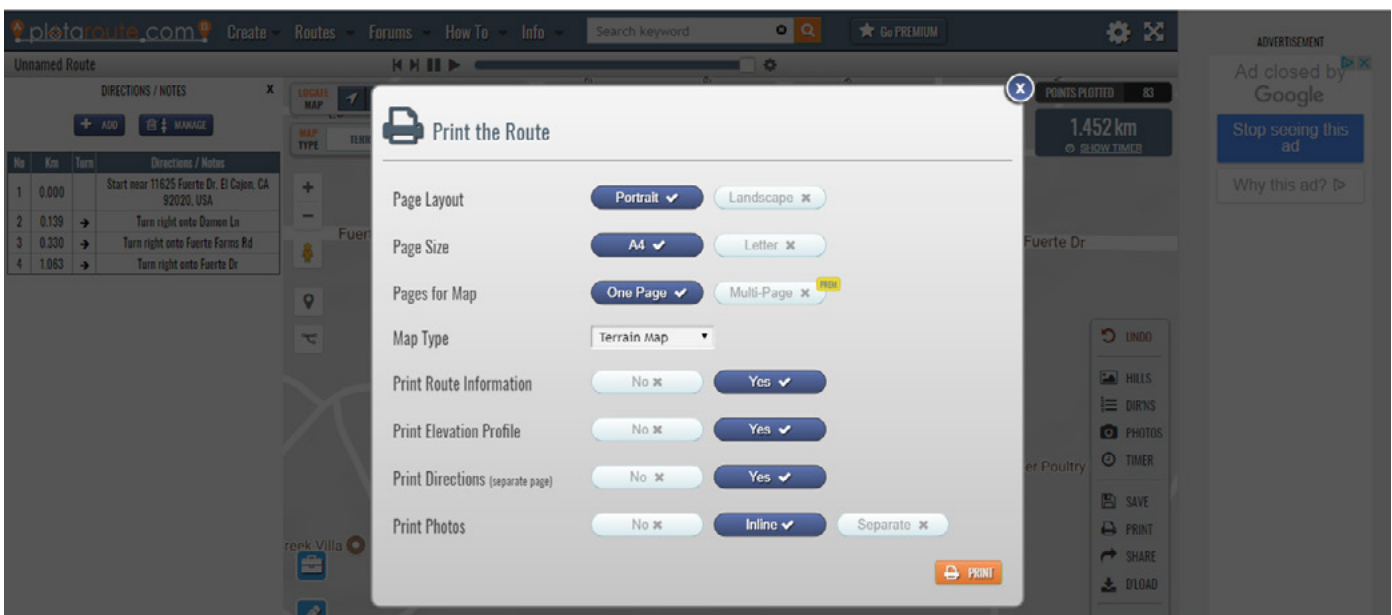
A. Obtain directions

To obtain turn-by-turn directions, use the menu bar in the bottom right of your screen and click “Dir’ns.” Turn-by-turn instructions with street names will appear on the left hand of your screen.



B. Print route map

In the bottom right menu bar, click “Print” and select the layout you would like to print. If you would like to include turn-by-turn directions, be sure to click “yes” for print directions.



C. Share route

In order to share your route, you must first save it as a public route. There are a number of ways to share this route with students, families, and teachers. The easiest way is to share a link via email, either by copying and pasting the link or clicking the icon that looks like an envelope. You can also post to Facebook and Twitter. If you'd like to embed it on a website — for example, if your workplace has a wellness page — select the size you'd like the map to appear on the web page and use the code displayed in the

