

I would like to welcome you to the patch portion of my Silver Award Project-Bike History and Safety. My Silver project was originally planned to be a six week after school program in the middle and elementary schools in my town including the installment of two bicycle repair stations in my community. Unfortunately, the Covid-19 pandemic began just months before I was to implement my project. During the following months I came up with alternate plan after plan to redesign my Silver Project, resulting in this patch program, along with still installing the repair stations.

It is my goal that as you take on this patch program you Discover, Connect and Take Action with the history, safety, and benefits of the bicycle and go on to promote bike safety in your own community.

A few years ago, I witnessed my friend fall from his bike and hit his head on the curb-he didn't have a helmet on and continued to ride without a helmet. That moment stayed with me as I saw more and more people riding without helmets and it made me curious about bike safety and knowledge.

*\*Statistics show that while the overall number of bicycle accidents in the country is declining, the number of fatal bike accidents is on the rise. In 2015, there were 45,000 reported bicycle accidents in the United States, down from 50,000 reported accidents in the prior year. However, the number of fatal accidents increased by more than 12 percent during this same time..*

*Fewer bike accidents are happening on American roads. However, a larger percentage of these accidents tend to be fatal. Why?*

*Reasons that the number of fatal bike accidents has risen include:*

- *New bicyclists are less familiar with safe biking practices*
- *Drivers are not using caution when sharing the road with bicyclists, and*
- *Cities are planning but have not implemented changes to infrastructure to support bicyclist safety. \*\**

*-from a PPM Bike and Walk Alliance online Article*

As you go through the steps to earn your patch, you will see that since 1817, bikes have been a great, eco-friendly form of transportation and exercise. With bikes becoming even more popular, it is important for everyone to know their impacts on history and society along with proper safety while riding.

To earn this patch, complete the required steps for your level in the Discover, Connect, and Take Action sections on the next pages. Try to do your own research, but if you get stuck, I have provided resource links for your parents or Leader to help you with. Remember, if you are going to go online for your research, fill out the Girl Scout Internet Safety Pledge first! It can be found here:

<https://www.girlscouts.org/en/help/help/internet-safety-pledge.html>

Level	Discover	Connect	Take Action
Daisies	2	2	2
Brownies	3	2	2
Juniors	4	3	2
Cadettes	5	4	2
Seniors/Ambassadors	5	4	2

**\*\*\*\* Parents or Leaders-for any videos I have tried to verify the rating. I would suggest you view material first to determine if you are comfortable with your Girl Scout viewing it. \*\*\*\***

## Discover

*The Discover step of a patch allows you to educate and prepare yourself for the issue at hand. For the Discover steps of this badge, you will learn about what you need to do before going on a bike ride and the history of the bicycle.*

- Learn about bike safety, the rules of the road, and laws regarding bikes in your state
- Research the history of bikes and the Wright brothers
- Learn what you need to do before going on a bike ride, including the ABC Quick Check
- Research famous and revolutionary female cyclists such as, but not limited to Annie Londonderry, Billie Fleming, Beryl Burton, Marianne Martin, Jeannie Longo, and Marianne Bos
- Research competitive cycling wear
- Make a list of the pros and cons for riding your bike as a main source of transportation.
- Learn simple repairs to do on bikes
- Research common injuries from cycling and how to treat or prevent them
- (D/B) Watch Bicycle Safer Journey which can be found on YouTube
- (J/C/S/A) With parental permission, watch Hill Climb Girl, an animated short about a girl who constantly loses a race to school on her bike but dreams of competing professionally one day. A story about perseverance. (<https://www.youtube.com/watch?v=Ifv1gbWf3eE>)
- (A) With parental permission, watch The Racer (Rated 16+), about a Tour De France cyclist and the pressures of performance enhancing measures

## Connect

*The Connect step of a patch has you learn about how the issue extends to and impacts other aspects of life. In this step, you will learn about the different types of bikes and how they can be used, where there are bike lanes and bike paths in your community, and environmental impacts of the bike.*

- Learn to fit a helmet properly
- Research different bike trails in your area on [traillink.com](https://www.traillink.com). List a few that you would like to ride on. <https://www.traillink.com/find-trails/>
- (D/B) Research the two main categories of bikes (Mountain and Cruiser) and what riding conditions they are good for
- (J/C/S/A) Research 5 different types of bikes and figure out which one would suit your needs best
- Find the social impacts of the bicycle, including how the bike affected the women's rights movement.
- (C/S/A) Take a look at the environmental impacts- both good and bad- that both cars and bikes have. Which one is better for the environment? Why?
- (S/A) Price out the average expenses of owning and using a car for a year and compare that to the cost to purchase and upkeep a bike for a year. (Note: When pricing out the car, make sure to include insurance, gas, etc. When pricing out the bike, include repairs, spare parts, another set of brake pads, cycling gear, and a few days of public transportation to account for rainy days)

