

Pinewood Derby in Six Easy Steps

An illustrated “how to” guide for building your
Pinewood Derby Car



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Pinewood Derby in Six Easy Steps

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If you put Pinewood Pro on your scouting site we will send you any Pinewood Pro wheel or axle set **FREE**.
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Then send me an [email](#).
We look forward to hearing from you.

Buckle Up! We're Building a Car...

The first Pinewood Derby race was held in 1953 in Manhattan Beach, California. Since then, hundreds of thousands of people have had fun designing, building and racing Pinewood Derby cars – welcome to the club! Pinewood Derby is an annual event for the Cub Scouts and it has been adopted by many, many other organizations. Quite simply, it's fun to brainstorm car designs with your child, fun to build the car, paint and decorate it, and finally, to race your car against your friends' cars! Building and racing a Pinewood Derby car is a perfect way to spend precious quality time with your child. This book will be your guide. It will help you have more fun with your child plus make your project easier with a step-by-step, illustrated guide.

The focus of this book is to teach beginners how to design and build their cars. Although this book can be given to a child to help them build their car, it was written with the adult in mind who is helping a child. I firmly believe that Pinewood Derby is a parent-child project. If the adult builds the car entirely, the child gains little experience and feels no ownership of the car. If the child builds the car entirely, he or she is likely to make so many mistakes that their car will not be competitive in the race, resulting in disappointment or embarrassment. The intent of Pinewood Derby is for the parent and child to learn to work side by side – thinking, planning, teaching, sharing, joking, being creative and generally having a good time – TOGETHER.

I built Pinewood Derby cars with my son each of the four years that he was in Cub Scouts. The last three of those years, I also managed the event for my son's Pack 468. When I started with my son, he was only 7. Even at 7, I found a way for him to help at every stage of building - from selecting a car design and colors to placing his hands over mine as I sawed the block of wood. A child of any age can select the colors, paint the car, decorate it and apply decals. My son also liked to name his car when we were done. He used names like Neon Demon, Golden Retriever, Silver Bullet and Blue Beauty.

Throughout the years, I was always with my son working side by side with him because I enjoyed this father-son project immensely. Each year he was able to build more of the car on his own. While it is tempting for the parent to grab the saw or file and do the work, it is important to remember that the more the child does, the more they will feel a sense of accomplishment from the project. By the time my son was a Weblo, he was able to design, plan and build the entire car by himself.

Please read, or at least skim, the entire book before starting to build your car. The book contains speed secrets, time saving tips, a handy list of tools and we even include car design templates that you can use to build your car faster.

Having Fun is Number One!

Building a Pinewood Derby car can teach a child many life-long lessons, such as how to plan a project (hint: start early), teamwork, sportsmanship, and commitment to completing a challenging job. It also gives the child a chance to develop their creativity by thinking up different car designs, color schemes finishing touches, and decorations which make their car unique and “their own.” And believe me, I’ve seen some very creative, wild themes! Have fun, be creative and enjoy the time you spend together building your car.

Safety in the Fast Lane

When building your Pinewood Derby, always remember rule number one: **Safety first.**



Safety first means children should not use power tools unless under adult supervision. It means adults and children should wear gloves to protect against splinters or sharp tools, goggles to protect eyes and a breathing mask, especially when sanding, to avoid inhaling sawdust.

When adding weight to your car for speed (weights will be explained below), purchase the weights from a hobby shop or Boy Scouts of America (BSA). Weights come in various shapes and sizes (flat, round and even decorative little racecar drivers) that can be broken off with pliers to get the exact weight you need. Some people will want to melt lead. Please **DO NOT** melt lead to use as weights; hot lead is very dangerous, and lead is poisonous if handled with bare hands.

Play by the Rules

As in any competitive event, there are rules. Each race may have slightly different rules. It is important to read the rules thoroughly and abide by them. Typical rules include maximum car dimensions, such as maximum length, width and height, limitations to wheel modifications (usually wheels can be rounded or cut), maximum car weight (5 oz) as well as rules that limit the use of motors, rocket fuel and nuclear propulsion devices. Failure to follow your local race rules could result in your car requiring last minute adjustments or even being disqualified.

STEP 1: DAD, I'VE GOT AN IDEA!

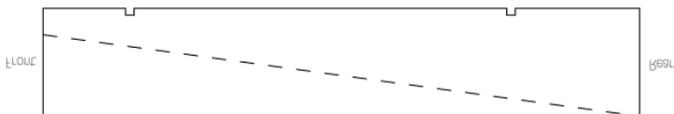


Step one is to have fun thinking up a car design. What do you want your car to look like? Do you want a cool looking jet black batmobile? How about a dark blue drag racer with a little guy in the driver's seat? Maybe a funny looking car like a banana, a beaver riding a log, a pencil, Mickey Mouse mobile, etc. Perhaps a **cool looking** spaceship, a camouflaged tank or a cement truck.

