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# Curriculum for teaching marginalized youth on cycling, road safety and bike maintenance



<https://das-bike.eu>

2025



## About the project

This publication is one of the final products of the Youth & Commute project and represents a structured approach to increasing the mobility of marginalized youth by promoting the use of bicycles.

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## Project Websites

<https://youth-commute.org/>

<https://das-bike.eu/>

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# INTRODUCTION

Teaching young people in need about the basics of bicycle maintenance and repair for sustainable mobility is one of the key topics the consortium is concentrated in their respective communities. With this project, we hope to address important concerns including career prospects in sustainable mobility, education about road safety, and the development of useful skills in client service and business management.

Since many vulnerable populations do not have access to formal training on how to safely navigate streets as bicycles or pedestrians, one of the primary areas of concentration is road safety education. **One of the goals of offering this curriculum is to lower the likelihood of accidents and injuries**, which will eventually lead to a safer driving environment for all users.

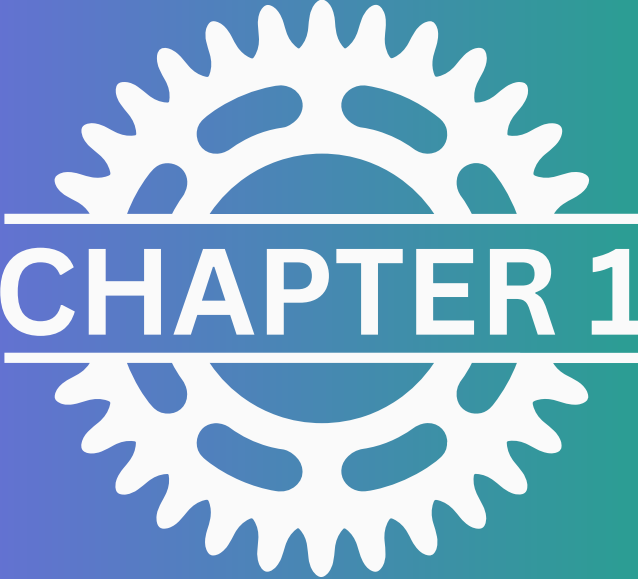
Furthermore, we are educating young people to decide on their own transportation choices by educating them on how to properly maintain and repair their bicycles. Having a well-maintained bicycle can significantly impact a person's capacity to access jobs, education, and other vital services for a large number of migrants, students, and vulnerable children. We are assisting to break the obstacles to transport and enhance chances for young people in need by providing free or inexpensive maintenance as well as access to resources for cyclists.

Furthermore, **by teaching people the fundamentals of bicycle maintenance and repair, we may be able to create job possibilities in the sustainable transportation sector**. Our community's sustainable mobility options day by day are expanding, and we are creating significant employment opportunities by giving young people the skills they need to work in bike repair shops or launch their own small companies. This focus on job training and skill development contributes to the development of a more diverse and economically stable society.

We stress the value of business management and client service besides the practical skills covered in these chapters. We not only give people useful job skills but also set them up for future employment success by fostering a feeling of professionalism and quality in all facets of our work. This emphasis on providing excellent client service also contributes to the development of rapport and trust inside the community, which encourages cooperation and support among all members.

As a social entity, we are working to build a more sustainable and just society for everybody through our work in sustainable mobility, road safety education, basic bike maintenance, introduction to bicycle repair, and client service and business management. By providing people with the information and abilities required for **reasonably priced transport options**, we are enhancing people's quality of life and encouraging social inclusion in our neighborhood.





# CHAPTER 1

**Present the idea of sustainable mobility**



# Introduction to chapter 1

The main goals of Chapter 1 **are to present the idea of sustainable mobility** and stress the significance of changing to modes of travel with less of an environmental impact. Sustainable mobility like cycling, and public transport is essential in order:

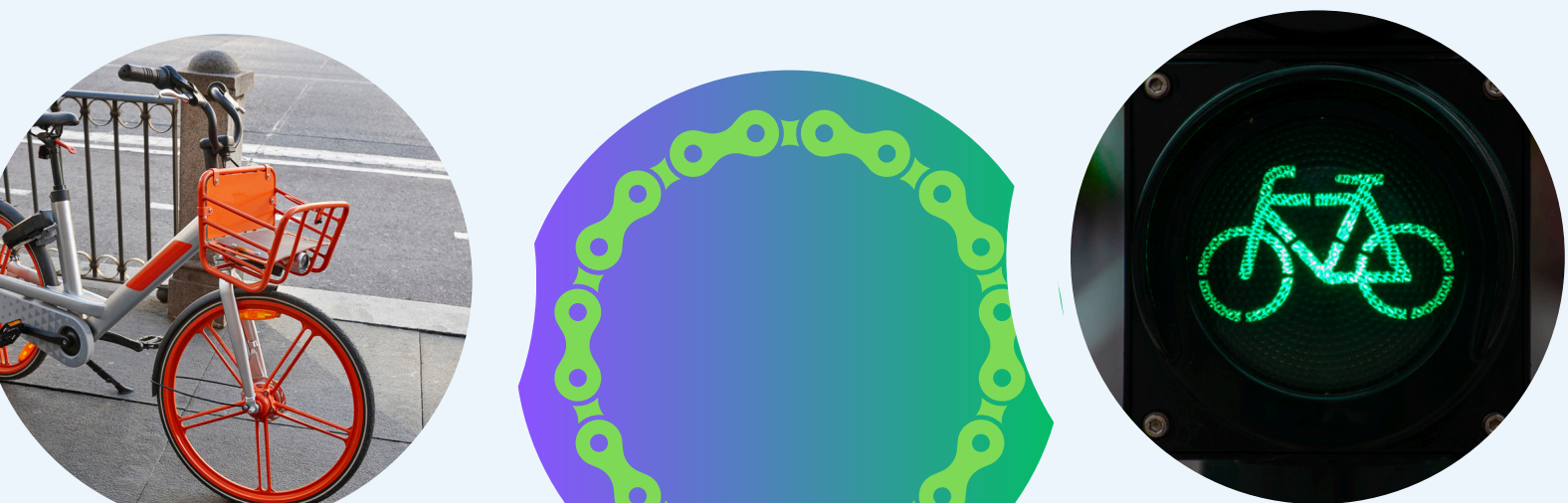
- To lower greenhouse gas emissions,
- To contribute in improving air quality,
- To create a society that is healthier and more livable, sustainable travel options like cycling, public transport, and electric cars are crucial.

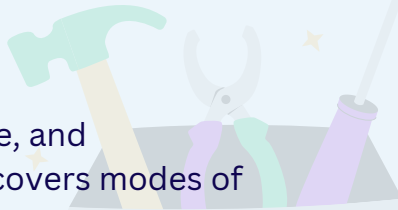
Riding a bicycle is a kind of transportation that has many advantages for people and the environment. It's also a reasonably priced and effective means of moving around town. Cycling encourages physical activity, lessens air pollution, and eases traffic congestion. Furthermore, compared to conventional cars, bicycles are a more environmentally friendly form of transportation because they run on fossil fuels.

Additionally, Chapter 1 addresses how transportation affects global warming. For the most part, the transportation industry contributes significantly to greenhouse gas emissions by using fossil fuels to power cars, ships, aircraft, and trains. We can lessen the consequences of climate change and lower our carbon footprint by switching to sustainable transportation solutions.

## Theoretical part

The topic of sustainable mobility is more crucial than ever in the modern society. Young people who are marginalized are disproportionately impacted by the effects of environmental degradation and climate change. We must realize how important it is to switch to forms of transportation that are more environmentally friendly and encourage a better way of living.





The use of transport modes that are socially just, economically feasible, and environmentally beneficial is referred to as sustainable mobility. This covers modes of transportation like walking, bicycling, public transportation, and electric cars. We can drastically cut greenhouse gas emissions, enhance air quality, and build a society that is healthier and more livable for all by selecting these environmentally friendly forms of transportation.

For young people who are marginalised, cycling is one of **the most accessible and economical forms of transportation**. It not only encourages physical exercise and lowers air pollution, but it also lessens traffic and our need on fossil fuels. You may improve your general well-being and help create a cleaner, more sustainable world by making cycling a part of your daily routine.

Understanding how transport affects climate change and global warming is crucial. Emissions of greenhouse gases are mostly caused by the transportation sector, which uses fossil fuels to power its cars. Cars and trucks are the main sources of transportation-related greenhouse gas emissions, which make up a large amount of the global emissions. Fossil fuel combustion contributes to climate change and global warming by releasing pollutants into the atmosphere, including carbon dioxide. Wide-ranging effects on the environment result from this, such as biodiversity loss, weather changes, and rising sea levels.

Cycling is an environmentally beneficial and sustainable substitute for conventional modes of transportation. Furthermore, encouraging bike-friendly neighborhoods and investing in cycling infrastructure can encourage more people to adopt this eco-friendly form of transportation.

