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Self

# 4-H BICYCLE Program

## Unit I – Your Bicycle and You



### *Bike Driving is Fun*

Bicycling is “fun on wheels” for people of all ages. You may have started when you were younger by riding with Mom or Dad on a two-seated bicycle. You can begin driving your own bike as soon as you can reach the pedals and learn to balance yourself.

Bicycling is good exercise, too. It gets you out in the fresh air and helps make your body strong.

Your bicycle is good transportation. It gets you where you want to go and back more quickly and easily than walking. You can drive your bike to school and to the park. You can take trips on your bike around town or in the country. You can also play games and test your skills on your bike.

But you have responsibilities, too. You must know how to drive your bike correctly and take care of it. You will want to follow safety rules and obey traffic laws to keep yourself and others safe.

The 4-H Bicycle Program is designed to help you make the best use of your bicycle. Read this booklet and listen to the advice of your leader to learn how to drive your bike correctly and safely, how to keep it in tip-top condition and how to have the most fun with it. You will become more confident in your driving ability, and will have the chance to earn awards and to share your skills with others.

### *Get to Know Your Bike*

Bikes, like people, come in all shapes and sizes. There are three basic styles of modern bicycles that you will want to know about. (See the picture on this page.) One type is the “middleweight”. This bike has a frame with curved handlebars, heavy wheels and wide, low-pressure tires. It is not as fast as the lightweight, but balances easily and is strong. The middleweight may have hand brakes or pedal-coaster brakes. This bike is recommended for beginning bicyclists.

A second style is the “lightweight”, including 3-speed, 5-speed and 10-speed bikes. It takes less effort to drive and can reach high speeds. Because they are usually welded into

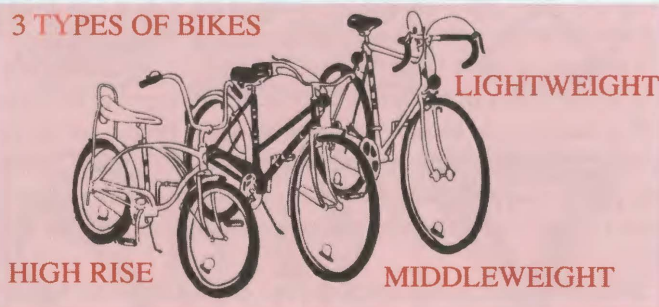
one continuous frame, these bikes can be very strong without weighing much. They have narrow, high-pressure tires designed for speed and are meant for touring and racing. Since there is a greater selections of gears, the cyclist needs to spend some time to get to know the bike and to practice changing gears before going on the road.

A third type of bicycle, the “high rise” (and its counterpart, the Motocross trail bicycle) is designed for short distance riding. The “high rise” is compact and has high handlebars. Its long “banana” seat allows kids of different sizes to fit on it just by scooting up or back. It is sturdy and will take rough treatment. But this bike is not made for long rides.

Knowing your bicycle is important. How many different parts can you identify? Can you name the parts on the bicycle frame? Can you find the rear wheel sprocket, front hub, crank and wheel rims? Check the diagram on the next page to see how many parts you could identify and locate.

The *serial number* is your bike’s very own, and will help you to identify your bike if it’s ever lost or stolen. The number you find on your bike may be the *model number*, so have a dealer point out the difference to you. Copy down the serial number and keep it in a safe place. Take your bike to a police station or a fire station to see if you can officially register the number. Also find out if your community requires you to license your bike.

### 3 TYPES OF BIKES





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5655  
A162  
no. 388-108  
VPI  
Spec

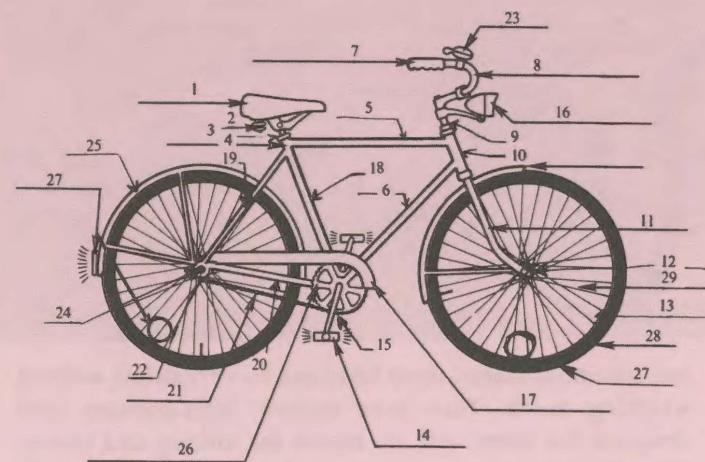
### The Quick Check

Each time you drive your bicycle, give it a "quick check" to make sure that it's working correctly. Ask your leader to demonstrate the following steps:

