SOAP BOX DERBY CLINIC PLAN BOOK



HOW TO

SET UP AN ORGANIZED
PROGRAM TO HELP BOYS
BUILD THEIR RACERS



HOW YOUR CLINIC PROGRAM WILL HELP THE BOYS

Experience in many communities shows that a surprising number of boys begin to build their Soap Box Derby racers but fail to complete them.

This results in disappointment and loss of money for the boy or the sponsor who purchased the wheel sets and, of course, results in fewer participants in your race.

Building a racer that is safe and qualifies under the rules is not a difficult job. It certainly does not require the use of extreme-precision tools or advanced methods.

However, most boys do a better job and are much more likely to finish if they have guidance and encouragement from adults at various stages of construction.

The purpose of your Clinic program is to make guidance available to the boys on a regular, planned basis.

THESE KIT MATERIALS ARE PROVIDED TO MAKE IT EASY FOR YOU TO ORGANIZE YOUR CLINIC

• Clinic Plan Book.

This booklet of instructions for organizing and conducting clinics.

• Sound Slidefilm: Finish First.

To build the boys' enthusiasm and impress them with the importance of completing their racers.

• Silent Slidefilms:

Building the Floor Board

Adding Axles and Bulkheads

Installing Brakes and Steering

Completing the Body and the Car.

These films give the boys detailed, step-by-step suggestions for building a car which will qualify for the race.

NOTE: Since this Kit is on a loan basis, and its use is not limited to the present year, assist us in preserving it for others to use by making it a practice to return the record, films and this Plan Book to the box after use.

BOYS WILL BENEFIT FROM A REGULAR SCHEDULE OF ACTIVITIES IN A SUITABLE CLINIC LOCATION

Setting up a regular, planned series of Clinic sessions will benefit the boys by giving them a schedule to follow. This will encourage them to build their racers in a logical sequence of steps so that the cars can be checked and any mistakes corrected before they are completed.

Also, the regular program gives the boys a chance to get to know each other and have the fun of working together in a group. This can be a strong motivation to keep them at the job until they finish.

Suggestions are given in this booklet for door prizes and perfect-attendance prizes which will stimulate the boys to participate regularly.

Wherever possible, it will be helpful to set up one permanent central location for the majority or all of your Clinic activities.

Since some boys do not have a suitable place to build their racers at home, the ideal Clinic location is a place where the boys can store their materials and tools and build their racers from start to finish, working after school, and on weekends.

In case such facilities are not available, the boys can do the majority of their actual construction work at home or in small groups at suitable neighborhood locations. In this case, the Clinic sessions will be employed mainly for the showing of the films, question and answer sessions, and for demonstrations.

Here are Clinic locations to consider:

- School manual-training shop or gymnasium.
- Community center recreation area.
- Church basement or recreation center.
- Service clubs, YMCA, other organizations.
- Fire Department or Police Station Garage.
- Store with available space in rear.

HELP IS YOURS FOR THE ASKING

The materials provided in this Kit make it possible for you, with no other assistance, to put on an extremely helpful Clinic program. The films are designed to stimulate the boys' enthusiasm and show them, in step-by-step fashion, how to build a racer which will qualify. You need no special mechanical aptitude to set up a guidance program built around these films.

However, you can count on a great deal more assistance than this, if you $\underline{\text{invite}}$ participation and assistance from others in your community.

The Soap Box Derby is the type of activity which almost everyone is anxious to support, because it is so obviously a wholesome, worth-while project for boys.

If you have no one available who is "handy" with tools, you may want to invite the help and participation of those who are. In many cases, the boys' fathers will be more than willing to help, and many of the fathers will be familiar with the use of tools. Let the fathers know you are anxious to have their assistance. Invite them to attend Clinic sessions with their boys. Fathers of past Derby champions are excellent prospects, also. They can give helpful advice on many phases of the activity.

By all means, encourage participation on the part of sponsors, including men from Chevrolet dealerships and from news media.

A manual-training instructor from a local school may be willing to give a talk and demonstration on the use of tools, including methods of laying out a racer.

(In some instances, schools give manual-training credit for construction of a racer on school premises.)