Including cycling in everyday routines can have social and economic benefits in addition to health and environmental ones. **Cycling can ease traffic congestion by lowering the number of cars on the road**, which will make it simpler for people to get to work or complete errands in time. This might lead to higher efficiency, which would be advantageous for companies and the economy at large.

In addition, **cycling is less expensive as a form of transportation than driving a car or taking public transportation**. People can save money on gas, parking costs, and public transportation expenses by opting to ride their bikes instead. For low-income young people who might not have access to a car or who live far from public transport, this can be extremely helpful.

From a sociological standpoint, encouraging cycling can contribute to the development of more cohesive and inclusive societies. Riding a bicycle is a terrific **way to bring people of all ages and abilities together** because it's an accessible means of transportation. Cities can facilitate people's access to employment, schools, and other vital services, irrespective of their physical abilities or socioeconomic situation, by investing in bike infrastructure.



A greener, healthier, and **more inclusive society can be created for all by embracing sustainable mobility and supporting fair and accessible transportation solutions**. Working together, we can create a transport system that is more ecologically friendly and sustainable for the benefit of all.

Activity #1	Title of the activity
Introduction to Sustainable Mobility	Bike Challenge
Objectives of the activity	
<ul style="list-style-type: none"> <li>• Educate young people on the advantages of sustainable mobility.</li> <li>• Motivate young people to start cycling as a form of transportation.</li> <li>• Emphasize that regular biking can improve the general health and physical fitness of young people.</li> <li>• Emphasize that group bike activities can foster a sense of community and solidarity among young people from all backgrounds.</li> </ul>	
Materials needed	
<ul style="list-style-type: none"> <li>• Bicycles</li> <li>• Helmets</li> <li>• Reflective Gear and Lights</li> <li>• Water Bottles</li> <li>• Maps or Route Guides</li> <li>• First Aid Kit</li> <li>• Communication Devices</li> <li>• Snacks</li> <li>• Camera or Smartphone</li> </ul>	
Details for the activity	
<p><b>Introduction (5 minutes):</b>  Welcome everyone and explain the idea behind the Bike Tour Challenge, which is a fun and instructive exercise that promotes sustainable mobility through cycling.</p> <ul style="list-style-type: none"> <li>-Stress the need of adopting more eco-friendly transport options, like cycling, to cut down on carbon emissions, encourage physical activity, and build a healthier community.</li> <li>- Give a brief agenda of the day's events and discuss how the Bike Tour Challenge can encourage people to bike more often in order to contribute to a more sustainable future.</li> </ul> <p><b>Preparation for the Bike Tour (10 minutes)</b>  - Give a brief talk about the need to wear helmets, traffic rules, and proper bike behavior.</p>	



- Remind young people to respect traffic signs and signals, turn or stop using hand signals, and ride in the same direction as traffic at all times.
- When riding at night, encourage riders to use lights or reflectors to make themselves visible to vehicles.

**Do some exercise to warm up for the challenge (10 minutes):**

- Organise a quick warm-up exercise to prepare participants for the bike excursion.

**Organize the Bike Tour (30 minutes)**

Participants in the bike tour will ride along a predetermined route through picturesque streets and pathways, passing by notable local sites.

Experienced bikers who know how to keep everyone safe and happy will be leading the tour. There will be opportunities to learn about the advantages of cycling along the route, in addition to breaks for water and photo ops.

The tour will encourage physical exercise and community involvement while showcasing how simple and accessible cycling is as a sustainable form of transportation.



Figure 1. Bike tour



**Interactive session (25 minutes)**

Engage participants in conversation on the advantages of cycling, sustainability, and community health by discussing with them after the tour is finished. Invite young people to discuss how they may incorporate cycling into their daily life and to share their personal cycling experiences.

To promote the Bike Tour Challenge and inspire others to join, ask participants to take pictures or videos of their then post them to social media with a designated hashtag to raise awareness of the Bike Tour Challenge and inspire others to take part.

**Conclusion (10 minutes)**

At the end encourage participants to keep riding their bikes on a regular basis for fitness, fun, or transportation, and to share the message of sustainability with their friends and family. Give people who want to continue their bike experience information on nearby cycling groups, events, and resources. Also, encourage participants to share their experiences and advancements with the Bike Tour Challenge community by keeping them updated.



## Instructions and tips for educators

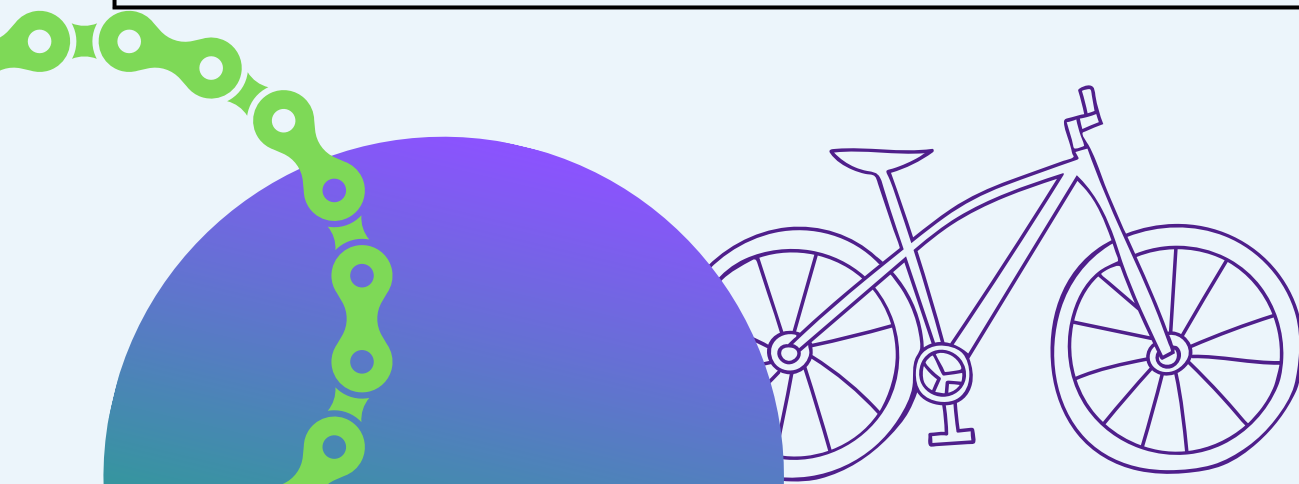
- **Safety first!** - As experienced cyclist and educator in charge of the Bike Tour Challenge, you should prioritize safety. Verify that everyone is adhering to driving laws and wearing helmets. Remind them to bike in the same way as traffic, and use hand signals.
- **Choose appropriate bike route** - Meaning safe and appropriate for riders of all ability levels by becoming familiar with it. In case of any unplanned events, carry a first aid kit and emergency contact information with you.
- **Encourage sustainability** - Use this as a chance to inform people on the advantages of cycling for their own well-being and the environment. Inspire them to think about bicycling as a sustainable mode of transportation for their everyday needs.

## Instructions for students

Your bike should be in good condition - Prior to the Bike Tour Challenge, make sure your bike is in good working condition. Make that the brakes, gears, and tyres are all in good working order. Pack any equipment or tools you'll need for little repairs. If you don't know ask the educators/leaders of the tour. Put on comfortable clothes, shoes, and a helmet for safety when cycling. To stay hydrated, don't forget to pack a water bottle, sunglasses, and sunscreen. Follow all traffic laws and signals. When turning or halting, use hand signals, stay in single lane, and follow traffic signals and signs.

## References and further reading

<https://www.vbt.com/travel-styles/biking-tours/>





Activity #2	Title of the activity
Introduction to Sustainable Mobility	Bike Safety
Objectives of the activity	
<ul style="list-style-type: none"> <li>• To inform young people about the value of bike safety when riding a bike for transportation.</li> <li>• To offer helpful advice and suggestions for riding safely.</li> <li>• To provide young people with tips and tricks they need to ride bicycles in their community with safety.</li> <li>• To encourage young people to engage in conversation and share their personal experiences with bike safety.</li> </ul>	
Materials needed	
<ul style="list-style-type: none"> <li>• Helmets</li> <li>• Handouts summarizing bike safety regulations and tips</li> <li>• Bicycles for hand signal practice</li> <li>• Visual aids (posters, slideshows, videos)</li> <li>• Markers/Whiteboard</li> <li>• Safety gear (reflective vests, lights)</li> <li>• Informational brochures about local bicycle safety resources</li> <li>• Refreshments (water, light snacks)</li> </ul>	
Details for the activity	
<p><b>Introduction (5 minutes):</b></p> <ul style="list-style-type: none"> <li>- Introduce the Bike Safety Workshop and stress how important it is to comprehend and follow bike safety regulations in order to guarantee a fun and safe cycling experience.</li> <li>-Emphasise the need to wear helmets, observe traffic laws, and be cautious of any dangers when cycling.</li> <li>- Describe how the workshop will cover important bike safety advice and offer an engaging place for participants to participate in activities and debates.</li> </ul>	



### Interactive workshop (40 minutes)

1. Helmet Fitting Demonstration: Assist participants in properly fitting a helmet to guarantee optimal safety when cycling. Talk about how important it is to always wear a helmet. Check the video <https://www.youtube.com/watch?v=6xte8c9KFml>
2. Practice Hand Signals: Show participants how to stop and turn while cycling. Give them practice utilising these signals so they can interact with other drivers efficiently.