1. Check the tires with a gauge to see that they have enough air pressure. (The correct pressure is marked on the tire). Look around for any cuts on the tread.
2. Stand over the frame and grasp the handlebars. Can you turn them up or down? If yes, tighten the stem. If the fork cone nut is loose, tighten it.
3. Be sure to check the brakes. If your brakes are good, your wheels should skid when you apply pressure.
4. Check for looseness in the front-wheel hub, crank assembly, chain, rear wheel, cones, and pedals. The pedals should turn easily without wobbling.
5. Pick up each end of the bike so that you can spin the front and the back wheel in turn. When you spin the wheel does it wobble or touch the frame?
6. Pick up your bike by the handlebars and the seat and gently let it down onto the ground. Do any parts sound loose?

If any of these parts are out of adjustment, ask your parent, leader or bike mechanic to help you fix it. This way you will learn more about your bicycle tools, too. You will soon learn to make many of these repairs yourself.

- |                         |                        |                         |
|-------------------------|------------------------|-------------------------|
| 1. Saddle               | 11. Front fork         | 21. Chain               |
| 2. Saddle clamp         | 12. Front axle and nut | 22. Rear axle and nut   |
| 3. Saddle post clamp    | 13. Front wheel rim    | 23. Bell                |
| 4. Frame                | 14. Pedal              | 24. Rear wheel sprocket |
| 5. Crossbar             | 15. Crank              | 25. Fender              |
| 6. Lower bar            | 16. Front light        | 26. Chain wheel         |
| 7. Handlebar grip       | 17. Chain guard        | 27. Reflectors          |
| 8. Handle bar (touring) | 18. Saddle mast        | 28. Tire                |
| 9. Handlebar stem       | 19. Rear frame stays   | 29. Spokes              |
| 10. Steering head       | 20. Rear frame fork    |                         |



### Riding Your Bike

As you now know, one of the keys to correct riding is making sure that your bike fits. The fit must be comfortable for you before any suggestions on how to ride will actually help you to ride more easily and skillfully.

Practice doing the things listed below in order to become a better cyclist.

When you get on your bike, place the widest part of your foot on the pedal. The "ball" of your foot should be over the axle of the pedal, with your toes pointed straight ahead.

Begin pedaling with a smooth, steady rhythm. Preserve your heart and lungs by pedaling down small hills. Only coast down very steep hills.

Ride your bike efficiently. Keep your knees straight ahead, parallel to the bike frame. Swaying your body to the right or to the left is a bad habit and will tire you out. Your body should be almost motionless except for your legs pumping up and down.

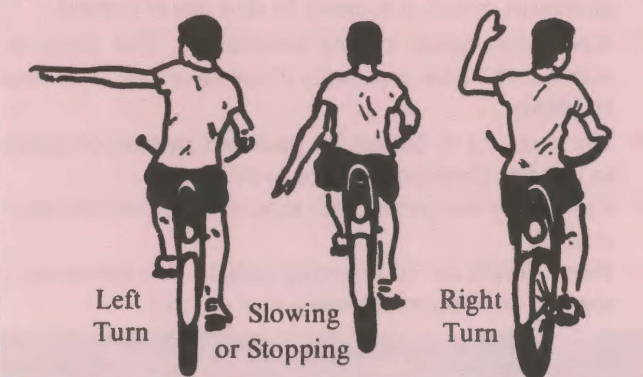
Learn to pedal with ease. Imagine the pedal cranks to be hands of a clock. When the crank is at 12 o'clock, push forward at the top of the pedal circle. The heel should be down and the toe up, in order to push forward. Press downward at 1 o'clock with heel and toes level until your foot goes past the bottom of the circle at 6 o'clock. Here the heel is high and the toes are down, pushing backwards.

Then the toe lifts quickly to push forward before coming back to the 12 o'clock position. Depress the heel and begin the cycle again.

If your bike has extra gears let them "level out the hills". On 3-speeds, stop pedaling as you change gears. On derailleur bikes such as 10-speeds, keep your pedals turning as you shift. In general, drive in lower gears and pedal faster. You'll be surprised how far you can go without getting tired!