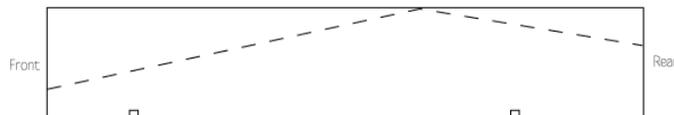
Be creative, brainstorm ideas, have fun with it. Steven and I would usually start by sifting through his basket of toy matchbox cars. Usually a certain style or feature would appeal to us from one car. Other times we would select ideas from several cars until we settled on our "look for that year".

Don't limit your child's imagination. Let them put as many unique things as possible into their car, such as crazy painted designs, wild color combinations, decals and even consider gluing small toy parts to the car. The more the child does, the more ownership, pride and fun they will have.

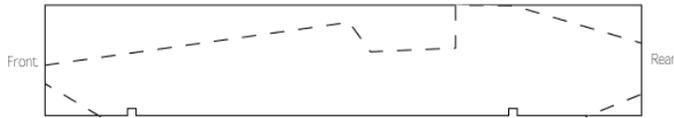
Time Saver: If you are short on time, consider a very simple design that requires only one or two cuts. Car design template #1, pictured below, only requires a single cut...fast, easy, simple. It is called a "wedge-shaped design". Full size cut-out templates can be found in the appendix at the back of the book. You can cut out the templates and use them as a guide for cutting the block.



Below is another simple car design that only requires two cuts.



The car design below requires seven cuts.

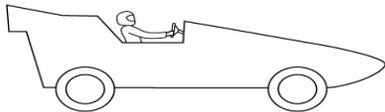


When you have decided the overall look that you want to create, then it's time to consider the practicality of the design. Consider the amount of detailed woodworking that may be required to make the car look the way you envision it. Some people (like me) enjoy the challenge of cutting, shaping and making intricate details. Others may dread it after they make the first cut. If you "bit off more than you can chew", eliminate some of the intricate details, round off some edges and simplify the looks.

Even after you start cutting the block, you may see new ways to shape your car. Almost every car my son and I designed has been modified as we started cutting and shaping. Sometimes we simplify the design, other times we add special little features that Steven thought of as the car was taking shape. Once he wanted "ridges on the top of the car" so it would be more aerodynamic. Another time he wanted grooves cut into the sides to make the car "look cool and increase airflow around the wheels". Yet another time he wanted a "bubble on the top", so I found a way to help him make a bubble with wood putty.

Design Tips:

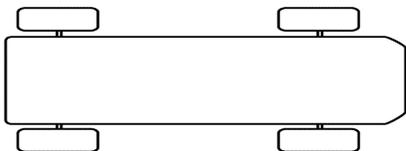
Be sure the car design clearly distinguishes which end is the front and which is the back! I've actually seen cars placed at the starting gate backwards because the car handlers couldn't tell the front of the car from the back! Generally, the front of the car is smaller and narrower than the back. Whatever design you choose, the car should have a tapered look, whereby there is more wood in the back than in the front. The side view below shows a tapered look that is the natural aerodynamic shape of all cars.



This general shape also leaves enough wood in the back of the car so you can add weight to the rear of the car to make it go faster. (More on that later under "Speed Tips".)

Another design tip to consider is the shape of the front of your car. The illustrations below show the front of the car looking down from the top.

GOOD



BAD



If the front of your car is shaped to a pointed, it will not rest against the starting pin and it may not trip the timing sensor immediately at the finish line.

Now that you have an idea of your car design and general shape, you are ready to draw your car design. For those of you that are in a hurry - the easiest and quickest way to envision your car is to draw directly on the block. Draw VERY lightly in pencil so you don't dig into the wood with your pencil. Start drawing directly on the block if your design consists of a few simple, straight cuts. If you have the time, or if your design includes curves or is more complicated, be sure to draw it on paper first. As my son would say, "Dad, trust me on this...", it is much easier to erase lines on a piece of paper than erase them from the block of wood. If you spend a few extra minutes (literally) to draw your car on paper it will help you to visualize the car before actually cutting. Besides, it's fun for kids to draw!

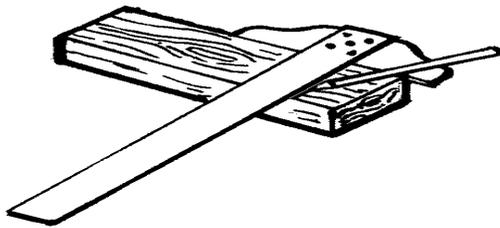
In the back of this book is a page with outlines of the pine block and cut lines. You can use these templates for your car design or draw your own design. You can make copies of this page to try out more design ideas or you can lay the block on a piece of paper and trace it to get more outlines to work with. I encourage you to try new design ideas until you and your child are happy with the look you want.