Figure 2. Hand signals while cycling

1. Group Discussion: Lead a conversation in which attendees can offer their personal perspectives and experiences about bicycle safety. Urge them to clarify any doubts they may have about safety by asking questions.

### Conclusion (10 minutes)

- Summarise the main rules and advice for riding safely that were discussed during the course.
- Motivate participants to raise awareness of bike safety in their neighborhood and to always put safety first when riding a bike.
- Offer details about regional groups or projects that advance bicycle safety and extend assistance to riders.

## Instructions and tips for educators

- Make sure that each participant has access to a helmet that fits them correctly during the workshop.
- Establish a welcoming and inclusive atmosphere that encourages participation in conversations and activities.
- Use realistic examples and interactive exercises to successfully impart important bike safety principles.
- To improve the participants' learning experience, encourage active engagement and interaction.

## Instructions for students

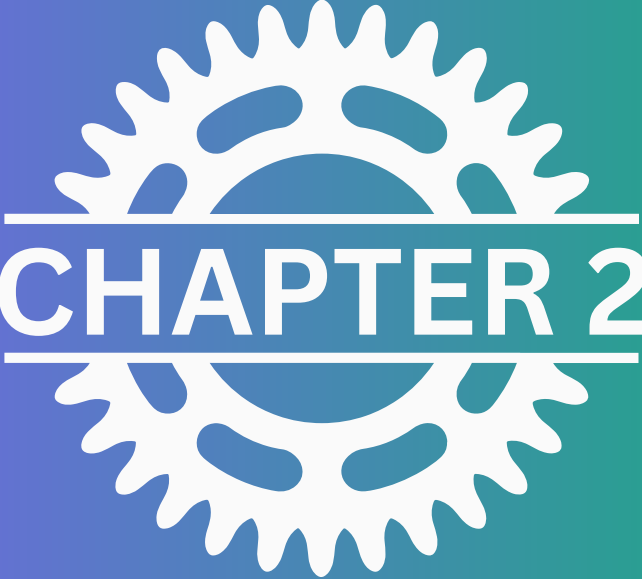
- Participate fully in conversations and activities while paying close attention to the workshop facilitator.
- To protect everyone's safety, including your own, pay close attention to the guidelines during the interactive workshop sessions.
- When riding your bike, remember the important safety principles that were discussed at the workshop.
- If you have any questions regarding any rules or facts pertaining to bike safety, don't be afraid to ask.

## References and further reading

1. <https://www.youtube.com/watch?v=6xte8c9KFml>
2. <https://www.youtube.com/watch?v=prYMM7D2qF8>
3. <https://bicyclensw.org.au/bicycle-hand-signals-3/>







# CHAPTER 2

## Education on road safety

## Introduction to chapter 2

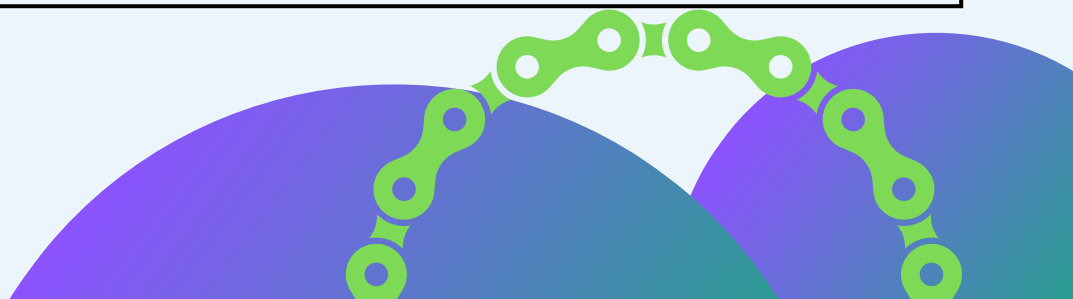
For all users of the road, including bikers, road safety education is essential. It is crucial to comprehend traffic laws and regulations to guarantee the safety of bicyclists and other road users. This entails comprehending speed limits, recognizing who has the right-of-way, and following all traffic signs and signals.

It's also essential to have plans for remaining safe when cycling in different situations. This means always wearing a helmet, utilizing lights and reflectors in not well-lit areas, and dressing in bright, reflecting colors to be seen by vehicles. Along with being aware of their surroundings, cyclists should also be on the lookout for potential hazards and be ready to respond correctly and swiftly in an emergency.

Teaching people young people from vulnerable categories and in general young people about road safety is essential to reducing cycling-related incidents and injuries. Cyclists can contribute to the safety of other road users as well as their own by studying traffic regulations, how to ride safely in metropolitan areas, and creating plans for staying safe in various situations.

Education for young cyclists how to ride safely in cities is needed because these settings frequently provide particular difficulties for bikers. This can involve sharing the road with pedestrians and cars, manoeuvring through congested streets with heavy traffic, and keeping an eye out for potential hazards like railway tracks, potholes, and construction zones. We can assist young riders avoid collisions and injuries by teaching them safe urban cycling techniques.

Another crucial component of teaching young cyclists road safety is helping them make plans for keeping safe in a variety of scenarios. This can involve practicing defensive riding skills to prevent possible collisions with automobiles or other barriers, as well as understanding how to handle situations like a flat tyre or being lost. We can help young cyclists be safe while enjoying the freedom and independence that riding affords by equipping them with the information and skills to respond appropriately in various scenarios.



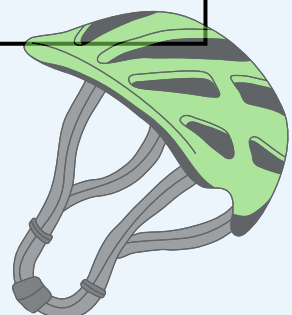
## Theoretical part


Cycling is an increasingly popular form of recreation and transportation that has several positive effects on the environment and human health. To protect both their safety and the safety of others, bikers must also receive road safety education.

A few tips for road safety for cyclists is:

- **Wearing a helmet** - a crucial component of riding safety. It is imperative that bikers always wear a correctly fitting helmet when riding because they can significantly lower the risk of head injuries in the case of accident.
- **Dressing in bright, reflective materials** to improve their visibility to other drivers, particularly at night.
- **To be aware of and respect the traffic laws and rules.** Like drivers, cyclists are considered vehicles on the road and are subject to all rules, signs, and traffic signals. This entails observing speed restrictions, yielding to pedestrians, and signaling turns. Bicyclists should ride in the same direction as traffic to improve visibility to cars and lower the chance of an accident.
- **Cyclists should be mindful of their surroundings and employ defensive riding strategies.** This entails keeping an eye out for any dangers on the road, including as potholes, debris, and parked cars, as well as being ready to respond swiftly to unforeseen circumstances. Along with riding predictably, cyclists should use eye contact and hand signals to other road users to indicate their intentions.
- **Understand their own capabilities and limitations.** This entails being aware of their degree of comfort and proficiency when riding in various traffic situations and being aware of how weather, exhaustion, and distractions affect their ability to ride a bicycle. In order to keep their bicycles in safe operating order, cyclists need also perform routine maintenance on them, such as inspecting the tyres, brakes, and lights before each ride.

Generally, encouraging a culture of safety and respect on the roads requires educating riders about road safety. Cyclists can take advantage of the many advantages of riding while lowering their risk of accidents and injury by adhering to these recommendations and adopting safe riding practices.



Activity #1	Title of the activity
Road Safety Education	Road Safety Role Playing Exercise
<b>Objectives of the activity</b>	
<ul style="list-style-type: none"> <li>• To raise participants' understanding of the value of traffic safety and the dangers of driving recklessly.</li> <li>• To increase participants' comprehension of the laws and guidelines governing road safety.</li> <li>• To help in the participants' development of responsible and safe bike riding decision-making abilities.</li> <li>• To motivate cyclists to think about how their actions will affect other people as well as themselves when they are cycling.</li> <li>• To encourage conversation and cooperation among participants on ways to make everyone's experience on the roads safer.</li> </ul>	
<b>Materials needed</b>	
<ul style="list-style-type: none"> <li>• Scenarios written on paper</li> <li>• All the safety equipment in figure 4</li> </ul>	
<b>Details for the activity</b>	
<p><b>Introduction (10 minutes)</b></p> <p>Introduce the session and stress its significance in encouraging youth road safety at the outset.</p> <p>Describe the workshop's aims and objectives. Talk to the participants about their experiences and any worries they may have regarding road safety.</p> <p><b>Role-playing exercise (35 minutes)</b></p> <p>Participants should be divided into smaller groups, with each group given a distinct road safety scenario to enact.</p> <p>Scenario 1: A biker experiences an unexpected flat tyre while out for a solo ride. In order to safely get back on the road, they must find out how to change the tyre.</p> <p>Figure 3. Cyclists fixing a flat tyre</p> 	



## Details for the activity

Scenario 2: A biker accidentally collides with a pedestrian while riding across a congested metropolitan roadway. It is a must that bicycles remain composed and ensure the safety of the pedestrian in this situation.

