Blackstone Bicycle Works

Refurbished Bicycle Buyers Guide
Always wear a helmet and make sure it fits!

2 fingers above your eyebrow to the bottom of your helmet

4 fingers to form a V shape where the straps meet below the ears

1 finger under the strap beneath your chin
Blackstone Bicycle Works sells donated bicycles that we refurbish and sell to help support our youth program. There are different types of bicycles that are good for different styles of riding.

What type of riding would you like to do on your new refurbished bicycle?
Choosing Your Bicycle

Types of Bicycles at Blackstone Bicycle Works
The Cruiser

Cruisers have a laid-back upright position for a more comfortable ride. Usually a single speed and sometimes has a coaster brake.

Some cruisers also have internally geared hubs that can range from 3-speed and up.

With smooth and sometimes wider tires this bicycle is great for commuting and utility transport of groceries and other supplies.

Add a front basket and rear rack easily to let the bike do the work of carrying things. Most cruisers will accept fenders to help protect you and the bicycle from the rain and snow.
The Hybrid Bicycle

A hybrid bicycle is a mix of a road and mountain bicycle. These bicycles offer a range in gearing and accept wider tires than road bikes do.

Some hybrids have a suspension fork while others are rigid. Hybrid bicycles are great for commuting in the winter months because the wider tires offer more stability.

You can ride off-road, but it is not recommended for mountain bike trails or single-track riding.

Great for gravel and a good all-around versatile bicycle. Great for utility, commuting and for leisure rides to and from the lakefront. Hybrids can accept rear racks and fenders as well as other accessories.

Riding position on a hybrid is usually more upright than road bicycles but less than the cruiser.
The Road, Cyclocross, and Gravel Racing Bicycle

Road Bicycles have narrower, slick tires and a more aggressive riding position. The geometry of the road bicycle is also more aggressive, and the wheels are closer together. This is a good choice for speed and competition on smooth pavement.

Cyclocross Bicycles are similar to the road bike but have clearance for wider tires and a slightly more relaxed geometry although much more aggressive than the mountain or hybrid and cruiser bicycles. Cyclocross is a sport where riders race bicycles through mud and dirt while mounting and dismounting to clear hurdles along the racecourse.

Gravel Bikes are closer to Cyclocross bikes but also similar to touring bikes in that the geometry is slightly more relaxed for added comfort on longer distance rides. Gravel racing (grinding) has become increasingly popular in the past decade or so. Similar to touring bikes gravel bikes usually can accept both fenders and front and rear racks for carrying things. Gravel bikes are also great for bike camping trips.
Touring Bicycle

What makes a touring bike? Here's an article that explains in detail: https://www.bikeradar.com/advice/buyers-guides/what-is-a-touring-bike/

A touring bike usually has a steel frame and fork that can handle heavy loads and is repairable. Fenders, racks, and lights.

Modern touring bikes have disc brakes for stronger stopping power under load. Cantilever and V-brakes are very common on touring bikes as well.

Geometry of touring bikes are designed for stability and have a longer wheelbase and slack frame angles. This prevents toe overlap when turning with luggage on your front rack as well as comfort and stability. Drop handlebars will usually be positioned much higher than a racing bike to allow comfort on long days of riding while maintaining multiple hand positions.

Gearing on touring bikes will allow for steep climbs under heavy load as well as moderate gearing for speed on a decent. Triple chainring options are great for this and modern double compact chainrings make up for some ranges in gearing here as well.
Single Speed / Fixed Gear

Single speed bicycles are typically road bikes with semi horizontal dropouts that have been converted to a single gear from multiple gears or a bicycle frame with Horizontal dropouts that allow the chain to be tensioned correctly. Track bicycles are always single speeds and typically come with a rear hub that can be flipped to fixed gear, meaning the cog is fixed in place and does not spin freely like a freewheel or cassette would.
Here’s a Wikipedia article on that:  

Single speed bicycles are ideal for many reasons here in Chicago. We have very little inclines and long stretches of flat paved roads and trails to ride on. Many single speed bicycles can accept fenders, racks, front baskets, as well as front and rear brakes (recommended even when riding fixed gear)
Advantages of a single speed is easily summed up to low maintenance. With fewer moving parts there is fewer things to maintain. These bikes need care and maintenance as well, just not as frequently as bicycles with gears.
Mountain Bikes

There are many types of mountain bikes and we seldom see true mountain bikes here in the city. There are places to ride now at Big Marsh that is a part of the Chicago Parks District and offers rentals as well as some camps for youth. For a better explanation of different types of mountain bikes here’s a link: https://www.evo.com/guides/how-to-choose-mountain-bike#types

Mountain Bicycles are design for riding rough off-road trails. They have flat or upright handlebars, and a very low gear range for pedaling up steep trails. Most mountain bikes have some type of shock absorbers or suspension. Mountain bikes with front suspension only are called hardtails; mountain bikes with both front and rear suspension are called full-suspension bikes or duallies. Mountain bikes with no suspension are called rigid. Mountain bikes can be outfitted for use as touring or commuting bikes, although they would not be as light or efficient as traditional touring or commuting bikes. Fat bikes, with their extremely wide tires, are included in the mountain bike category.
Kids or BMX bike

BMX Bicycles are popular with kids because of their small size, but they are used by adults and kids alike for various styles of trick and stunt riding.

Blackstone Bicycle Works refurbishes Many sizes and types of kids' bikes.

