



READY SET BUILD

Your RCA Derby Car Kit includes everything you need to get started. Students should be involved in designing and building their own car, but adult help is encouraged especially when using tools.



Before you start cutting, decide what you want your car to look like! Sketch your design directly on the wooden block or on a piece of paper first. Your car can be simple, silly, speedy, colorful, or completely original. **Just remember** that it must stay within the RCA size requirements.



With an adult's help, cut the wooden block into your desired shape. Sand the car until the wood is smooth and ready for decorating. Start with a coarser sandpaper and finish with a finer sandpaper for a smoother surface. Then **make it yours!** Paint, stain, draw, add decals, or decorate your car however you'd like.



Your finished car may weigh **no more than 5 ounces**. You may add weights to help your car reach the 5-ounce limit, but **all weights** and parts must be securely attached. Nothing should be loose or able to fall off during the race. Adding weight can help bring the car to its maximum racing weight. Your car will be **weighed during inspection**.



Use **only the wheels and axles supplied in your RCA kit.**

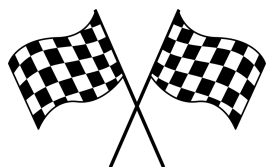
You may lightly sand or polish rough spots or mold marks on the wheels and axles. Dry graphite lubricant may also be used on the wheels and axles. Do not add bearings, washers, bushings, springs, magnets, motors, or other devices intended to power the car. Moving the axle location is not permitted



Carefully **press the axles into the pre-cut axle slots.**

Keep the wheels free of paint, glue, sawdust, and other debris. Once installed, roll your car across a smooth, level surface. It should roll straight. If it pulls strongly to one side, gently adjust the axle alignment.

If needed, an adult may place a small amount of glue on top of the axle where it enters the slot after alignment is complete. Keep glue away from the wheels so they remain free-spinning.



Each student may enter one car. All cars must pass inspection before racing. Once your car has been checked in, **no changes may be made to it.**

Cars are powered by gravity only (no motors, springs, magnets, bearings, washers, or other propulsion devices). **And remember:** this isn't only about building the *fastest car*! Awards will be given for both **speed** and **design**, so have fun creating something that is uniquely yours.

RACE DAY RULES:

RCA REQUIREMENTS

MAXIMUM WEIGHT 5 OZ

MAXIMUM HEIGHT 3", WIDTH 2 ¾"

WHEELS & AXLES RCA KIT-SUPPLIED ONLY