## Take Action

*In the Take Action step of a patch, you show your knowledge about the issue that the patch is focused around. For the Take Action step of this patch, you will go on a bike ride, educate others on proper bike safety, or make a change in our community to make it safer for cyclists*

- (D/B) If you're not yet ready to ride without training wheels, practice 2-3 times a week until you are
- (D/B/J) Make a poster about bike safety to share at school, the doctor's office, police station or somewhere else in your community
- (C/S/A) Make a TikTok or other video about bike safety to share with others
- Learn about and celebrate World Bicycle Day (June 3rd) by going on a ride!
- Go on a ride!
  - (D) Go on a bike ride around the block with your family
  - (B) Go on a bike ride around your neighborhood
  - (J) Go on a bike ride to your school. Make sure to use <https://www.traillink.com/find-trails/> to find the appropriate bike lanes in your town
  - (C) Go on a long-distance bike ride in your town. Make sure to use <https://www.traillink.com/find-trails/> to find the appropriate bike lanes in your town
  - (S/A) Go on an off-trail bike ride. Make sure to use <https://www.traillink.com/find-trails/> to find the appropriate bike paths in your town
- Write to your Town/City council or State representative about bicycle needs in your town/city. Do you need more bike paths? Do you need a repair station available to your residents? Should the police monitor motorists more to make sure everyone is watching for cyclists?

## Congratulations!

You have officially earned the Bike Safety patch!

To receive a free patch, either contact the GS Shop at [www.gssne.org](http://www.gssne.org)

(only 200 free available at the shop, inquire about further orders if sold out.)

or go to <https://www.signupgenius.com/go/10C0D4DAAAC2CA4FBC25-patches> and I will send you a free patch (only 100 available at this link)



## Resources for Leaders or Parents:

### Discover:

- **Bike safety:**
  - <https://exchange.aaa.com/safety/bicycle-safety/riding-skills-tips/>
  - <https://www.chla.org/blog/rn-remedies/bicycle-helmets-getting-the-right-fit#:~:text=The%20helmet%20should%20sit%20LOW,helmet%20on%20your%20own%20head.&text=The%20left%20and%20right%20side,meet%20right%20below%20your%20ear.>
  - <https://www.rei.com/learn/expert-advice/riding-traffic.html>
  - <https://kidshealth.org/en/kids/bike-safety.html>
  - Laws regarding bikes:
    - Bike laws in RI:
      - <https://ribike.org/bikelaws>
    - Bike laws in CT:
      - [http://www.ctbikapedboard.org/uploads/7/8/7/9/78791402/ct\\_bicycle\\_laws\\_handout2016.pdf](http://www.ctbikapedboard.org/uploads/7/8/7/9/78791402/ct_bicycle_laws_handout2016.pdf)
      - <http://www.bikewalkct.org/news/new-bike-laws-effective-july-1>
    - Bike laws in MA:
      - <https://www.massbike.org/laws>
- **History of the bike:**
  - <https://www.patentearth.com/blog/a-brief-history-of-the-bicycle.html#:~:text=The%20first%20bicycle%20historically%20confirmed,successful%20device%20of%20its%20kind.&text=1863%20brought%20with%20it%20the,by%20Pierre%20and%20Ernest%20Michaux.>
  - Wright Brothers and the bike
    - [http://www.wright-brothers.org/Information\\_Desk/Just\\_the\\_Facts/Bicycles/Wright\\_Bicycles.htm](http://www.wright-brothers.org/Information_Desk/Just_the_Facts/Bicycles/Wright_Bicycles.htm)
- **Prep for a bike ride**
  - ABC Quick Check
    - [https://www.youtube.com/watch?v=xGorOe\\_wW-0](https://www.youtube.com/watch?v=xGorOe_wW-0)
  - 5 things to bring
    - <https://www.centurycycles.com/tips/5-tips-what-to-bring-on-every-bicycle-ride-pg1228.htm>
- **Female Cyclists**
  - <https://mpora.com/road-cycling/trailblazing-women-cyclists-through-the-ages/>
  - <https://laka.co/gb/blog/cycling/11-inspiring-female-cyclists-to-follow-on-instagram/>
- **Competitive cycling wear**
  - <https://road.cc/content/buyers-guide/cycling-clothing-guide-5-ways-proper-kit-boosts-your-riding-172431>
  - [https://www.competitivecyclist.com/sc/winter-apparel-guide?INT\\_ID=IB25966IB26156&LOCATION\\_ID=CC\\_Storyboard\\_5](https://www.competitivecyclist.com/sc/winter-apparel-guide?INT_ID=IB25966IB26156&LOCATION_ID=CC_Storyboard_5)
  - <https://www.bikeradar.com/advice/buyers-guides/what-to-wear-on-a-bike-ride/>