Now that you have a drawing of your car, once again consider how easy (or hard) it will be to shape it exactly the way you envision it. If it is too complex to draw, you probably will spend many hours cutting and shaping. To make it easier, simplify the design on paper before you start cutting.

STEP 2: ONE SLICE OR TWO?

Now that you've sketched your car design on paper, it's time to start cutting. Now is the time to draw lines on the block so you know where to cut. There are a couple of ways to draw on the block.

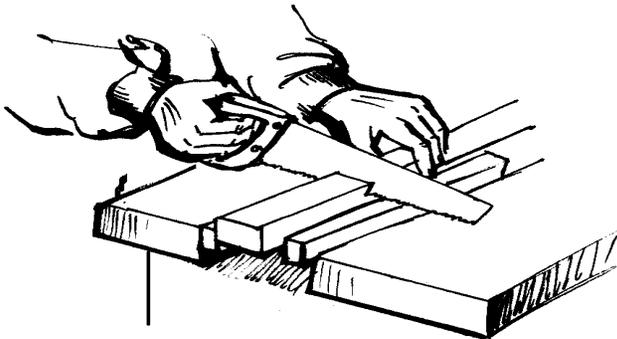
1. You can cut out your car drawing and use it as a template. After you cut out the drawing, tape it to the side of the car and trace it. Then tape it to the other side of the car and trace it.
2. You can draw directly on the block using your drawing as a reference.



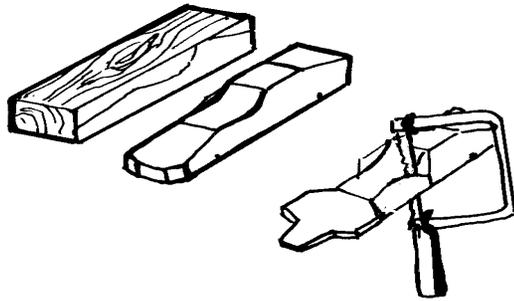
Hint: When drawing on the block, be sure to use a straight-edge. I strongly suggest you use a small T-square to help draw straight lines that are square to the edge of the block. If you don't have a T-square, use a ruler, the side of a CD case or anything else that is straight and rigid.

Safety Tip: Before cutting, be sure to use gloves so you don't get splinters and protective glasses to protect your eyes. Also, if you are using a power tool, use a breathing mask so you don't inhale sawdust.

There are three types of saws you can use to cut out your car: a hand saw, a coping saw or a table saw.

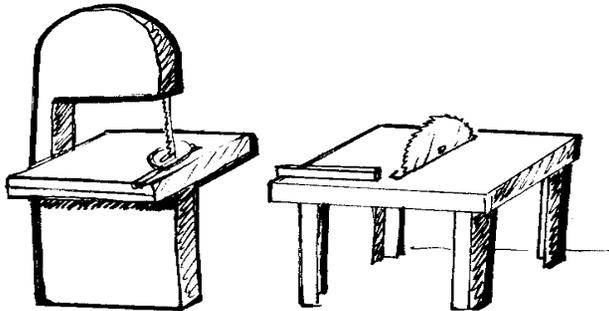


Most people already own a **hand saw**. The hand saw can be used for simple, straight cuts. Place the pine car block in a vice or adjustable workbench to secure it while you cut. This prevents your hand from slipping and also helps you make a straight cut. Follow the lines that you drew on the block to saw out your car. Don't worry if your cut is not perfectly straight because you will be sanding and shaping later to take out the imperfections.



A **coping saw** can be used for making curved cuts. Once again, secure the block in a vice or adjustable workbench, then cut on the lines that you drew on the block. A coping saw is very easy to handle, so it is the perfect tool for a young child to use. My son used a coping saw to cut out his first car at age 7.

If you have access to a **table saw** or **band saw** it is great for making cuts fast and straight. However, these tools are powerful and dangerous, so they should only be used by an adult.



STEP 3: Smooth as a Baby's...

The easy part is done! Now you need to shape, sand and smooth your car until it looks like it came off the show room floor! Well, not exactly, but you get the idea. No matter how clean and straight your cuts are, you will need to do some sanding to smooth rough edges, round off sharp corners and to add some style to your car.

Hold the car at arms length and take another look at it. Generally, cars don't have sharp edges and corners because metal on real cars doesn't bend to a sharp point. Your Pinewood car will look more polished if you sand all the edges so there are no sharp corners. Also, you might want to add a little style or pizzazz to your car by making cuts or grooves on the sides, in the back, near the wheels, etc. Have a little fun with the design by adding something unique, interesting or stylish.