When you practice these tips on how to ride correctly, you will be able to get "more miles for less muscle".

### LEARN THE SIGNALS



### The Rules of the Road

Remember that your bicycle is a vehicle. State law requires bike drivers to obey all motor vehicle laws that apply. So you should treat your bike as Mom and Dad do their automobiles.

Learn the rules of safe driving and respect them. Stop signs and red lights, for example, indicate heavy traffic conditions. So be alert for potential hazards when you see traffic signs. Remember, most accidents occur at intersections.

Drive on the right hand side of the road, going with traffic. Bike-car fatalities occur more often because of wrong-way bike drivers than any other reason. Stay close to the edge of the roadway, but allow a few feet to pull over to the right when necessary. You can pull out to the left and pass a slow-moving or parked vehicle. Just make sure to look behind to see that the way is clear. And always signal what you are going to do. When you make eye contact with other drivers on the road, you will be certain that they will be watching out for you, too.

### SIGNS OF LIFE: WHAT DO THESE MEAN?



### Safety Check on the Lightweight Bike

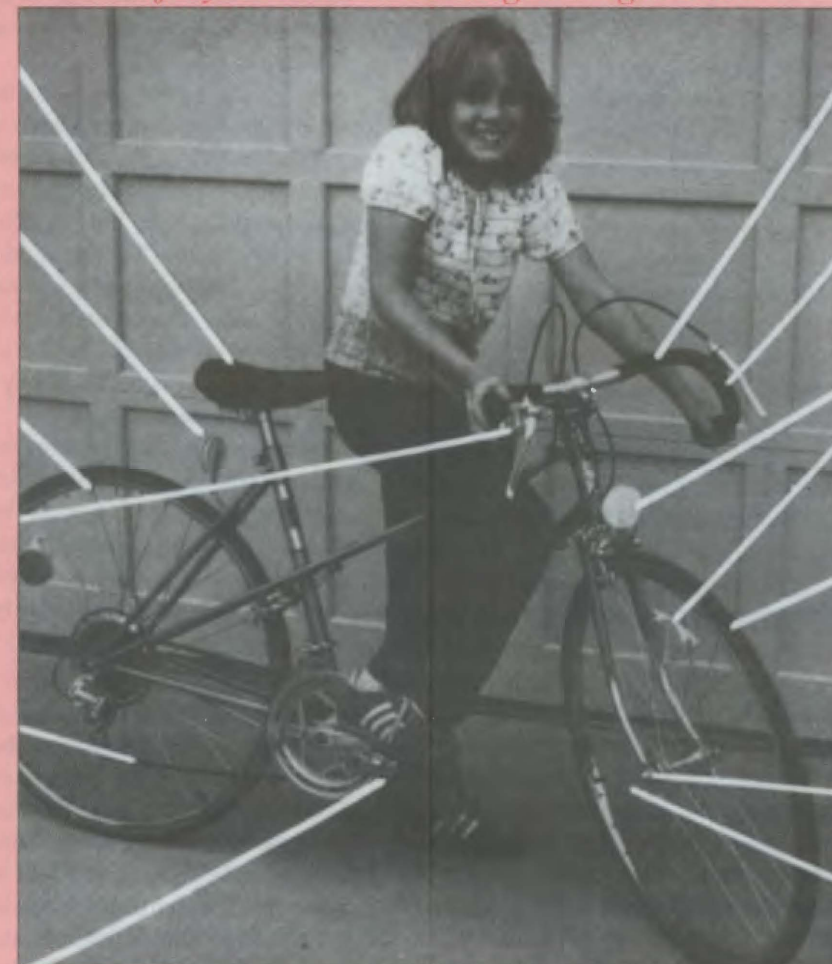
**SADDLE:** Adjust the height so that leg bends only slightly at the knee when the pedal reaches the bottom of the turn. Keep the saddle tight.

**RED REAR REFLECTORS:** On rear wheel and behind seat. Must be visible for 500 feet.

**SPOKES:** Keep them tight. Replace broken ones right away.

**HAND BRAKES:** Must brake evenly each time. Should not slip. Rubber blocks should be about 1/8 inch from the rim. Check for worn pads.

**CHAIN:** Keep a snug (but not too tight) fit. Clean frequently. Lubricate with light oil every so often. Check for damaged links. To keep pants from getting caught in chain use a metal pants clip or roll up the pants leg.



**HANDLEBARS:** The top of the stem should be in-line with the top of the saddle. Keep the stem down in the tube. Tighten well.