Help and instruction in the use of tools may also be obtained from dealership service technicians, woodworking men in cabinet-making shops, lumber yards, dealers in tools and machinery and others who understand safe practices.

At times, these people may be able to offer their own premises for the specific Clinic sessions.

Your local Derby Inspectors will have an excellent grasp of the specifications set out in the Official Derby Rules. Lectures, chalk talks, and demonstrations by these men can be especially helpful in impressing your boys with the need to obey the rules in order to qualify.

By all means, invite local merchants and business people to participate. Some may give personal assistance in conducting Clinic sessions, transporting the boys, or in other ways. Others may wish to contribute inexpensive construction materials or prizes, as described elsewhere in this booklet.

WHAT'S INVOLVED IN BUILDING A RACER

The following outline of construction procedures will indicate the type of guidance boys need, as well as the tools, facilities and materials required. For more complete information, consult the Official Rule Book and the films supplied with this Kit.

Dimensions and Weight

The Official Rule Book specifies certain maximum and minimum dimensions required for considerations of safety and fairness. Also, the total combined weight of car and boy is limited.

In order to hold size and weight within proper limits, it's wise for each boy to build his racer around himself -- much as a space capsule might be tailored to fit a particular astronaut. In practice, this means laying out the floor board and cockpit to at least provide minimum width and height permitted by the rules. At the same time, it's important to consider the eventual placement of the brake assembly, axles, and steering assembly, to make certain the over-all design is workable.

And remember, many of the Rule Book specifications given as minimums $\underline{\text{can}}$ be exceeded if necessary. For instance, the floor board can be thicker than the 3/4'' minimum, if added strength is needed.

Floor Board Must Be Enclosed by a Body

The rules require a body which completely encloses the floor board. In order to reduce air resistance and weight, many boys will wish to streamline the car body. For this reason, laminated wood strip design, Fiberglas, or other composition body designs are often desired, and suitable tools will be required.

Steering and Braking Systems Must Be Rugged and Safe

Steering and braking arrangements must meet definite safety specifications, including the use of bolts and eye bolts, approved cable types, locked turnbuckles, and countersunk drag brake facings.

While there is nothing especially difficult about constructing and installing proper steering and braking systems, it will be a big help to the boys to have access to wire cutters, pliers, wrenches, wood drills, and countersinks, in addition to saws, carpenters' squares, planes, chisels, and other woodworking tools.

(The rules permit taking the steering shaft and axles to a machine shop for drilling.)

SOURCES FOR TOOLS AND MATERIALS

The majority of hand tools needed can undoubtedly be loaned by parents of the boys themselves. In many instances, Derby sponsors or local merchants will loan or contribute tools.

Since racers are limited in size, most of the lumber needed can be obtained as scrap. The boys can obtain most of the wood in their own neighborhoods. Or, lumber yards, woodworking shops or local builders may donate the small quantities needed.

Paint, sandpaper, nails, glue, screws, bolts, eye bolts, cable, turnbuckles, and other hardware are low-cost items which most boys can pay for. In many instances, savings can be obtained by making a group purchase of hardware, lumber, paint or Fiberglas.

(Be sure you check the Rule Book for limitations on total cost.)

SETTING UP YOUR CLINIC PROGRAM AND SCHEDULE

It's wise to plan to have the boys' racers completed the month preceding your city race. This will give the boys time to test out their cars and make any changes needed before the race itself.

The silent films in the Kit describe construction of the racer in four major stages. The time required to complete each stage will, of course, depend on the skills of the boys you're working with and the complexity of the racers they choose to build.

In general, you can assume that each stage of construction will require a minimum of a week's part-time work. In most cases, considerably more time will be required. It's wise to allow for this when scheduling the film showings described in the next section.

When the boys work on their racers at the same session in which the films are shown, you should consider in advance what tools and materials will be needed to make sure they are available. At the end of each session, you can advise the boys as to the tools and materials they are to bring next time.

Most Clinics will not be so conducted as to allow boys to do actual construction there -- therefore, in most cases, tools will not be required except for demonstration.

The boys will have preferences as to the time of the day and days of the week for their sessions. You can work this out with them in the first session.