If you made a cutting mistake, don't worry. Just fill in any deep cuts or holes with a little wood putty. Just remember,

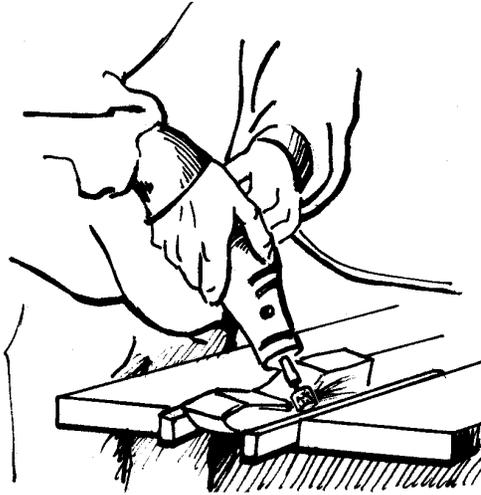


*There's no cutting mixup
that wood putty can't fixup.*

Wood putty also comes in handy for adding special touches that you can't get from shaping the wood. For example, one year Steven wanted a "bubble" on top of his car so I used wood putty to add a bubble for him. I have to admit that it looked pretty cool.

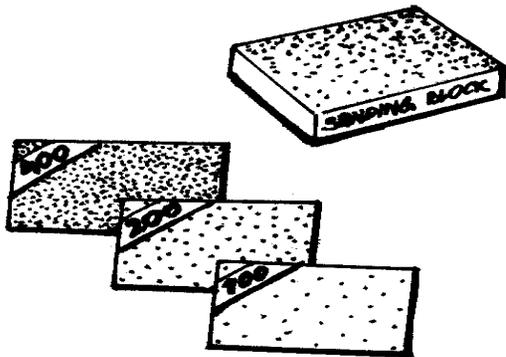
Once again, there are several tools you can use for shaping and sanding. A **wood rasp file** can be used for medium grade shaping and smoothing. Carefully secure the car in your vice or workbench by placing flat pieces of wood on either side of the car to hold it in place so the vice (or workbench) does not dig into the sides of the car. You can even use cardboard to protect the sides from gouges (deep holes) while it is held in place.





Another great tool for intermediate shaping is the **dremel tool**, which is a mini adjustable drill. It comes with many attachments that are ideal for power sanding. It is perfect for sanding rough edges and also for intricate shaping. Just be sure to set it to a slow speed because it sands off wood like a hot knife through butter! I also like the dremel because it is small enough for a young child to handle. It was the first power tool I let my son handle by himself.

Once you are satisfied with the shape of your car, it's sandpaper time! Fine sanding and smoothing are the last stages of shaping your car. No matter how good you are at shaping, you will need to do some sanding to remove small nicks, gouges, rough edges and to smooth the finish before painting. A sanding block can be purchased that has a rough grade sanding finish on one side and a finer grade of sandpaper on the other side. You can also wrap sandpaper around a block of wood to create your own sanding blocks of different sizes. I like the sanding block because it is easy to handle and will allow you to get most of the sanding done without using your fingers to hold the sandpaper, which can get tiring after awhile.



In addition to the sanding block, you should also purchase 100 grit (rough) and 200 grit (finer) sandpaper that you can use to sand intricate areas by hand. You perfectionists can even use 400 grit (very fine) paper for a real smooth, polished look. One sheet of each should hold you.

Hint: Use gloves and a breathing mask while sanding. Also, don't work at the kitchen table (been there) or on the living room floor (done that) because saw dust will start flying all over the place. Sand in your workshop, garage or outside.

STEP 4: Be a Heavy Weight

Now that your car is shaped, sanded and looking pretty sharp, hold your car at arms length and admire your work. I'll bet it looks pretty good and you should be proud.

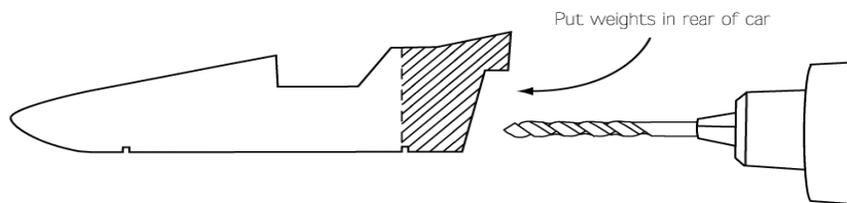
Next you need to add weight to your car. Why add weights? Because your car is propelled down the track by gravity, the more weight you have the faster your car will go. The Pinewood Derby rules limit the car weight to five ounces. You will need to find a scale and bring the car, wheels and axles up to the maximum 5 oz weight.

How do you add weight? Easy, go to your local hobby shop or mail order weights or BBs. If you don't want to buy special weights, you can add anything to your car to bring the weight up to 5 ounces - coins, screws, scrap pieces of metal, toy parts and just about anything else imaginable!