Most kids' bikes have coaster brakes and sizes are usually based on wheel size.
Anatomy of a Bicycle
Anatomy of a Mountain Bike

- Head Tube
- Top Tube
- Seat Post
- Seat Post Clamp
- Seat Tube
- Seat Stay
- Cassette
- Rim
- Tire
- Spoke
- Rear Derailleur
- Chain Stay
- Front Derailleur
- Pedal
- Crank Arm
- Chain Rings
- Bottom Bracket
- Fork
- Brake Levers
- Handle Bar
- Bar Ends
- Shifters
- Head Set
- Breaks
- Tire Quick Release
- Down Tube
The Frame

- Saddle (Seat)
- Seat Post
- Seat Stay
- Seat Tube
- Top Tube
- Stem
- Head Tube
- Down Tube
- Chain Stay
- Rear Dropout
- Fork
- Fork Dropout
How to Determine the Best Bike Frame Size for You

When buying a bike, it's crucial that you select one with the correct frame size for your body proportions. An ill-fitting bike is not only uncomfortable, but it can also be dangerous because it will be difficult to stop and stand with your bicycle without falling sideways.

In these next pages, we will guide you through the basics to help you make an informed decision about the best bike frame size for you:

- How Bicycle Frames are Measured
- Stand over height
- Seat height and position
Bicycle frame size is determined by measuring from the center of the crank spindle (or bottom bracket) to the top of the top tube. This is measured in centimeters and can be converted to inches. From there you can measure your inseam to get an idea of what frame size is best for you.
There Should be One inch of room above the top tube when standing flat-footed Over the bike.
Measure your leg inseam

- The stand over height of a bike is the distance between the ground and the top of the top tube. Manufacturers and retailers usually provide the stand over height measurement in their online product specs, so no sweat if you don’t have the bike right in front of you. Compare the stand over height to your inseam measurement to make sure both feet are stabilized on the ground when standing over the bike. As a general rule of thumb, you should shoot for at least an inch of clearance above the top tube.
Traditionally, manufacturers will size road, gravel, and cyclocross bike frames in centimeters and their mountain and hybrid frames in inches. Keep in mind that bike frame geometry is dictated by the style and primary use of the bike. It’s common that your mountain bike would be a frame size smaller than your road bike for better handling on aggressive terrain.

### Mountain & Hybrid Bikes

<table>
<thead>
<tr>
<th>Height</th>
<th>Inseam</th>
<th>Frame Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>4’10” - 5’3” / 147-160cm</td>
<td>25” - 27” / 62-70cm</td>
<td>13” - 15”</td>
</tr>
<tr>
<td>5’3” - 5’7” / 160-170cm</td>
<td>27” - 29” / 68-76cm</td>
<td>15” - 17”</td>
</tr>
<tr>
<td>5’7” - 5’11” / 170-180cm</td>
<td>29” - 31” / 73-78cm</td>
<td>17” - 19”</td>
</tr>
<tr>
<td>5’11” - 6’2” / 180-188cm</td>
<td>31” - 33” / 78-84cm</td>
<td>19” - 21”</td>
</tr>
<tr>
<td>6’2” - 6’4” / 188-194cm</td>
<td>33” - 35” / 82-90cm</td>
<td>21” - 23”</td>
</tr>
<tr>
<td>6’4”+ / 194cm+</td>
<td>35”+ / 88cm+</td>
<td>23”+</td>
</tr>
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# Road, Gravel & Cyclocross Bikes

<table>
<thead>
<tr>
<th>Height</th>
<th>Inseam</th>
<th>Frame Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>4’10”- 5’3” / 147-160cm</td>
<td>25”- 27” / 62-70cm</td>
<td>46-50cm</td>
</tr>
<tr>
<td>5’3”- 5’7” / 160-170cm</td>
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<td>52-54cm</td>
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<tr>
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<td>29”- 31” / 73-78cm</td>
<td>56-58cm</td>
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<tr>
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</tr>
</tbody>
</table>
If you choose to make your own saddle height adjustment:

• loosen the seat post clamp

• raise or lower the seat post in the seat tube

• make sure the saddle is straight fore and aft

• re-tighten the seat post clamp to the recommended torque (We can help with this).

Once the saddle is at the correct height, make sure that the seat post does not project from the frame beyond its “Minimum Insertion” or “Maximum Extension” mark.
Finding your seat height and angle

When in doubt level it out. A level seat is the best place to start to find your most comfortable riding position.
Sit on your bike while on flat ground and wearing the shoes you will be riding in.

Obviously, you’ll need to hold onto or lean against something. It’s helpful to have a mate to help so they can see what’s going on and get this more accurate. Place the heel of both shoes on the pedals, rotate your pedals backwards to get to the bottom of the stroke (pedals at 12 and 6 ‘o’clock). Your knee should be relaxed, and your leg should be straight. Remember relax, don’t push or strain.

Do a few rotations backwards, you shouldn’t feel your hips rocking or as though your knees are locking as you pedal.
Now when you put your foot back into the normal position on the pedal, you’ll have a nice slight bend in your knee for maximum power transfer. The normal position should place the ball of your foot over the pedal axle.

If this new position is much higher than before, then if necessary, take a measurement so you can get it back where it is now, and then lower the seat height a little until you are used to that.

Don’t go more than a centimeter or so lower though, better to feel a little uncomfortable for a ride or two than to keep using a seat height that is totally incorrect.
Seat forward/aft position

The seat can slide forward and back on the seat post.

This is to help you get the relationship between your pedals and your knees/legs correct for the best control and power transfer. When your foot is on the pedal, and the pedals are at 3 and 9 ‘o’clock, you should be able to hang a weight off your kneecap and it would hang right over the pedal axle and ball of your foot.
This is no substitute for a professional bike fit.

The right bike setup when you are starting out can help you not only avoid injury but also maximize your effort on the bike.

However, if you simply can’t afford to get a pro bike fit done or find one in your area then hopefully this will help.