



Pathfinder's Name

Pinewood Derby

- 1. Name the four basic components of a Pinewood Derby car.
 - 1. _____
 - 2. _____
 - 3. _____
 - 4. _____

- 2. Cars must meet the basic following requirements:
 - a. Must be made during the current calendar year or Pathfinder club year.
 - b. Width of car shall not exceed 2-3/4" or 70 mm
 - c. Length of car shall not exceed 7" or 178 mm
 - d. Weight of car shall not exceed 5 oz. (142 grams)
 - e. Width between wheels shall be 1-3/4" or 44 mm
 - f. Height from bottom of car to bottom of tires shall be 3/8" min. or 10 mm
 - g. Use only axles, wheels, and wood provided in the kit you purchase.
 - h. Wheel bearings, washers, and bushings are prohibited.

- 3. Know how to use safely the following while building your project:
 - a. Saw
 - b. Wood rasp
 - c. Course sandpaper
 - d. Fine sandpaper
 - e. Wood plane
 - f. Hammer
 - g. Shaping stick

- 4. Know the basic steps in designing a car:
 - a. Design
 - b. Transfer of design
 - c. Building the car
 - d. Axles and wheels
 - e. Adding weight
 - f. Lubrication

5. Design and build to completion a Pinewood Derby car from a basic kit using the instructions in the kit or if no instructions, follow the directions in # 2.

6. Participate in a sponsored Pinewood Derby event using the car you built in number five (5).

Event _____

Date of event _____

7. Define and practice good sportsmanship as it relates to your Christian walk.

Note: If you are planning to participate in a conference Pinewood Derby event be sure you use the correct specifications from your conference because some use different specifications than listed above.

Where to Order:

S & W Crafts Manufacturing or	Pine Car
PO box 5501	PO Box 98
Pasadena, CA 91117	Linn Creek, MO 65052

Note: Pinewood Derby cars are usually available through the Boy Scout organization.

Date completed _____

Instructor's Signature _____

Pinewood Derby, Advanced

- 1. Have the Pinewood Derby Honor.
- 2. Know the Pinewood Derby race regulations for your district, area, or conference. NOTE: Many conferences have special Pinewood Derby events and the rules may vary as to length, weight and wheels.

- 3. Be aware of the following:
 - a. Cars shall not ride on any kind or type of springs.
 - b. No loose materials of any kind are allowed in or on the car.
 - c. Official number must be clearly marked and visible.

- 4. Review tool safety.

- 5. Know the various ways to prepare and finish your project:
 - a. Sanding wood
 - b. Filling holes
 - c. Sealing new wood
 - d. Coloring wood
 - e. Gloss finishes
 - f. Enamel finishes
 - g. Stain finishes
 - h. Wax finishes
 - i. Acrylic finishes
 - j. Water colors
 - k. Leather look on wood
 - l. Decoupage
 - m. Forged foil

- 6. Know the principle meaning of friction and how it can effect the performance of your car.

- 7. Know the three best ways to reduce friction on your car.
 - a. Axle lubrication
 - b. Aerodynamic design
 - c. Smooth finish
 - d. Proper wheel/axle clearance
 - e. Reduce wheel shaking

- 8. Know the three theories of weight distribution and how it could affect the performance of your car.
 - 1. _____
 - 2. _____
 - 3. _____

- 9. Design and build to completion the following (not previously built):
 - a. Basic car kit with complete exterior finish
 - b. Deluxe/fancy car kit with complete exterior finish and decals
 - c. Be creative by building one of the following: tank, submarine, airplanes, piano, ice cream sandwich, fire engine, vege-link, school bus, baby carriage, etc.

- 10. Use details on your project such as steering wheel, driver, decals, and etc. as long as these details do not exceed the maximum length, width, and weight specification.

- 11. Participate in a club, district, or conference sponsored Pinewood Derby event with a current car.

Event _____

Date of event _____

- 12. Define and practice good sportsmanship as it relates to your Christian walk.