To determine the amount of weight you need, place the car, wheels and axles on a scale, then place your weights on the scale until you have 5 ounces.

I prefer to use BBs to add weight because I can add exactly the amount of weight I need down to the last BB. I drill holes in the very rear of the car that I'm going to fill with weight. Then I weigh the car, drop the BBs into the holes I drilled, then seal the hole with a little wood putty or wood glue.

Speed hints: Add weight to the rear of the car. This gives you the maximum pull from gravity for the longest period of time.



If you add weight to the bottom of the car, be sure to recess the weight into the wood so the car has enough clearance on the track. If the weights protrude from the bottom of the car, they may drag on the guide rail, thereby slowing your car down.

STEP 5: SHINE LIKE A STAR

You are now ready for the final touches...painting, decals, and decorating. This part can (and should) be done entirely by your son or daughter. Let them have fun picking the colors and designs that they want on their car, no matter how, um, different they look.



Painting should be done in four steps but if you are in a hurry you can simply spray paint in one step (see Time Saver hint below).

1. Primer – The first coat of paint should be a wood primer. You can buy a spray can of wood primer from any hardware store. Apply a thin coat to the entire car. The primer will sink deep into the wood giving you a good base for your finish coat of paint. Be sure to lightly sand the car with 400 grit sandpaper after the primer dries to remove small bumps.
2. Painting – You can buy spray paint or brush paint. I usually let my son paint a base coat in one color, then paint decorative designs or symbols to make it look “cool”. Let your child be imaginative and have fun painting designs, numbers, names, symbols, etc. If you want to paint multiple colors or intricate designs, use small brushes and buy small bottles of model paint.
3. Applying decals – decals can be purchased over the internet or at a hobby shop. Decals come in stick-on sheets -- just cut them out and apply them to add numbers, flames, car designs, etc. Kids love them.
4. Sealing the paint – now that your car looks cool, spray it with a clear lacquer sealer so your cool paint job doesn't get all nicked, scratched, dirty or messed up.

Time saver: Buy a can of spray paint, set the car up on blocks and spray. Let it dry, turn it over and spray again to hit the bottom of the car. With quick drying paint, you can complete painting in as little as 15 minutes.

Spraying tips: Be sure to hold the can about 18 inches away from the car and spray by swinging your arm across the car in several strokes. Plan on applying several thin coats of paint, letting it dry between coats. Be sure not to apply too much paint or the paint will start to run leaving drip marks on the car that will have to be sanded off. If you apply several coats, sand the car very lightly between coats with very fine sandpaper to remove small bumps and dust particles.

STEP 6: LET'S ROLL 'EM...

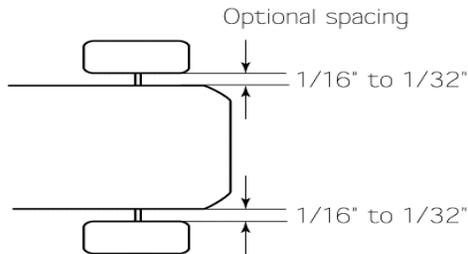
We're almost done. The last step is axle preparation and putting the wheels on.

First, the nails that you received in your kit that are used for axles must be deburred. What does that mean? Well, there is a sharp burr on the underside of the nail head (see drawing below) that must be filed down. If you don't file the burr off, the burr will dig into the plastic wheels as the wheel turns, severely slowing your car down. To remove this burr, place the nail in a vice so the head is sticking up. Now, gently file down the burr with a fine file until the burr is totally removed.

If you feel comfortable with power tools, you can put the nail in your drill, secure the drill in a workbench, then gently apply a file or wet/dry sandpaper to the nail head to remove the burr.

While you have the nail in the vice (or drill), use steel wool, then metal polish on a rag to polish the axle and make it as smooth as possible. Ideally, the axle should be mirror-like!

When all four axles have been deburred and polished, you are ready to insert them into the block. Place each wheel on the axle and gently insert them as straight as you can. Insert them until there is a 1/16" to 1/32" gap between the wheel and the car. An easy way to measure this gap is to put a matchstick where the wheel meets the car and slide the axle in until the matchstick binds, then remove the matchstick.



The last step is to glue the axles in place so they do not come out during the race. It is extremely important not to get glue near the wheels or axles. One drop of glue on the axle will bind your wheels and slow the car down. So, only apply one or two drops of glue near the **end** of the axle farthest from the wheel. Don't put glue closer than 1/2" from the wheel to avoid any possibility of glue touching the axle near the wheel.