- Pros and cons of bike riding
  - Bike Riding
    - Pros:
      - <https://panethos.wordpress.com/2012/06/18/reasons-why-bicycles-are-the-best-mode-of-transport-invented/#:~:text=Bicycles%20provide%20humans%20with%20low,interaction%2C%20communication%2C%20and%20connectivity.>
    - Cons:
      - <https://www.minnpost.com/cityscape/2013/01/how-cycling-can-be-dangerous-your-health/#:~:text=But%20biking%20is%20still%20dangerous,Some%2048%2C000%20cyclists%20were%20injured.>
- Bike repairs
  - <https://greatist.com/fitness/bike-repair-maintenance-guide#1>
  - <https://www.rei.com/learn/expert-advice/bike-maintenance.html>
- Different injuries
  - <https://www.theactivetimes.com/bike/n/8-most-common-cycling-injuries-and-how-prevent-them>
  - <https://www.cyclingweekly.com/fitness/common-cycling-injuries-349671>
- (J/C/S/A) Hill Climb Girl
  - <https://www.youtube.com/watch?v=Ifv1gbWf3eE>
- (A) The Racer
  - IMDb (summary and preview)
    - <https://www.imdb.com/title/tt8374436/>
  - Watch (On YouTube for \$7.99)
    - [https://www.youtube.com/watch?v=XPNJpj1k0JO&has\\_verified=1](https://www.youtube.com/watch?v=XPNJpj1k0JO&has_verified=1)

## **Connect:**

- Helmet fitting
  - <https://www.rei.com/learn/expert-advice/bicycle-helmet.html#:~:text=A%20good%20fitting%20helmet%20should,side%20and%20back%20to%20front.>
- Bike paths in your area
  - Bike paths in RI:
    - <https://www.trailink.com/stateactivity/ri-bike-trails>
  - Bike paths in CT:
    - <https://www.trailink.com/stateactivity/ct-bike-trails/>
  - Bike paths in MA:
    - <https://www.trailink.com/stateactivity/ma-bike-trails/>
  - For anyone who is not in the states listed above, follow this link to find bike paths near you
    - <https://www.trailink.com/find-trails/>

- (D/B) Categories of bikes
  - <https://www.centurycycles.com/buyers-guides/bicycle-types-how-to-pick-the-best-bike-for-you-pg9.htm>
  - <http://greatfunbike.com/mountain-vs-cruiser-which-bike-should-i-get/>
- (J/C/S/A) Types of bikes
  - <https://www.centurycycles.com/buyers-guides/bicycle-types-how-to-pick-the-best-bike-for-you-pg9.htm>
  - <https://www.bicycling.com/bikes-gear/a23067076/types-of-bikes/>
- Social Impacts of the bike
  - <http://www.moah.org/bicycles/social.html>
- (C/S/A) Environmental impacts of a bike vs. car
  - Car
    - <https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle#:~:text=typical%20passenger%20vehicle%3F-A%20typical%20passenger%20vehicle%20emits%20about%204.6%20metric%20tons%20of,8%2C887%20grams%20of%20CO2>
    - <https://www.nationalgeographic.com/environment/green-guide/buying-guides/car/environmental-impact/>
  - Bike
    - <https://www.motherearthnews.com/green-transportation/bicycling/environmental-impact-of-cycling-ze0z1309zpit#:~:text=The%20science%20endorses%20the%20gut,ton%20of%20carbon%20is%20generated.&text=So%2C%20per%20vehicle%2C%20making%20bicycles,times%20cleaner%20than%20making%20cars>
    - <https://www.adventurecycling.org/routes-and-maps/us-bicycle-route-system/benefits-and-building-support/environmental-impact/>
- (S/A) Prices of a car vs. bike
  - Pricing out a car
    - <https://www.nerdwallet.com/article/loans/auto-loans/total-cost-owning-car>
  - Pricing out a bike
    - <https://www.bicycling.com/rides/a20024531/how-much-do-you-spend-on-cycling-gear-every-year/#:~:text=Litman%20set%20the%20cost%20of,9%20here>

### **Take Action:**

- (D/B) Helping your child ride without training wheels
  - <https://mommypoppins.com/kids/8-tips-for-teaching-your-child-to-ride-a-bike-without-training-wheels>
- World bicycle day
  - <https://www.jagranjosh.com/general-knowledge/world-bicycle-day-1591105632-1>

### **Other Resources:**

- Online PPM article (for statistics on page 1): <https://www.peoplepoweredmovement.org/bicycle-accidents-in-the-united-states/>