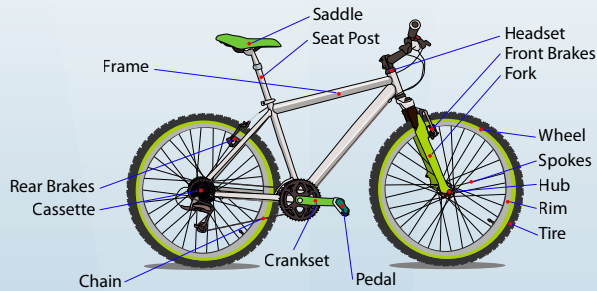


Parts of the Bicycle

In order to talk about bicycles, it's good to start by naming all of the parts.



The **frame** - A bicycle's frame is made of metal tubes welded together.

The **front fork** is the movable part of the frame that holds the front wheel.

The **wheels** - The wheels are made of a hub, the spokes, the metal rim and the rubber tire.

The **saddle** and **seat post** is where the rider sits.

The **handlebars**, **headset** and the **stem** connects the handlebars to the frame .

The **brakes**, consisting of the levers on the handlebars, the brake **cable**, the brake calipers and the brake pads

The **chain** and **gears**, consisting of the **pedals**, front **crankset**, the rear cassette, the front and rear derailleurs, the shift levers on the handlebars and the cables make up the drive train.



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Learn to Ride a Bicycle

If you want to understand how bicycles work, you also need to know a little bit about physics. Bicycles obey the laws of physics: force and motion, gravity, inertia, and friction.

Force and Motion

A force makes things move, but a force can also stop things from moving. When you pedal a bike, you use your muscles to create a force. You are like the engine for your bike. You push the pedals in a circle to start a forward motion.

Gravity

Do you remember when you first got on a bike? You probably fell a lot. The reason you fell is because you were too young to make the wheels go fast enough to keep the bike going in a forward motion, so gravity pulled you down. (In inertia below, you will learn why forward motion is so important.) When you became older, you learned how to make the wheels go fast enough, so you could stay up.

Friction

Friction slows things down. Friction also tries to stop one surface from sliding on another. If you were trying to ride your bike on an icy road, there would not be enough friction between the surface of the tires and the surface of the ice. You would slide and not have control of your bike.

Inertia

According to Newton's First Law, inertia is the tendency for an object that is moving to keep moving and the tendency for an object that is at rest to stay at rest. To prove that inertia exists, go outside and pedal your bike fast and then brake. Did you stop immediately? Or did you skid a little bit? Because of inertia, you should have skid a few inches.

First Steps

While practicing this specific method, do not hold onto the rider or their bicycle. Holding on hinders the rider's balance and prolongs the entire learning process.



Image: South Dakota Office of Highway Safety

Make sure that the bike rider wears a properly fitting **helmet**; shoelaces and pant legs are tucked in or rolled up.

Check that the bike seat is low enough that the rider can touch her/his feet flat on the ground.

1. Have the rider practice slowly **pushing the bike with both feet** while sitting on the bike (it may help to remove the pedals).

Tip: Remind the rider to keep his or her chin up, pointing in the direction he or she wants to go (not looking down) and to keep elbows straight—"No noodle arms!"

Practice stopping the bicycle, this is a very important skill. Try a game of Red Light, Green Light .

Wait until the bike rider is comfortable doing this procedure before moving onto the next step.

2. Have the rider put one pedal forward in the "**Power Pedal Position**"*, step down on the pedal and coast forward while the other foot is out to the side. Then switch feet. Normally, with natural progression the rider will begin the linking pedal strokes.

***"Power Pedal Position" - if the front chain ring was the face of a clock, the pedal would be in the 2 o'clock position - the "Power Pedal Position"*

3. When rider begins to feel comfortable balancing have her/him try pedaling a few strokes while steering straight ahead. Remind him or her to look up and ahead and "no noodle arms".

Use counter steering to bring the bike upright if the rider begins to lean. **Counter steering** is steering in the same direction as the lean and then straightening out once the bike is again balanced.

If a small incline is available, have the rider start at the top of the incline to help the rider gain momentum. This momentum makes lifting both feet off the ground a bit easier.

4. Once they are comfortable pedaling, **practice turning** . Practice riding in a straight line and weaving around cones.

Keep giving the bike rider positive feedback and watch him or her learn the life skill of bicycle riding!!!

Rules of the Road

- Under 16 must wear a helmet
- Inspect your bike
- Obey all traffic signs and signals (stop at stop signs and red lights)
- Ride in the same direction as other traffic, on the right side of the road
- Look behind you and use hand signals to alert others of direction and lane changes, turns
- Watch out for opening car doors
- Yield to pedestrians (use a bell)
- If it is dark, your bicycle must have a white front light and a red rear reflector or red light