Speed Hints, Tricks and Traps

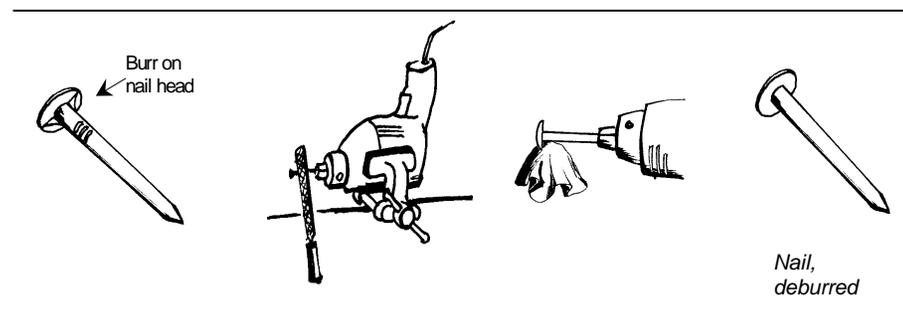
Let's face it, while building your car is fun, the Pinewood Derby is a race and the big trophies are won for **speed**. If you are interested in building a winning car, go to www.pinewoodpro.com and look at our book titled **Winning Pinewood Derby Secrets**. It is a 24 page illustrated book that contains 28 speed hints, tricks, secrets, do's and don'ts. As an engineer, I analyzed what it takes to make the fastest car possible. I've written this book to share the many secrets I've learned while

adding my own inventions that helped my son and I win the speed trophy every year. But don't take my word for it...browse the many testimonials on our website and read from the winners that used our secrets. First year racers have won and you can too. Our hints will put you in the winner's circle.

If you don't purchase **Winning Pinewood Derby Secrets**, the six speed tips below are the minimum requirements you will need to make your car competitive. Depending on competition, this may be enough to win your race. Although some of them were covered above, this section gives you a little more information and explanation for each speed modification.

Axles

The nails supplied in your kit have a small burr on the underside of the nail head. This burr will actually dig into the plastic on the wheel, severely slowing your car down. The nails also have small ridges close to the nail head.

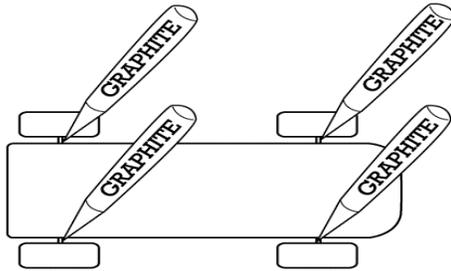


These MUST be filed away. There are two ways to file the burr off.

1. Secure the nail in a vise and gently sand away the seam with a fine file or wet/dry sandpaper (black sandpaper).
2. Place the nail in a drill and secure it tightly. Next secure the drill in a workbench or padded vice. Be careful not to tighten the vice or workbench too tightly on the drill case! While the drill is spinning the nail, carefully apply a fine file to the underside of the nail head for a few seconds to remove the burr. Stop the drill and feel the nail to be sure it is completely removed. Repeat this process until the burr is totally removed.

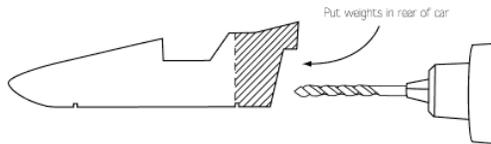
Once the burrs are removed, you should also polish the nail with 000 steel wool, then metal polish to make it as smooth as possible to minimize friction on the wheel as it rolls. Just wrap the steel wool or rag soaked in metal polish around the nail as it spins in your drill.

Graphite



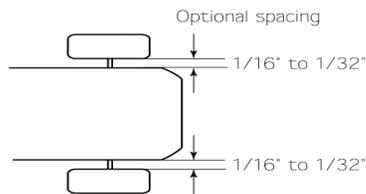
Wherever two surfaces rub, there is friction. Friction is the enemy of speed. To reduce friction, you need to purchase a tube of graphite powder. Graphite acts like little ball bearings creating a very slick, slippery surface thereby reducing friction. Graphite on the axle, where the wheel spins on it. Pour a little bit of graphite to the inside of the axle, closest to the car, and also around the head of the axle so the graphite works into the wheel from the outside. Don't be tempted to use lubricating oils, grease or your kitchen cooking oil. These things will actually slow down your car and will gum up the axles.

Weight Placement



As we mentioned under **Be a Heavyweight**, be sure to place your weights as far to the rear of the car as possible. This moves the center of gravity towards the back of the car, thereby giving your car a little more momentum (or push) from gravity when the car reaches the bottom of the track. Ideally, you want the balancing point (center of gravity) to be just in front of the rear axle. This is the optimal point where you get the maximum effect from gravity, yet the weight is not too far back which would cause your car to pop wheelies!

Wheel Spacing



The distance between the wheel and the car is critical. Here's why. If the wheel is too close, it will rub against the car and grind like a brake. If the wheel is too far out, it will cause the car to wobble back and forth as it goes down the track. Both of these situations are bad. Wheel spacing should be 1/16" to 1/32" from the car body. This is the optimum distance to minimize rubbing and wobble.