Scenario 3: During a race, a competitive cyclist feels lightheaded and confused out of the blue. Their teammates must act fast to evaluate the situation and, if required, seek medical attention.

After every scenario, have a group debrief where you can talk about what went well and what could have been done better.

### Safety equipment session (20 minutes)

Give participants demonstrations of appropriate safety equipment, like lights, reflectors, and helmets. Talk about the significance of a bicycle while wearing safety gear and demonstrating how each item should be fitted and used.

To make sure they understand how to use the safety equipment properly, let them try on various pieces and ask questions.

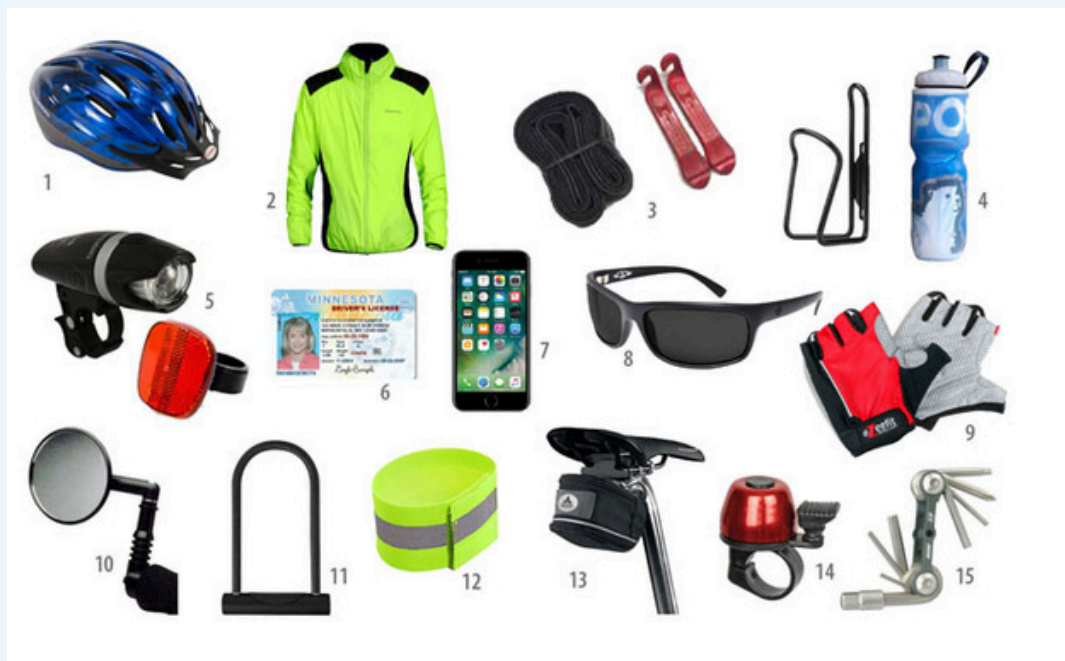


Figure 4. Safety equipment

### **Conclusion (10 minutes)**

Summarise the main rules and advice for riding safely that were discussed during the course. Motivate participants to raise awareness of bike safety in their neighborhood and to always put safety first when riding a bike. Offer details about regional groups or projects that advance bicycle safety and extend assistance to riders.

### **Instructions and tips for educators**

Make sure that each participant has access to a helmet that fits them correctly during the workshop. Establish a welcoming and inclusive atmosphere that encourages participation in conversations and activities. Use realistic examples and interactive exercises to successfully impart important bike safety principles. To improve the participants' learning experience, encourage active engagement and interaction.

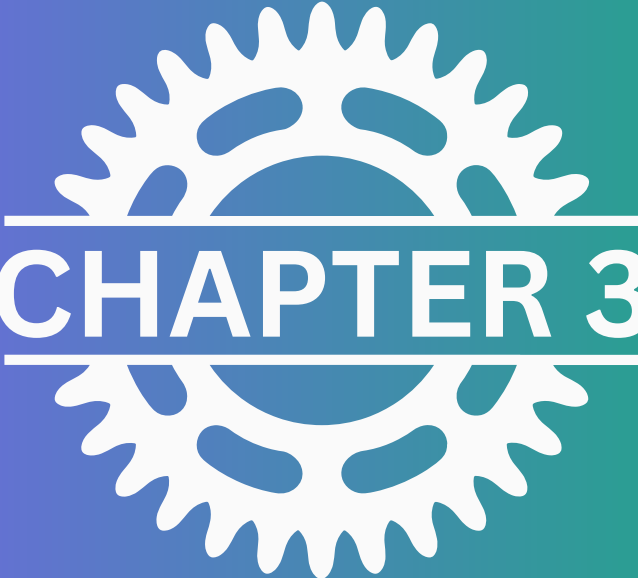
### **Instructions for students**

Participate fully in conversations and activities while paying close attention to the workshop facilitator. To protect everyone's safety, including your own, pay close attention to the guidelines during the interactive workshop sessions. When riding your bike, remember the important safety principles that were discussed at the workshop. If you have any questions regarding any rules or facts pertaining to bike safety, don't be afraid to ask.

### **Resources and further reading**

1. <https://womenwhocycle.com/changing-your-own-flat-tyre-on-your-bike/>
2. <https://www.bikemn.org/mn-bicycling-handbook/safety-equipment/>





# CHAPTER 3

**Bike Maintenance education for  
youngsters from vulnerable categories**

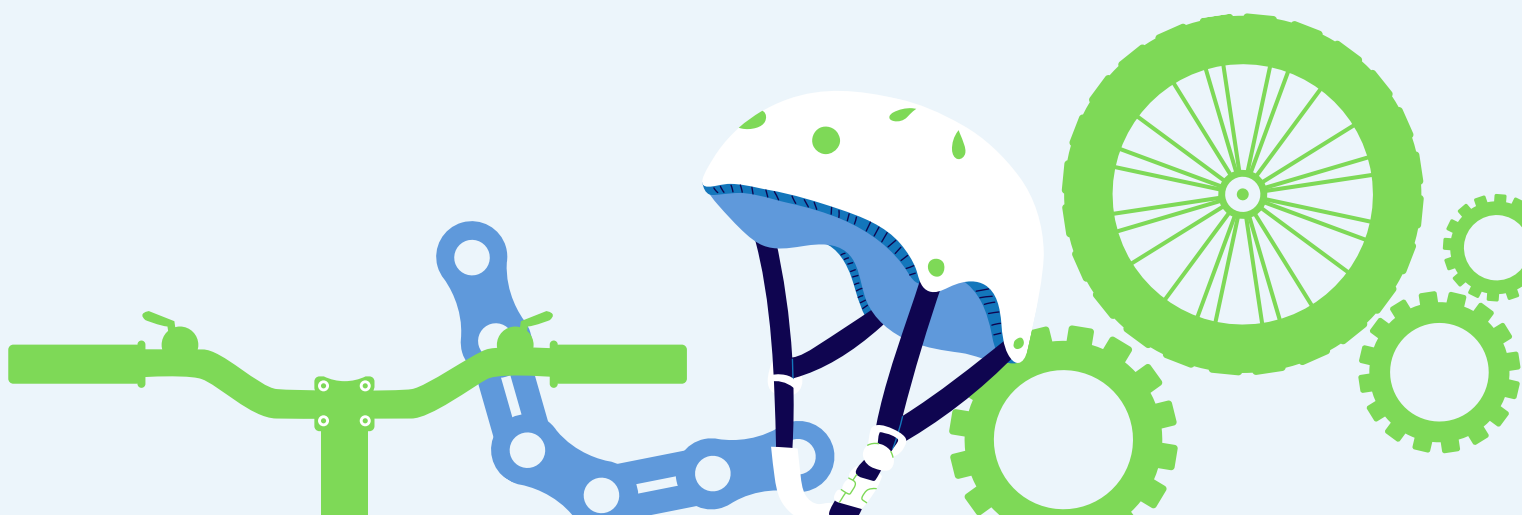
## Introduction to chapter 3

Teaching young people from vulnerable categories how to maintain their bikes can provide them with important life skills and give them the confidence to change their mobility and well-being. By providing them with **an introduction to the fundamental bike parts and vocabulary of bicycles**, the curriculum will help them gain a better knowledge of how their bikes function and the value of regular bike maintenance.

