USE THIS ROOTS & SHOOTS COMMUNITY MAPPING TOOL ALONG WITH YOUR CRITICAL THINKING SKILLS TO EXPLORE YOUR COMMUNITY AND:

- Learn the geography and layout of your local area
- Determine areas of need for people, other animals and the environment
- Identify resources that may support efforts to meet community needs
- Form a deeper commitment and resulting empathy towards the people, other animals and environment that make up your community

Community mapping practices many types of research including observation, internet and print media searches, as well as interviews with family, friends and community leaders who become collaborators with you on your efforts.

EDUCATORS: Learn how to align mapping with different subjects at rootsandshoots.org/lessonplans

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1 PART ONE: OBSERVING YOUR COMMUNITY
Take note of what is on the way to school or work when on the bus, in the car, biking, etc. Imagine you are looking at the community from a bird’s eye view.

SAMPLE GUIDING QUESTIONS
- Why is it important to learn more about your community?
- What are the roads around your location? Are there any major intersections?
- Notice the cars and people walking outside, imagine where they are going and what they do to have fun, where they work, eat, sleep etc.
- Do you see animals, wild or domestic? Where do they go during the day? get food? play? or go when they are sick?
- Where do you see plants or trees? How do they survive and how did they get there? What makes them important to your community?
- Be introspective! What role do you play in your community? How do the daily actions you take impact the people, other animals and environment around you?

Observations can be recorded in many different ways - photography, artwork, journaling, video production, presentations, the options are endless.

SAMPLE GUIDING QUESTIONS
- How do you feel about your community? Do you feel your community has the resources to meet the needs of both humans and animals? Do you feel that local officials consider the environmental impact of major changes such as new roads, parks, and development?
- What issue have you recently read or heard about that impacts your community? Does this issue primarily impact humans, animals, or the environment? Do you believe the issue will have a positive or negative impact on your community?

2 PART TWO: PREPARING YOUR MAP
Draw, print or purchase a map of your location (OR, skip this step and start your map directly in Google My Maps.) If you are mapping a radius around a zip code or specific location, two to five miles is sufficient. If it is a campus, request a map from the front office. If you are using a purchased map, draw a radius around your community.

OPTIMAL CHALLENGE:
Use a blank sheet of grid paper (or the one included in the end of this guide) and see if you can draw your location from memory. How is your community or campus oriented —to the North, South, East or West?

3 PART THREE: MARKING COMMUNITY ASSETS
See the examples below to identify your community’s unique assets. The lists below are just examples of assets, you don’t have to map all of them, and you could map others depending on your community. Distinguish the three categories on your map by assigning each a unique identifier (i.e., color, shape, stickers). For example, mark human assets in blue, animal assets in red, and environmental assets in green.

**HUMAN ASSETS**
- Places for school/work
- Highlight major streets
- Areas of leisure
- Libraries/Community centers
- Places of worship
- Grocery stores, farmer’s markets, favorite restaurants
- Hospitals or clinics
- Shelters and food banks
- Fire and police stations

**ANIMAL ASSETS**
- Animal sightings, species
- Domestic animal use (dog parks, dog friendly trails, etc.)
- Animal shelters
- Animal control facility
- Animal hospitals
- Animal sanctuaries
- Zoos and aquariums

**ENVIRONMENTAL ASSETS**
- Wild and/or protected spaces
- Bodies of water
- Mountains, beaches, etc.
- Recycling centers, landfill/waste management
- Water facilities
- Power sources (coal, nuclear, wind, solar and geothermal power plants)
- Environmental services (watersheds, reservoirs, wetlands)
PART FOUR: REFLECTION
Refer to your map as you reflect on the following suggested questions.

SAMPLE GUIDING QUESTIONS

- Do any of the marked assets above serve more than just the one category? (human, other animal and Environment) Example, a recycling center benefits the environment but also provides a service to humans.
- What are some of the assets above that support the people, other animals, and environmental habitat in your community?
- What things do you like about your community?
  - One quality about your community that makes it a great habitat for people
  - One quality about your community that makes it a great habitat for animals
  - One quality about your community that makes it a great environmental habitat
- What makes you most proud (happy?) to live in your community?
- Is your community meeting the basic needs of people and animals?
- Is your community environmentally sustainable?
- What things could be improved for your community?
  - One quality your community could improve to make it a better habitat for people
  - One quality your community could improve to make it a better habitat for animals
  - One quality your community could improve to make it a better environmental habitat
- What other parts of your community should be included on the map? How are they important to the human, animal, or environmental habitats in your community?
- Reflect on the observations made in Part 1. How did your initial observations influence your map? Are there things that surprised you about your community as you were mapping?

GLOSSARY OF COMPASSIONATE SKILLS & TRAITS PRACTICED THROUGH MAPPING

CRITICAL THINKING
Exploring a topic from all angles before making a well-thought-out decision

COLLABORATIVE
Embracing the inspiration and participation of others by accepting new ideas and perspectives

EMPATHETIC
Connecting to feelings outside your own by viewing concepts through the lens of another

INTROSPECTIVE
Examining your beliefs to consider how your actions affect the world around you

See more compassionate leadership traits and mapping activities at rootsandshoots.org.