The Aerodynamics Mix

Certainly, an aerodynamic shape reduces air resistance, which is a source of friction. However, I view this almost on the same level as choosing a fast color! Aerodynamics sounds good, but pinewood cars are not going fast enough nor long enough for wind resistance to make much of a difference.

If you are building the car with your son or daughter, I feel it is more important for the child to select the car design and feel good about it, rather trying to find the optimal aerodynamic design. If we were to attempt to find the “optimum” aerodynamic design, each car would look exactly the same. That would take all the fun and creativity out of it; so have fun designing an aerodynamic car, but don’t get too hung up on it – this is the *least* important part of making a fast car!

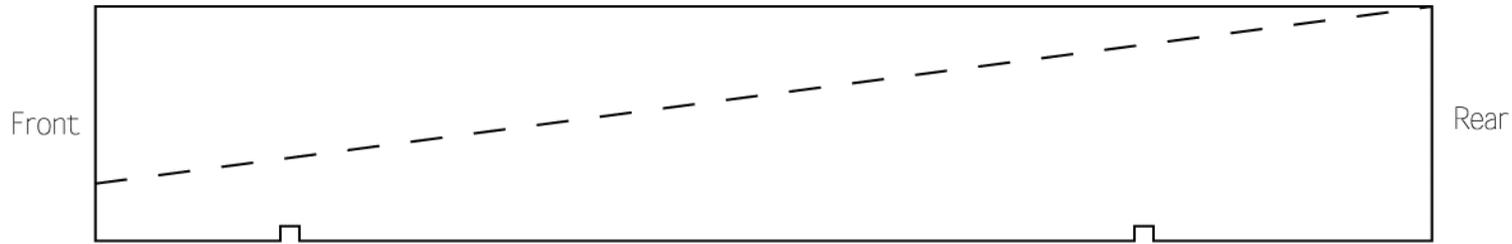
Straight On

When you have the wheels attached, put the car on your kitchen floor and gently push it. It should roll straight for about 6 to 10 feet. If the car curves to the left or right, it will hit the rail as it goes down the track causing the car to slow down. If the car curves, you need to re-insert the axles to make it roll as straight as possible.

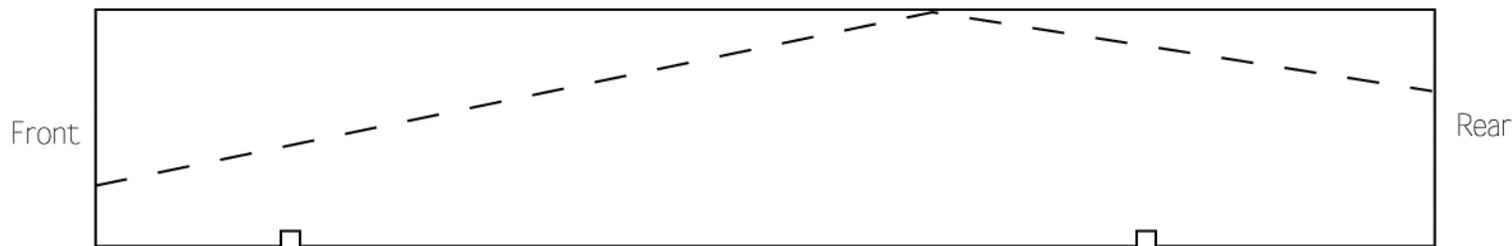
Appendix

Appendix A: Car Design Cut-Out Templates

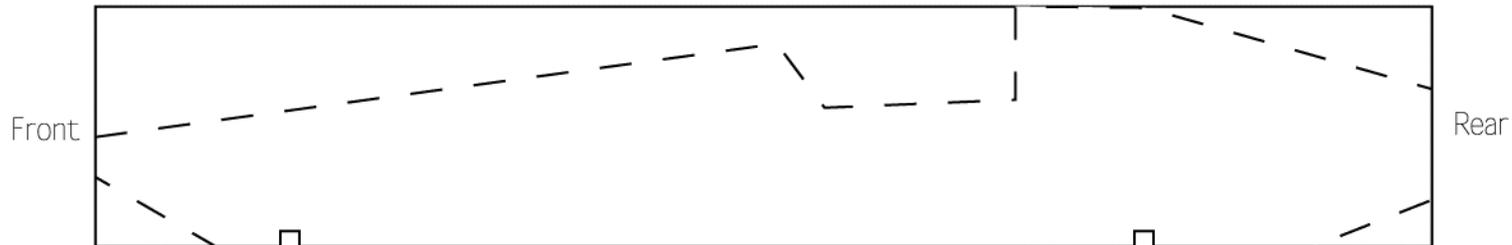
- **Car design #1:** single cut - wedge shaped design



- **Car design #2:** Two tapered cuts - one tapers the front, the other shapes the rear



- **Car design #3:** Multiple cuts



Appendix B: Handy list of tools

You may not need all of these tools, but this list will help you gather the tools you might use before you need them. Most of these items can be picked up at a hardware store or hobby shop.