Youngsters will develop a sense of independence and accountability by learning how to do simple maintenance tasks like cleaning and lubricating the chain. Extending the life of their bikes and avoiding expensive maintenance, will also save them money over time.

Vulnerable young people can develop problem-solving skills and build confidence in their ability to overcome obstacles by being assisted in identifying common concerns and taught troubleshooting procedures. This can be extremely empowering for people who might otherwise encounter other challenges in their lives.

Empowering marginalized young people about bike maintenance can make them more aware of their sense of independence, self-worth, and general wellbeing. It can give youngsters useful life skills that they can use in various areas of their lives in addition to riding bikes. We can assist them in creating a better and more resilient future by funding their education and empowering them.



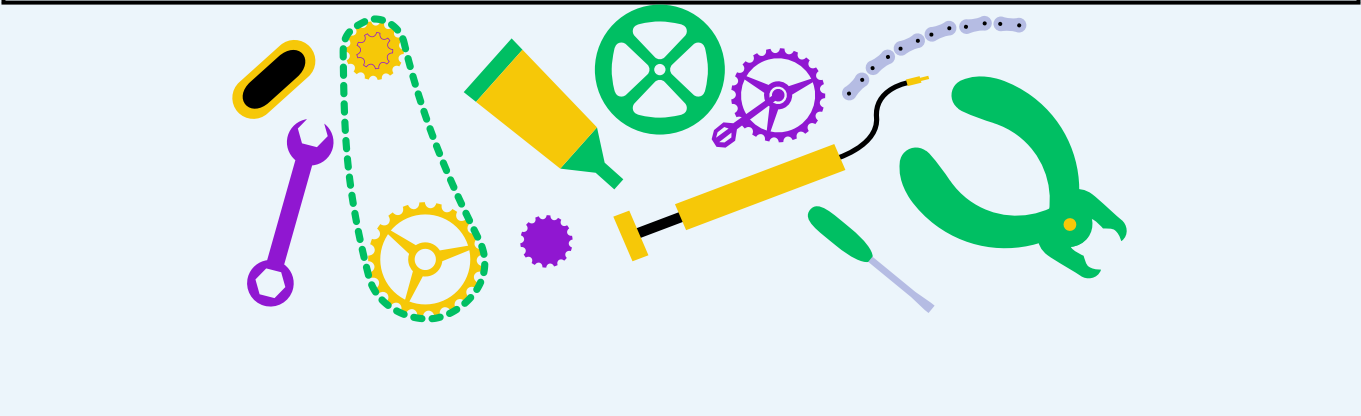


**Theoretical part**

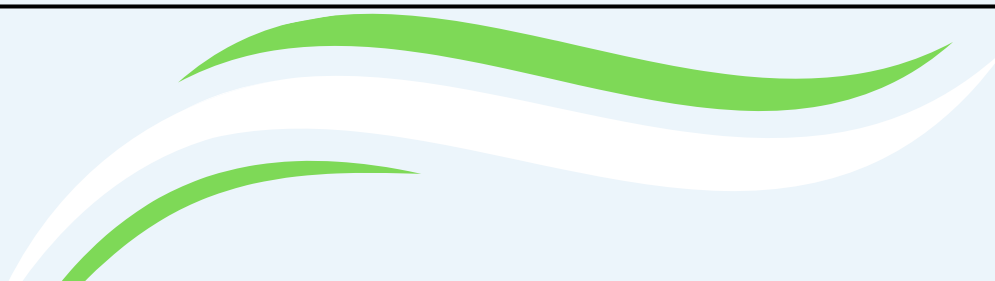
Bike maintenance education for vulnerable youth holds immense potential to transform their lives in profound ways. Beyond the basic upkeep of bicycles, this education equips them with essential life skills and fosters a sense of empowerment that reverberates across various facets of their existence. Firstly, by familiarizing them with the fundamental components and terminology of bicycles, this curriculum lays a solid foundation for understanding bicycle mechanics. From learning how to clean and lubricate chains to conducting basic repairs like fixing flat tires or adjusting brakes, these practical skills not only extend the lifespan of their bikes but also save them money by mitigating the need for costly repairs. This financial literacy fosters independence and resilience, crucial qualities for navigating life's challenges.

Moreover, bike maintenance education cultivates problem-solving abilities as youth learn to identify and troubleshoot common bike issues. This empowerment is particularly meaningful for individuals facing additional hurdles in their lives, providing them with a tangible sense of agency and accomplishment. As they engage in workshops and interact with peers and mentors, they develop social skills, confidence, and a sense of belonging that transcends the bike repair realm. This newfound confidence extends beyond cycling, impacting their interactions with the world and bolstering their self-esteem.

Furthermore, by instilling safety awareness and environmental consciousness, this education promotes responsible citizenship and sustainable practices. The skills acquired through bike maintenance workshops not only enhance employability but also open doors to career opportunities in related fields. By investing in their education and skill development, we pave the way for a brighter, more resilient future for vulnerable youth, empowering them to thrive despite the challenges they may face.



Activity #1	Title of the activity
Bike Maintenance	Guided Bike Relay
<b>Objectives of the activity</b>	
<ul style="list-style-type: none"> <li>• Assist participants in recognizing and comprehending key components of a bike, such as the tires, gears, chain, and brakes.</li> <li>• Give participants instruction on basic maintenance procedures such tire pressure checks, bike cleaning, chain lubrication, and bolt tightening.</li> <li>• Create an atmosphere where individuals may collaborate in groups to address maintenance issues, encouraging dialogue and teamwork.</li> <li>• Provide participants with the tools they need to solve problems and get over challenges.</li> </ul>	
<b>Materials needed</b>	
<ul style="list-style-type: none"> <li>• Bike (one for each person or shared by small groups)</li> <li>• Simple bicycle repair equipment, such as tire levers, chain lubrication, and wrenches</li> <li>• Station indicators that highlight various maintenance issues</li> <li>• Timer or stopwatch</li> <li>• Pens and notepads for attendees</li> </ul>	
<b>Details for the activity</b>	
<p><b>Introduction (10 minutes)</b></p> <p>As you greet the attendees, provide a brief introduction to yourself and the other facilitators. Describe the goals of the workshop, which include developing collaboration and practical bike maintenance skills.</p> <p>Stress the value of bike maintenance for independence, economic effectiveness, and safety. Give a brief rundown of the session's schedule.</p>	



## Details for the activity

### **Icebreaker (10 minutes)**

Introduce a lighthearted icebreaker to get people interested.

Pose trivia questions about bikes, like "What is the purpose of lubricating a bike chain?" or "Name three essential tools for bike maintenance."

Invite people to respond on their own or in pairs.

Give out little gifts or praise for accurate responses.

### **Instructions for the Relay Race (5 minutes)**

Describe the relay race's regulations, stressing that teamwork and learning are more important than speed:

Teams of participants will work together to finish maintenance tasks at several stations.

Before tagging the following teammate, each member of the squad will take turns taking on a challenge.

The objective is to finish every task as a team.

Examine the safety precautions when using tools and equipment.

The tasks at the stations are:

#### **Flat Tire Repair Station:**

Task: Identify the tire puncture, take off the inner tube, repair or replace it, and put the tire back on the rim.

Tire levers, a patch kit or extra tube, and a pump are required tools.

#### **Station for Chain Lubrication and Cleaning:Challenge:**

After using a degreaser and brush to clean the bike chain, participants must properly lube it to ensure smooth functioning.

Tools Required: Chain lubricant, degreaser, and cleaning brush for chains.

#### **Station for Brake Adjustment:**

Challenge: Participants have to test the brakes' response and adjust the brake pads to make sure they make correct contact with the wheel rim. Allen wrench, rag, and brake pad alignment tool (if available) are the tools required.

### **Relay Race under Instruction (30 minutes)**

- Organize participants into groups of three to five people, making sure that each team has a variety of skills and abilities.
- At the start of the relay course, designate a starting position for every team.
- Begin the race and offer direction and encouragement to teams as they complete each task.
- Encourage people to support their teammates and pose questions.
- Stress the importance of learning and give little triumphs and advancements recognition.

### **Discussion and Debrief (15 minutes)**

After the relay race, gather the competitors. Organize and lead a conversation on their experiences:

- Invite teams to present their observations and lessons acquired from the challenges.
- Talk about any difficulties you've had and how you overcame them, placing a strong emphasis on collaboration and problem-solving.
- Congratulate participants on their accomplishments and efforts and provide words of support.

### **Practical Exercise and Skill Development (15 minutes)**

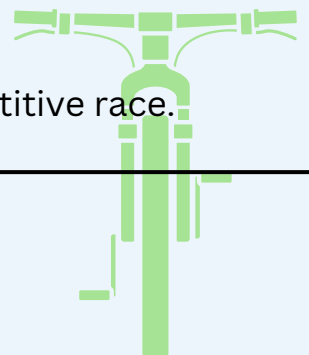
Arrange a practical training space equipped with bicycles and upkeep instruments. Step-by-step demonstrate doing simple maintenance operations such adjusting the brakes, checking tire pressure, and cleaning the chain.