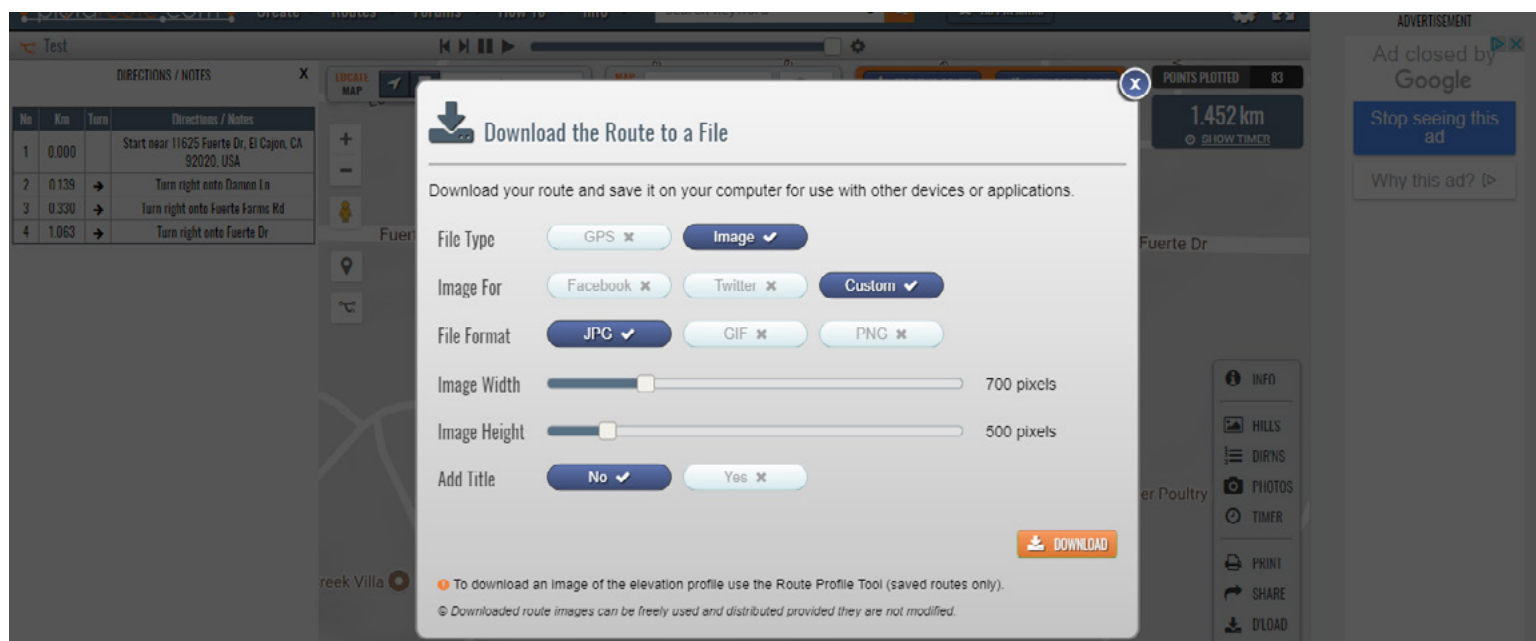


D. Download the Map

To insert the map into a document, such as a walking brochure, click “D’LOAD”, and “Save to File.” Adjust the settings to:

- File type: Image | Image for: Custom | File format: JPG (or your preferred image format) | Add title: No

Then click “download”. The image will be saved to your downloads folder. From there, either copy and paste or drag and drop the image into the desired location in the walking brochure



Section 2: Mapping On-Campus Walking Routes

Providing on-campus walking routes is a great alternative or supplement to walking routes from neighborhoods to schools. There are a number of reasons to develop and share on-campus walking routes:

- For days with excessive heat or cold, rain, or snow, walking indoors is a great alternative to walking outside.
- Creating on-campus routes provides opportunities for programming where students and staff to walk during the school day and immediately before and after school.
- On-campus walking routes can be used for school Walk-a-Thons or other events.
- On-campus routes also provide walking opportunities for students who live far away, are bussed to school, or are for other reasons not able to walk to and from school. For example, some rural schools like to have Walking Wednesdays or other events in which students walk at lunch every Wednesday despite being bussed to school.

How to Make On-Campus Routes

There are many options for creating an on-campus route. Routes can be indoor or outdoor depending on your school and climate. Utilize your school's blacktop, track, basketball court, indoor gymnasium, or hallways to create your routes. Unlike planning walking routes on streets and in neighborhoods, where online mapping tools like Plot A Route use streets and trails to measure distance, on-campus we must rely on a good old-fashioned tape measure. With a little bit of time, and perhaps some assistance from a friend or teacher, you can measure out distances of hallways and outdoor areas in your school using a tape measure or [measuring wheel](#).

Suggestions and Tips for Indoor Routes

- With permission from the administration, hang signs in the hallways marking distance at a regular interval, for example 1/10 of a mile.
- Consider advertising the routes by the amount of time they will take in addition to or instead of the distance for a fun math exercise.
- Consider creating routes for different distances and stringing them together to create longer routes. If your school is in a small building, consider creating laps. If creating laps, consider creating $\frac{1}{4}$ mile laps, which take approximately 5 minutes to complete. This way, it's easy for students and staff to keep track of their distance. If your school is an especially small building, you can post/share the number of laps around the building or times up and down the corridor equal a certain distance. For example, 10 laps up and down the hall equals $\frac{1}{4}$ mile.

Distance Conversions

- 5,280 feet = 1 mile
- 2,640 feet = $\frac{1}{2}$ mile
- 1,320 feet = $\frac{1}{4}$ mile



Maps

Visual maps of school buildings and campuses are most helpful for developing the initial route, but for sharing with students and staff, written instructions will typically suffice. If you'd like to provide a map, you can utilize a blueprint image of the building or campus or create a rough sketch yourself. To obtain a blueprint or campus map of your school, you may need to contact the school district. For a simpler option, consider drawing a rough sketch of the building yourself and then drawing out the routes.

Here is an example of a map of indoor walking routes from Plymouth Comprehensive High School:

Plymouth Comprehensive High School



Other Resources

Check out these other resources for inspiration.

- [Alliance for a Healthier Generation Indoor Fitness Trail](#)

This toolkit provides ideas and instructions for setting up an indoor fitness trail in a school with signs to incorporate activities to keep students engaged and active.

- [Solano County Safe Routes Google Map Tool](#)

The Solano County Safe Routes to School program used Google Maps to create and share their walking school bus routes.

References

1. Alexander et al., The broader impact of walking to school among adolescents. *BMJ* online.
2. Cooper et al., Commuting to school: Are children who walk more physically active? *American Journal of Preventative Medicine* 2003; 25 (4)
3. Hillman CH, Pontifex MB, Raine LB, Castelli DM, Hall EE, Kramer AF. The effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. *Neuroscience*. 2009;159(3):1044-1054. doi:10.1016/j.neuroscience.2009.01.057