Safety items

- Goggles, Gloves, Breathing Mask

Rough-Cut Saws

- Hand saw, Coping saw, Band saw (if available)

Shaping tools

- Dremel tool, Wood rasp file, Wood chisel

Finishing tools

- Wood putty
- Sanding block
- Different grades of sandpaper: 100, 200, 400

Painting

- Spray can of wood primer
- Spray can of paint for your final coat
- Small brushes to paint designs or numbers
- Small bottles of model paint
- Spray can of sealer

Finishing Touches

- Decals, Weights, Glue for axles
- Drill for drilling holes for weights

Axle Preparations

- Fine file for sanding axle burrs
- Drill to spin axles while polishing them
- Grade 000 steel wool for polishing axles
- Brass polish or pumice for polishing axles

Be Famous!

Hold up your car, smile wide and [email](#) us your picture for the...

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or

[Pinewood Pro Winners Gallery](#)

Show the world your creation!

Pinewood Derby products to help you build your car and make you a winner!

Visit www.pinewoodpro.com for the latest Pinewood Derby products

“How To” Books – Speed Secrets and Easy Building Guide

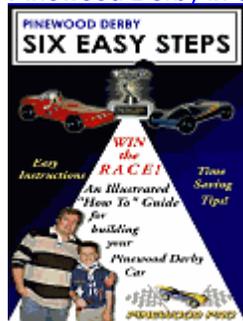
[Winning Pinewood Derby Secrets](#)



The #1 selling pinewood derby book with over 30 speed secrets to make you the next winner!

Thousands of winners! [Read our testimonials.](#)

[Pinewood Derby in Six Easy Steps](#)



A how-to guide for beginners that shows you how to build your car step-by-step.

Includes building tips, three simple car designs with cut-out templates plus the essential speed tips you need to make your car competitive.

Speed Products – to win your race

[PRO BSA friction-free Speed Wheels](#)



“Fastest Wheels on the market, guaranteed!” Precision lathed with 9 speed advantage! These wheels are perma-coated with graphite using our secret process to make them “friction-free”! Read about our [9 speed advantages](#).

[PRO Speed Axles](#)



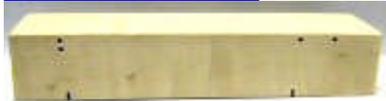
“Fastest Axles on the market, guaranteed!” Lathed to remove crimp marks, axle head is angled to reduce friction, secret grooves reduce friction more and store graphite, then they are polished and nickel plated.

[BSA polished axles](#)



Official BSA axles that have been lathed to remove crimp marks, axle head is angled and then they are polished. Just slide them in and you are ready to race!

[Precision drilled block](#)



Drilled axle slots so your car rolls straight. Optional raised front wheel. Read about our [7 speed advantages](#) over standard blocks.

[Graphite and NyOil lubricants](#)



Special formula graphite and thin film NyOil lubricants...The racer’s edge!

Tools - to Build Your Car Faster, Easier

[PRO Tools](#)



PRO Tools help you modify your axles, wheels and car block to maximize speed.

PRO Body Tool is used to drill precision axle holes (it even comes with a #44 drill bit!)

PRO Hub Tool is used to ream the axle bore and cone the wheel hubs to reduce friction.

PRO Mandrel is used to sand the wheel tread to remove the injection mold

[Wheel and Axle Alignment](#)



PRO Wheel and Axle alignment tool gives you [six adjustments](#) in one.

Wheel spacing is the easiest thing to fix and perhaps the adjustment that most people get wrong. This tool makes it a snap, along with the other simple 5 measurements you can make to align your wheels and axles.

Car Kits, Accessories, etc – for the Final Touches

[Pre-cut pinewood derby car blocks](#)



Many different pre-cut car blocks to choose from...just paint and go!

[Complete car kits](#)



Pre-cut cars, paints, decals, accessories all in one kit
Many to choose from!

[Paint kits](#)



Complete with a base color and accent color, plus two paint brushes and a sealer.

[Decals, DVDs, accessories](#)



Browse our store to see the latest decals and accessories.

Lots more!

Visit [Pinewood Pro](#) often for speed tips and the latest products.

[Link your site to Pinewood Pro](#) where you will find free derby help, like our Car Design Guide, How to Build a Fast Car, Derby Certificates, Pinewood Derby Driver's License, How to Build a Derby Car Stand, and lots more!

Good luck , God Bless and all the best from Pinewood Pro.