Urge participants to rehearse these exercises under observation, providing assistance and direction as required. Stress the value of consistent practice in order to develop self-assurance and competence in bike repair.

### **Summary and Next Actions (10 minutes)**

Write a summary of the workshop's primary lessons, emphasizing the value of cooperation and fundamental bike maintenance knowledge. Offer options for additional education, including web guides or neighborhood bike repair shops. Express gratitude to the attendees for their involvement and urge them to keep using their newly acquired abilities.

The important thing to emphasize is that this is not a competitive race.





## Instructions and tips for educators

Assign participants to different teams and create an atmosphere where they feel free to ask questions and offer assistance to one another in order to promote cooperation and teamwork. Provide participants with clear instructions and assistance to ensure they understand their roles and know how to use the repair tools and equipment properly. Pay close attention to what the participants need, and help and counsel them as they work through the problems of maintenance. Organize insightful discussions and conversations so that participants may consider their experiences, exchange ideas, and pinpoint areas in need of development.

## Instructions for students

Engage fully in every activity, such as the relay race, icebreaker, hands-on experience, and conversations. Seize the chance to pick up new abilities and put them into practice in a friendly setting. Engage in open communication with your peers and work together as a team to overcome the maintenance obstacles. If you have any questions or need clarification, don't be afraid to ask them. Utilize your lecturers' knowledge and advice; they are there to assist you in learning. Think back on your workshop experiences, including the things you learned, the difficulties you encountered, and the ways you can use your newly acquired abilities in the future.

## Resources and further reading



Activity #2	Title of the activity
Bike Maintenance	Guided Bike Relay
<b>Objectives of the activity</b>	
<ul style="list-style-type: none"> <li>• To encourage active learning and knowledge retention by involving participants in practical bike repair activities and challenges.</li> <li>• To foster collaboration among participants by assigning team roles and encouraging effective communication during task completion.</li> <li>• To give participants the chance to put their knowledge and expertise of bike maintenance to use in practical situations by giving them tasks like recognizing maintenance problems or locating particular bike parts.</li> <li>• To encourage participants to think critically and problem-solve as they navigate through tasks and overcome obstacles, strengthening their problem-solving abilities for future situations.</li> </ul>	
<b>Materials needed</b>	
<ul style="list-style-type: none"> <li>• Task List</li> <li>• Tools and Bicycle Parts</li> <li>• Safety Equipment</li> <li>• Timer</li> <li>• Pens or Markers</li> <li>• Awards</li> <li>• Refreshments and Debriefing Materials</li> </ul>	
<b>Details for the activity</b>	
<p><b>Introduction (10 minutes)</b></p> <p>Introduce the session and have a bike next to you, to share the bike parts, equipment needed for bike maintenance. Divide participants into 3 groups.</p> <p><b>Scavenger hunt (45 minutes)</b></p> <p>Make sure teams have a list of activities to accomplish before the scavenger hunt starts. These assignments ought to address a variety of bike maintenance-related duties and difficulties. Think about incorporating assignments like:</p>	

- Locating certain tools or bike pieces that are hidden throughout the scavenger hunt location.
- Recognizing possible maintenance problems, including worn brake pads, loose nuts, or incorrectly adjusted gears, on various bikes.
- resolving riddles or puzzles about bikes that direct groups to particular places or bike-related items for maintenance.

### 1. Locating Particular Bicycle Tools or Parts:

Task: Find the tire pump close to the park's entrance.

Task: Locate a set of tire levers that are hidden behind a tree next to the bike path.

Task: Locate a multitool that is concealed in the bushes next to the picnic spot.

### 2. Recognizing Possible Maintenance Problems:

Assignment: Examine Bike No. 1 and locate any loose frame bolts.

Task: Check to see if Bike #2's brake pads need to be replaced because they appear worn.

Task: Examine and determine whether the gears on Bike #3 are smoothly shifting and appropriately set.

### 3. Answering Riddles or Puzzles About Bikes:

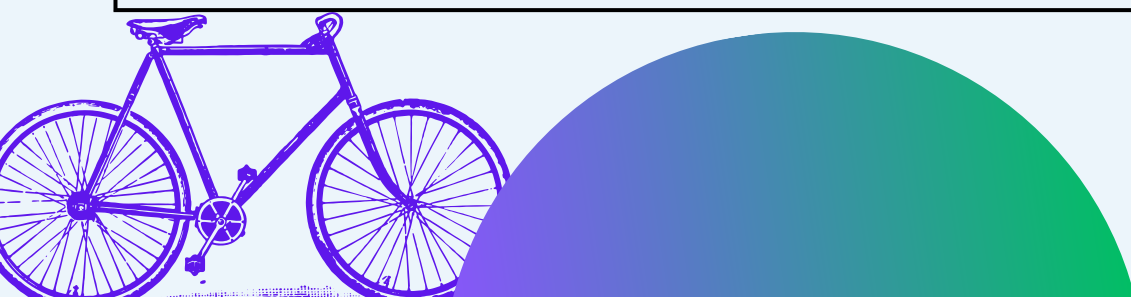
-Task: The task is to figure out the riddle "I can't roll with two wheels." "What am I?" in order to discover a bike saddle's secret location.

-Assignment: Solve the riddle. "I'm black and spherical, and I'll keep you steady while riding a bike. "What am I?" in order to find a bike tire's hiding place.

-The task is to solve the question "I'm made of rubber and will protect you while driving." "What am I?" in order to uncover a bike tube's secret position.

-Assignment: Solve the riddle. "I can assist you shift gears because I'm long and silver. "What am I?" in order to find the bike chain's hiding location.

Team who finishes first and pass all tasks correctly is the winner. They have to finish everything correctly to be considered winners.



**Scavenger Hunt Debrief (10 minutes):** Call a meeting of all the teams to talk about the scavenger hunt and their experiences. Invite teams to discuss any successes, setbacks, or lessons discovered. After congratulating the teams on their efforts, declare the victors according to the total number of points.

**Prize Distribution and Wrap-Up (5 minutes):** Give out awards to the winning team or teams and express gratitude to everyone who took part. Utilize this opportunity to emphasize the value of cooperation, problem-solving techniques, and the useful bike maintenance skills that the scavenger hunt taught.

### Instructions and tips for educators

- To encourage active learning and knowledge retention by involving participants in practical bike repair activities and challenges.
- To foster collaboration among participants by assigning team roles and encouraging effective communication during task completion.
- To give participants the chance to put their knowledge and expertise of bike maintenance to use in practical situations by giving them tasks like recognizing maintenance problems or locating particular bike parts.
- To encourage participants to think critically and problem-solve as they navigate through tasks and overcome obstacles, strengthening their problem-solving abilities for future situations.

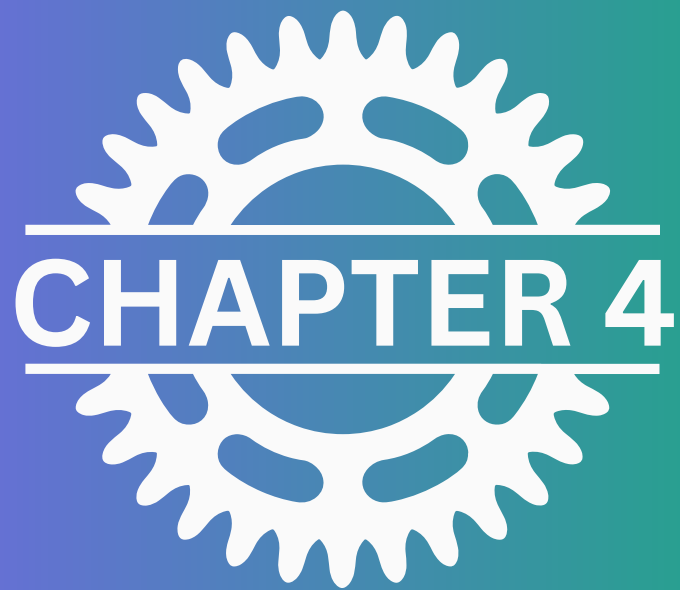
### Instructions for students

- Engage in hands-on bike repair activities and challenges to enhance your comprehension and retention of bike maintenance principles.
- Work together with your peers to accomplish projects quickly by assuming allocated roles and speaking clearly.
- Apply your knowledge of bike repair to practical challenges by using it to find specific bike parts or identify maintenance difficulties.