GET STARTED WITH GOOGLE MY MAPS

Google My Maps lets you quickly and easily make beautiful maps, and share them with students, teachers and communities. With this tool, you have the ability to:

- import data from a spreadsheet, or simply draw and add points of interest, lines and shapes.
- style the points and shapes on your map, and choose from nine base map styles.
- share and collaborate on your map with colleagues or students and embed it on your website and in your Roots & Shoots project profile.

Before you start: In order to use My Maps, your students will need a Google account. In the United States students must be 13 years old to have an account. If outside the US please check your country’s age requirements. If your students are younger (or if you don’t want to require them to create a Google account for security or privacy reasons), you can create a group dummy Google Account with a shared password that they can all use at the same time.

CREATE A NEW MAP

- Log in to your Google account and navigate to google.com/mymaps.
- In the welcome pop-up, select CREATE A NEW MAP. If you don’t see the big red button, click on the lines in the top left corner of your screen.
1. Click to change the title of your map and add a description of your project.
2. Search for a place or address. Your map screen will zoom to that place.
3. Click here to add a layer to your map and give it a title.
4. View all of your map layers. A "checked" layer means it will show up on your map. You can check and uncheck them as you edit.
5. These buttons allow you to add features to your map.
6. Use the "+" to zoom in and the "-" to zoom out.
CREATE A NEW MAP CONTINUED...

- Your new map should automatically open and look like the GUIDE image on page 4 of this tutorial. Use the GUIDE image to understand how to customize your map and help you find things throughout this tutorial. We will go through each step and refer to the numbers on the GUIDE, using the phrase “GUIDE #” for each area.
- The first thing you should do is title your map (GUIDE #1). Click on the “untitled map” text and a new window will pop up, allowing you to give your map a title and short description.

6 ADD LAYERS

Click the Add a Layer (GUIDE #3) button to start adding layers to your map. You can create multiple layers of data. For the R&S community mapping exercise we recommend using at least three layers and titling them People, Animals and the Environment. This way, they match your existing categories. You can use the extra layers, if you choose, for things related to your campaign. Each layer will appear in the “Layer Settings” area (GUIDE #4).

TIP: When adding points/lines/polygons to the map, be sure you are editing the correct layer. You can uncheck layers to make this easier. Don’t worry if you make a mistake...you can move your data between layers.

SEARCH FOR YOUR LOCATION

You can either use the search bar (GUIDE #2) to search for the location of a place or you can browse the map to find the place yourself.

In this example, we searched for a town. Type in your desired location and click on the blue magnifying glass button. Your map will zoom to that location and create a place mark for it. Your place mark will show up in the “Layer Settings” (GUIDE #4). You can keep it by choosing the + or clicking on “Add to map.” Click the “x” to the left of the name to remove it from your map.

7 ADDING FEATURES

Next, you want to add features to your map! You can add points, lines or polygons to illustrate your human, animal and environmental assets:

- **Points (or “place marks”):** represent a very specific place on the map (a city or town, a school, library, etc.)
- **Lines:** represent a path or route (a running path, a drive, a river, an animal trail etc.)
- **Polygons:** represent an area (a country, a neighborhood, the grounds of a place, a park, etc.)

The buttons for each of these are located below the search bar (GUIDE #5). Read about what each button does on the next page of this tutorial. >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>eterangan
ADDITION FEATURES CONTINUED...

- **Arrows**: the right arrow will undo your previous action, and the left will redo something.
- **Hand**: click on this to move around your map, without creating any features
- **Balloon**: creates a point
- **Line**: opens a dropdown menu to create lines, shapes, and routes.
- **“V” Arrow**: creates a driving route
- **Ruler**: measures a distance between 2 features on your map.

**ADDING A POINT**

Click on the balloon icon (GUIDE #5) to start creating a point on your map. Then, click on the location where you want your point to be. Your screen will look like the one below. Here, you can add a title for your point and short description. When you are done, hit “Save.”

Your point will now appear in the layers list to the left.

**STYLE YOUR POINTS**

To beautify your map, and keep track of all of your points, you may want to style them. The easiest way to do this is to click the point on your map. A box will appear above it and look similar to the one below.

The icons in the bottom right corner allow you to edit and style your point. Here is what each one does:

- **Paint Can**: change the color and icon of your point. Google has many options to choose from!
- **Pencil**: edit the title and description of your point
- **Camera**: add a photo or video to your point (we will go through this later in the tutorial)
- **“V” Arrow**: creates a driving route between this point and another feature
- **Garbage Can**: delete this point

Keep in mind, these editing features also work for shapes and lines, which we will go over next.
**ADDING A SHAPE**

You can add a polygon to represent a neighborhood, the grounds of a place, a park, etc. To start drawing a polygon, click on the line tool under the search bar (GUIDE #5). Click on your map to create points along the line and outline your shape. Once you are finished, double click your last point to complete the shape.