**HANDLE GRIPS:** Make sure they fit snugly, and replace them when they wear out.

**FRONT REFLECTORS:** White on steering head, amber on front wheel. Must be visible for 500 feet. At night use a head light.

**TIRES:** Check frequently. Inflate to correct pressure. Remove glass, cinders, and other objects that are stuck in the tire. If your tires are worn out, don't drive on them.

**WHEELS:** Tighten the wheel nuts.

**TIRE VALVE:** Keep the stem straight. Inspect for leaks.

**PEDALS:** Tighten pedal spindles. Replace worn-out pedals. Keep amber reflectors clean.

**HAVE A MECHANIC CHECK YOUR BIKE TWICE A YEAR**

### Be Sure Your Bike Fits You

You will enjoy your bike more if it fits. If it is too large or too small, it will be harder to control. You will tire more quickly and feel uncomfortable when you drive if the bike does not fit properly.

Sit on the seat in driving position and place the ball of one foot on the pedal when it is in its lowest position. Is your leg straight at the knee, or is it bent? If it is completely straight, with the seat all the way down, the bike is too large. If it is bent too much, with the seat all the way up, your bike is probably too small. If you have a closed frame bike (one with a crossbar), stand with your bike between your legs and lift up the bike. If your bike really fits you, you should be able to lift it about an inch before the crossbar touches you.

You can get a better fit by adjusting the seat and the handlebars. To change the seat, first loosen the nut on the seat-post bolt. Adjust it so that your toes touch the ground when you sit on the seat. Make sure that the seat is far enough forward so that your hip joint is nearly over the pedals in their highest or lowest position. When you have the seat where you want it, tighten all the nuts securely.

You can raise or lower the handlebars by loosening the bolt in the center of the handlebar stem and tapping the bolt with a hammer to loosen the stem wedge. (Be sure to leave two inches of the stem in the headset and two inches of the seat post in the seat tube so that they will not break or work loose). Keep the handlebar grips tight so that they do not slip.

Your seat and handlebars should be at the same height when they are adjusted properly.



Here are some other Rules of the Road that you will want to follow:

- Yield the right-of-way to pedestrians when crossing a sidewalk and to vehicles when entering onto a roadway. Remember that many times they are not looking for you, and so will not see you.
- Drive in a single file when traffic conditions require and no more than two abreast at any time.
- Signal your intentions to motorists, particularly at intersections, where the rules of the road are most often violated.
- Drive at a speed that is safe for road conditions. Your brakes will not work as well on loose gravel or wet pavement, where it is easier to skid out of control.
- Keep both hands on the handlebars. This helps to stabilize the bike, especially if you have to turn or stop suddenly.
- Use a carrier or basket for packages instead of trying to balance them on the bike itself.
- Carry only one person per seat, so that you can keep control.
- Never "hitch on" to a moving vehicle. The driver can't see you and you could easily lose control.



*Signal and Make Eye Contact When Moving Into Traffic*

You will want to equip both yourself and your bike so that you can be easily seen on the road. Wear light-colored clothes. Make sure that you have front, rear and side reflectors on your bike. Put reflectors on the moving parts of your bike, such as on the wheels or the pedals, to catch the eye of other drivers. Consider putting a bright-colored flag on the rear of your bike.

At night, you will want to wear bright, reflective clothing and to use a headlight. The law requires a front white light and a red rear reflector. Some states require a red rear light as well. These should be visible from 500 feet away.

Study your state bicycle laws and your local bike ordinances. You can pick these up from your local city hall or police department.

Watch for good and bad driving practices. See who can find the most examples of safe and dangerous driving habits. Think how bike accidents that you know about could have been avoided.

### *Taking Care of Your Bike*

To park your bike, use a bike rack or a kickstand. Remember not to leave it where other people will run over it.

Whenever you park your bike away from home, you should use a lock. You want to use a lock and chain set that is long enough to go through both the front and rear wheels. Then fasten the chain to a firm support. The best locks are either the bar lock or the key lock. A dial combination lock is easy to pick and so is not highly recommended. Even the best locks and chains can't protect your bike if you leave it unguarded in a driveway, the street, or in an out-of-the-way place where it can easily be stolen.

Clean and oil the moving parts of your bike with light oil to keep it operating well, and to prevent rusting. Be careful not to use too much oil on the chain, for it collects too much dirt that way and will not work well.

By taking care of your bike, you will take more pride in driving it. Your friends will admire both the bike and you. They will realize what good friends you and your bike really are.



### ACKNOWLEDGMENT

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