### Resources and further reading

<https://www.youtube.com/watch?v=QN64bP8xkLc>





# CHAPTER 4

**Bike Repair simple and more complex tasks**

## Introduction to chapter 4

For young people at risk, knowing how to fix and maintain a bicycle can be quite helpful. Avoiding going to a bike shop for simple maintenance, not only gives a practical way to save money but also a sense of empowerment and independence. Having a basic understanding of bicycle maintenance, such as **how to change a flat tire or adjust the brakes, can also boost self-assurance and problem-solving abilities.**

The first step in any repair **is to become familiar with the fundamental tools and equipment** required, such as tire levers, adjustable wrenches, patch kits and lubricants. Educating them on this can mean that young people at risk might feel more comfortable and equipped to deal with frequent problems that may come up when riding their bikes.

Putting practical repair skills to use in a safe setting, like a workshop or classroom, can help increase their knowledge and boost their confidence. Youth will be educated to effectively make repairs on their own by using **supervised practice sessions, and demonstrations.** The learning process can be further improved by giving students access to mentors who can provide them with advice and help.

This chapter is important for fostering resilience and self-sufficiency in at-risk youngsters by teaching them how to fix **more complex bicycle repairs** and giving them important life skills in the process. These abilities can improve their general well-being.

## Theoretical part

Offering youngsters in need a secure space to learn and practice practical repair skills in a monitored workshop or classroom setting helps them become more confident and knowledgeable about fixing bicycles. They obtain real-world experience and direction through interactive workshops and mentoring, which equips students to troubleshoot and solve issues on their own. This procedure enhances their general well-being by fostering a sense of achievement and self-worth in addition to fostering resilience and self-sufficiency. These talents go beyond mechanical aptitude and impart valuable life skills like critical thinking and problem-solving, enabling at-risk adolescents to confidently pursue opportunities and overcome obstacles, thus promoting their overall growth and success in the future.



It is important to know the fundamental tools and equipment:

- Tire levers: Useful for freeing the tire from the rim so that the inner tube or tire may be more easily accessed and repaired.



Figure 5. Using tire levers

- Adaptable Wrenches: Its function is to enable you to adjust the bolts and nuts on your bike, including the ones on the handlebars, seat post, and brakes.



Figure 6. Adaptable wrench

- Patch Set: Provides bikers with a simple way to patch flat tires while they're on the road by including adhesive and patches for inner tube punctures.



Figure 7. Bike patch set

- Chain Tool: Used to break and reattach chain links for maintenance or repair, as well as to remove and install bicycle chains.



Figure 8. Bike Chain Tool

Allen Key Hex Wrench Set: Crucial for adjusting and tightening bolts on the bike's various hexagonal fittings, derailleurs, saddle clamps, and brake calipers.



Figure 9. Allen Key Hex Wrench Set

- Spoke Wrench: This tool facilitates wheel truing and maintenance by allowing the individual spokes to be adjusted.



Figure 10. Using a spoke wrench

- Chain Oil: Applied to the chain to ensure smooth and effective cycling by lowering friction, preventing corrosion, and extending the life of the drivetrain components.



Figure 11. Chain oil

- Pedal Wrench: Its long handle and slim profile are intended to give leverage for removing and installing pedals, which are frequently fastened firmly to the crank arms.



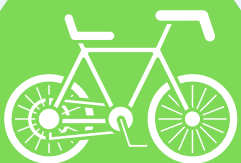
Figure 12. Pedal wrench

- Crank Puller: Enables maintenance or replacement of the bottom bracket bearings by removing the crank arms from the bottom bracket spindle.

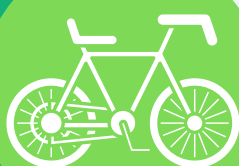


Figure 13. Crank puller

Providing youngsters a safe environment to practice and learn bicycle repair techniques gives them practical experience, increases their confidence, and sharpens their problem-solving skills. Having a basic understanding of basic equipment such as chainsaws, adjustable wrenches, and tire levers is necessary for efficient bike repair. In addition to fostering important life skills like resilience and critical thinking, these transferable skills also support their overall development and future success.



Activity #1	Title of the activity
<b>Bike Repair simple and more complex tasks</b>	<b>Bike maintenance stations</b>
<b>Objectives of the activity</b>	
<p>To encourage active learning and knowledge retention by involving participants in practical bike repair activities and challenges.To foster collaboration among participants by assigning team roles and encouraging effective communication during task completion.To give participants the chance to put their knowledge and expertise of bike maintenance to use in practical situations by giving them tasks like recognizing maintenance problems or locating particular bike parts.</p>	
<b>Materials needed</b>	
<ul style="list-style-type: none"> <li>-A few bicycles (one for every two to three people)</li> <li>- Patch kits - Adjustable wrenches - Tire levers</li> <li>- Chain instruments</li> <li>- Hex wrench sets for Allen keys</li> <li>- Crank pullers - Pedal wrenches - Chain lubrication - Spoke wrenches</li> <li>- Workstations or stands for repairs</li> <li>-Gloves and rags; safety glasses</li> </ul>	
<b>Details for the activity</b>	
<p><b>1. Introduction and Safety Briefing (10 minutes)**</b></p> <ul style="list-style-type: none"> <li>- Greetings and overview of the goals of the workshop.</li> <li>- Talk about the value of safety, including donning, safety glasses, and using tools with care.</li> <li>- Give a brief explanation of the various stations and the layout of the workshop.</li> </ul>	



## **2. Getting to know the tools and Demonstration (10 minutes)\*\***

- Demonstrate each tool and describe its intended use.
- Give a insight of how each tool works.
- Give people time to handle the tools so they can get used to them.

## **3. Practical Activity Stations (30 minutes)**

Station 1: Repairing Tires and Tubes (10 minutes)

- Show how to remove a tire with tire levers.
- Demonstrate how to find a puncture, find a patch kit, and put the tire back together.
- Allow participants to experience taking out and repairing tubes.

Station 2: Handlebar and Brake Adjustments (10 minutes)

- Show how to modify handlebars and brake calipers using Allen keys and adjustable wrenches.
- On their bikes, participants practice adjusting the handlebars and brakes.

Station 3: How to maintain the chain in proper condition (10 minutes)

- Show how to detach and reattach a chain using a chain tool.
- Demonstrate the correct application of chain lubricant.
- Chain removal, lubrication, and reattachment are practiced by the participants.

## **4. Group Discussion and Mentoring (10 minutes)**

- Get back together as a group to talk about what you learnt.
- Invite participants to talk about their experiences and any challenges they ran into.
- Mentors offer more advice, respond to inquiries, and show support.

## **5. Conclusion (5 minutes)\*\***

- Summarize key points learned during the workshop.



### Instructions and tips for educators

- To encourage active learning and knowledge retention by involving participants in practical bike repair activities and challenges.
- To foster collaboration among participants by assigning team roles and encouraging effective communication during task completion.
- To give participants the chance to put their knowledge and expertise of bike maintenance to use in practical situations by giving them tasks like recognizing maintenance problems or locating particular bike parts.
- To encourage participants to think critically and problem-solve as they navigate through tasks and overcome obstacles, strengthening their problem-solving abilities for future situations.

### Instructions for students

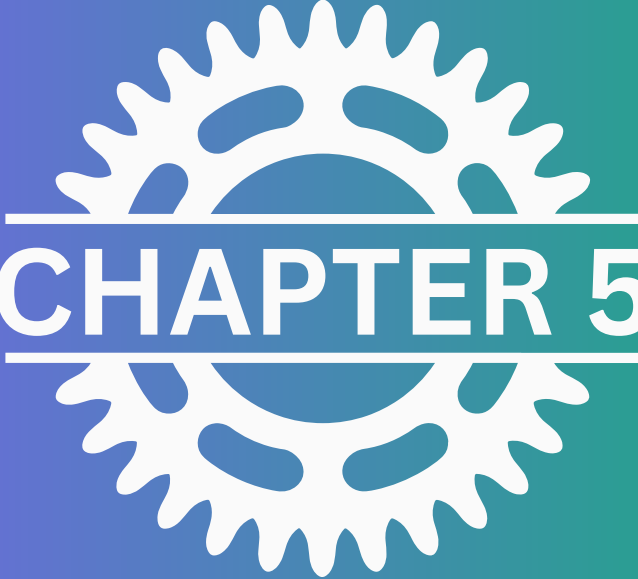
- Engage in hands-on bike repair activities and challenges to enhance your comprehension and retention of bike maintenance principles.
- Work together with your peers to accomplish projects quickly by assuming allocated roles and speaking clearly.
- Apply your knowledge of bike repair to practical challenges by using it to find specific bike parts or identify maintenance difficulties.