Don’t forget to give it a title and description, by clicking on your shape and editing the same way you did with your points.

> **TIP:** Make sure you can see the extent of the area in your map view before starting to draw your polygon.

**ADDING A LINE**

You can also add a line to represent a path or route. Click on the line tool under the search bar (GUIDE #5) in order to start drawing a line. Click on the map to draw points along the line. Double-click the last point of the line to stop editing.

Don’t forget to give it a title and description by clicking on your line and editing the same way you did with your points.

> **TIP:** If you need to zoom in or out to more easily draw your line, use the minus button at the bottom lefthand corner of the map. You can also edit your line later if you need to.
8 ADD PHOTOS/VIDEOS TO YOUR FEATURES
To add photos or videos to your features, click on the feature to open the editing box. This time, click on the camera icon and a new window will appear. Here, Google allows you to choose from many options, including uploading your own photos and searching the web for some ideas.

When you have the photo you want, click on it and hit the blue “select” button. Now when you click on your point, it will look like the one below. Hit “Save” to complete the process.

9 CHOOSE YOUR BASE MAP
In the lefthand panel, locate the “Base map” section and click the downward facing arrow to the left. You will have a choice between nine base maps.
10 LABELS & VIEWING

Once you are done adding and stylizing your features, you can customize the view settings.

- In the Layer Settings area (GUIDE #4), each layer will have a blue button under it, titled “individual styles.” Click on this.
- Under the “set labels” drop down menu, you can choose whether to display the names or descriptions of your features. >>>>>>>>>>>
- Click the “X” to close this window. Your features should now have a label next to it, without having to click on each one.

To preview what your map looks like to others, click on the preview button in the Map Settings (GUIDE #3) area.

Hooray! You’ve completed your community map! Now, let’s learn how to share it with others.
**11 SHARE YOUR MAP**

Click on the Share button in the “Map Settings” (GUIDE #3). Your screen should look like this:

The first section is a link that you can use to share your map. The original settings only allow you to share the link with collaborators. To add a collaborator, you need to use the bottom section to “Invite People.”

Once you have invited someone, they will show up under the “Who Has Access” section, like here:

Here, you have the ability to change each individual person’s view or edit setting by clicking on the pencil icon next to their name. You can also remove them as a collaborator by clicking on the “X.”

To widely share your map, you need to use the first column under the “Who Has Access” section. Click on the “change” button to the right and it will open your link settings, like in the image below.

Choose which setting is best for your campaign and above the “save” button, a new line will appear. It says “Access” with your chosen setting and has a blue button at the end that allows you to choose whether these people can view or edit the map. If you’re sharing with the public, we suggest keeping it at “can view” so your hard work doesn’t get changed!

If you have turned link settings on, your original “share” screen will now have a link at the top that says “Link to Share”, rather than just with collaborators. You can use this link anywhere, like Facebook and Twitter, to promote your campaign.
11 START YOUR CAMPAIGN

- Plan your project! Visit www.rootsandshoots.org/getstarted to get some project planning tips and enter your project idea.
- Be counted! Update your project report www.rootsandshoots.org/createproject with your campaign outcomes.
- Visit www.rootsandshoots.org/takeaction for some ideas on how you can use your digital community map throughout your Roots & Shoots campaign.
- Celebrate Your Impact! Visit www.rootsandshoots.org/celebrate for some ideas.

SAMPLE CAMPAIGN: WOOD DUCK HOUSES AT BOB CROSS PARK

A group of elementary students in Sauk Rapids, Minnesota went on a walk through the Bob Cross Nature Preserve. Their assignment was to observe the wetland birds that lived on the ponds and count how many of each species they noticed. They saw many Canada geese and Mallard ducks, but they noticed that there weren’t as many Wood ducks around as they expected there would be.

They wondered...why weren’t there many wood ducks at the park? To answer this, they investigated the area using Google My Maps. They created a community map that highlighted people, animal, and environmental assets at the park — this would show them different types of habitats and land uses inside and around the park.

The class projected the map onto a whiteboard, where they could all contribute and add things they had observed during their walk. Their completed map illustrated that there were many ponds and other animals living at the park, but the mystery of the missing Wood ducks remained.

Determined to gather more information, they reached out to a community collaborator. The local Department of Natural Resources (DNR) discussed with the students where Wood ducks live, what they eat, and their life cycle. They learned that Wood ducks live in wooded swamp areas and prefer to nest in tree cavities or similar structures.

They knew from their map that the park had the habitat Wood ducks like, but how could they attract them? The DNR told them that the ducks probably needed a place to nest and told them about Wood duck boxes. With help again from the DNR, they used their community map to pick the best locations for the boxes.

Now, students are in the process of working with the DNR and reaching out to other community collaborators to learn how to design their boxes. They also plan to reach out to other community members for help fundraising and building the boxes. Their campaign will span the school year and the students are eager to see their impact on their community — for people, animals, and the environment.