### Resources and further reading

<https://www.naturalresourceervices.org/projects/community-bike-kitchen>







# CHAPTER 5

**Client service and business management**

## Introduction to chapter 5

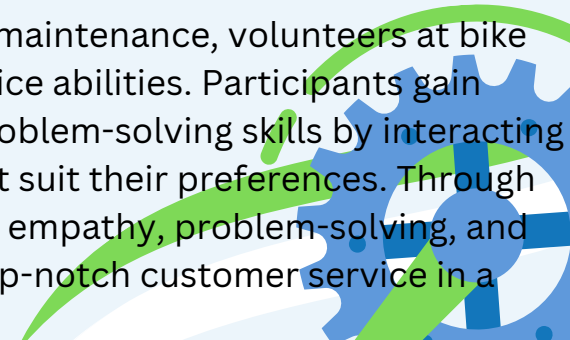
In this chapter the project consortium, will focus on client service and company management. This can equip youngsters with useful skills that can lead to long-term job prospects. These young people can become more confident in their interactions with clients and coworkers and position themselves for success in the workforce by honing their communication and interpersonal skills. Giving young people at risk(migrants, students, economically affected) the tools they need to succeed in entry-level jobs in the retail or service sectors or to pursue entrepreneurship by teaching them the fundamentals of small company management, such as pricing tactics and inventory management. In today's competitive job market, knowing how to establish prices and manage inventory effectively might provide them an advantage.

Providing the young people with workshops on the skills they need to succeed in entry-level jobs in the retail or service sectors or to pursue entrepreneurship by teaching them the fundamentals of small company management, such as pricing tactics and inventory management. In today's competitive job market, knowing how to establish prices and manage inventory effectively might provide them an advantage. In addition, investigating career prospects in sustainable mobility might introduce marginalized youngsters to a fast-expanding sector emphasizing eco-friendly modes of transportation.

## Theoretical part

Bike kitchens are a great way to improve participants' comprehension of business management and customer service while also giving them real-world experience that helps solidify these ideas. Bike kitchens are dynamic learning spaces where participants can put business management and customer service techniques to use in real-world scenarios.

First of all, by helping people with bicycle maintenance, volunteers at bike kitchens may improve their customer service abilities. Participants gain practical communication, listening, and problem-solving skills by interacting with consumers and offering solutions that suit their preferences. Through practical application, participants gain the empathy, problem-solving, and interpersonal skills necessary to deliver top-notch customer service in a retail or service industry setting.

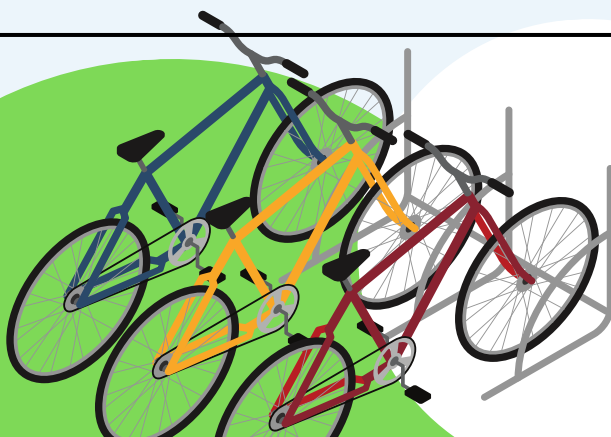


Also, bike kitchens function as nonprofits or small enterprises, which means they need efficient administration and planning skills to guarantee seamless operation. Engaging in bike kitchen activities gives participants direct experience with budgeting, resource allocation, and inventory management—all essential components of running a business. They get knowledge on how to keep track of spending, manage inventory, and maximize resources in order to satisfy patron needs and keep the bike kitchen running.

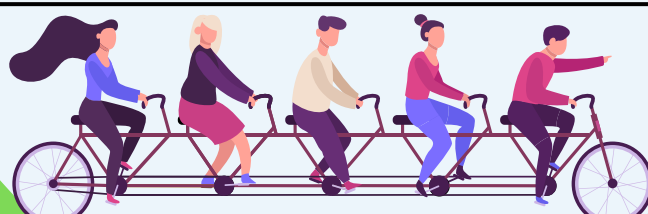
Bike kitchens help participants and volunteers develop a sense of community and teamwork, which is critical for creating strong teams and a healthy work environment in any type of organization. As they cooperate with others to accomplish shared objectives, participants come to understand the importance of communication, cooperation, and mutual assistance. In addition to improving the participant's experience, this sense of camaraderie and shared purpose also makes the workplace more cohesive and effective.

By exploring the environmentally friendly and sustainable features of bike kitchens, participants learn about the increasing focus on environmental responsibility in company operations. They gain knowledge about how companies may integrate sustainability practices into their daily operations, like encouraging the use of bicycles as an eco-friendly mode of transportation and cutting waste with initiatives like recycling and bike repair. This comprehension of sustainability gives participants a competitive edge in the job market and is in line with the growing customer demand for ecologically friendly goods and services.

Bike kitchens enhance the educational experience, by giving participants real-world chances to put company management and customer service concepts into practice. Participants in bike kitchen activities build vital skills, strengthen ties within the community, and learn about sustainable practices. These outcomes will help them succeed in future employment in the bike service, or entrepreneurial sectors.



Activity #1	Title of the activity
Client Service and business management	Customer service in the bike industry
<b>Objectives of the activity</b>	
<ul style="list-style-type: none"> <li>• Highlight to participants the value of providing outstanding customer service in the cycling industry in order to provide them with important skills for their future pursuits.</li> <li>• Emphasize the need of building reliable client relationships in order to promote happiness and loyalty, as these are necessary for the bike industry's long-term success</li> <li>• To improve overall customer service and create more fulfilling client experiences, talk about essential customer service qualities like empathy, active listening, and product knowledge.</li> </ul>	
<b>Materials needed</b>	
<ul style="list-style-type: none"> <li>• Whiteboard or flip chart</li> <li>• Markers</li> <li>• Handouts with discussion questions</li> <li>• Seating arrangement conducive to group discussion</li> <li>• Timer or clock to keep track of time segments</li> </ul>	
<b>Details for the activity</b>	
<p><b>Introduction to Customer Service in the Bike Industry (10 minutes)</b></p> <ul style="list-style-type: none"> <li>- Meet participants and outline the workshop's emphasis on providing exceptional customer service in the bicycle industry.</li> <li>- Talk about the special qualities of consumer interactions in a bike shop, like meeting the demands of a wide range of customers and encouraging a friendly cycling community.</li> <li>-Stress the value of developing trustworthy relationship with clients in order to foster satisfaction and loyalty.</li> <li>-Introduce the idea of "bike kitchens" as community hubs where young people can learn by doing bicycle maintenance and repair, with an emphasis on how these areas enhance the entire clientele experience.</li> </ul>	



## **Comprehending the Needs and Preferences of Customers (15 minutes)**

- List frequent questions, worries, and preferences from customers in a bike shop on a whiteboard or flip chart.
- Lead a conversation about the best approaches to recognize and meet the requirements of your clients, including active listening, follow-up inquiries, and tailored suggestions.
- Emphasize how bike kitchens help meet the needs of its patrons by repairing bikes, giving maintenance tips, and creating a welcoming atmosphere for riders.

## **Discussion (25 minutes)**

Discuss the following questions with participants.

- Which customer service competencies do you think are most crucial in a bike shop setting?
- Could you give an example of a time when dealing with a business was improved by providing excellent customer service?
- In what ways do empathy and attentive listening support satisfying customer experiences?
- In what ways may a bike shop's customer experience be improved by product knowledge and enthusiasm

Encourage the participants to share their knowledge on the topic, and keep in mind that everyone can contribute.



Figure 5. Community Bike Kitchen in Eureka, California

## **Important Lessons (5 minutes):**

- Write a summary of the main ideas and observations made throughout the conversation.
- Participants should be prompted to consider how they may use these insights to improve the way they provide customer care.

-Stress the importance of lifelong learning and progress in order to build solid customer service abilities.

**Conclusion(5 minutes):**

- Encourage participants to look for opportunities for additional skill development, including volunteering or participating in bike kitchen activities to further enhance their customer service and business management skills.
- Before ending the exercise, ask participants to voice any last questions or reflections.

### Instructions and tips for educators

- To encourage active learning and knowledge retention by involving participants in practical bike repair activities and challenges.
- To foster collaboration among participants by assigning team roles and encouraging effective communication during task completion.
- To give participants the chance to put their knowledge and expertise of bike maintenance to use in practical situations by giving them tasks like recognizing maintenance problems or locating particular bike parts.
- To encourage participants to think critically and problem-solve as they navigate through tasks and overcome obstacles, strengthening their problem-solving abilities for future situations.

### Instructions for students

- Engage in hands-on bike repair activities and challenges to enhance your comprehension and retention of bike maintenance principles.
- Work together with your peers to accomplish projects quickly by assuming allocated roles and speaking clearly.
- Apply your knowledge of bike repair to practical challenges by using it to find specific bike parts or identify maintenance difficulties.

### Resources and further reading

<https://www.naturalresourceservices.org/projects/community-bike-kitchen>







## Bündnis für klimaschonende Initiativen und Kooperationen in Europa (BIKE)

### Alliance for Climate-friendly Initiatives and cooperation in Europe (BIKE)



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