The people you invite to give talks or demonstrations will often need time to develop their presentations. For this reason, it's helpful to inform them of your schedule well in advance.

Naturally, you will want to tailor your schedule to fit your particular needs -- the important thing is to have a complete plan and schedule blocked out before proceeding with the Clinics themselves.

PUBLICIZE YOUR FIRST CLINIC SESSION WELL IN ADVANCE

Announcement notices posted in Chevrolet dealerships can be used to inform boys that help is available as soon as they enroll and buy their official wheel and axle sets. The notices should specify the date, time and place of your kickoff session.

Postcard notices and reminders can be sent to boys who have already registered.

Announcements to churches and young people's organizations will help publicize the Derby and let the boys know that a Clinic program has been set up.

Notices can be posted in stores and places of business co-operating with you.

Also, the sponsoring newspaper, radio, or television station will co-operate in publicizing the Clinic. Wherever possible, announcements should indicate the date, time and place of the first session.

Here's a typical postcard announcement:

ANNOUNCING -- FREE SOAP BOX DERBY CLINIC

Official Films To Show You How To Plan and Build a Racer!

Construction Tips and Hints!

Prizes and Awards!

Don't Miss the Fun -- Come to the First Meeting -- at Baker Auditorium, Saturday, March 9, 2:00 P.M.

S.J. Dunnings, Clinic Director, Phone: 231-9241

YOUR FIRST CLINIC FILM SESSION

At the first session, your first step should be to get acquainted with each boy and note down every boy's name, address and phone number. This will make it easier for you to keep in touch with the boys later on.

Next, show the sound slidefilm, Finish First, to impress the boys with the importance of starting out right.

(See the section "Helpful Hints on Showing Films" immediately following.)

After showing Finish First, it would be wise to review the main points covered in the Official Rule Book so that all the boys will understand how the rules affect design and construction of a racer.

It will be helpful to have a physics teacher or professional engineer present to discuss, in a simplified manner, the physical principles involved in the race, particularly the effect of weight, friction and air resistance.

If there's a boy in the community who has raced at Akron, it would be helpful to have him present to describe the fun and excitement of the race and to give the boys tips on construction.

The four silent filmstrips demonstrate in detail the four major stages in the construction of a racer:

Building the Floor Board

Adding Axles and Bulkheads

Installing Brakes and Steering

Completing the Body and the Car.

In your first Clinic session, you undoubtedly will want to get the boys started by showing the first how-to-do-it filmstrip:

Building the Floor Board.

Following this, the boys can begin the layout and construction of their floor boards.

SECOND CLINIC FILM SESSION . . .

ADDING AXLES AND BULKHEADS

You can begin this session with the second silent filmstrip, Adding Axles and Bulkheads. Follow the same procedure you used with the previous silent film.

To supplement the film and give the boys additional guidance, you might invite a wheel alignment specialist or someone else who can contribute ideas on wheel alignment. This will help impress the boys with the importance of building their racers so that front and rear wheels will be aligned properly and will "track." The Rule Book provides suggestions, also.

THIRD CLINIC FILM SESSION . . .

INSTALLING BRAKES AND STEERING

The silent filmstrip, <u>Installing Brakes and Steering</u>, will give the boys helpful ideas on the construction of the important braking and steering systems. Here, again, careful study of the Rule Book will be valuable to the boys.

FOURTH CLINIC FILM SESSION . . .

COMPLETING THE BODY AND THE CAR

The silent filmstrip, Completing the Body and the Car, describes various types of body construction and gives suggestions for painting or otherwise finishing the body.

You may wish to invite someone who is familiar with the application of Fiberglas to help the boys and demonstrate the handling of Fiberglas for them. A local boat builder, marine supplier, or dealer in Fiberglas materials might be able to help.

FINAL INSPECTION OF RACERS

Wherever possible, you or someone else thoroughly familiar with the rules should check the racers at the different stages of construction to make sure they are built according to specifications. This will prevent any need for last-minute revisions and repairs.

Remember, racers which do not qualify according to the Official Rules will not be allowed either in the local Soap Box Derby or at Akron. Careful inspection of the racers during construction and after completion will keep the boys from experiencing the disappointment of being disqualified at the last moment.

HELPFUL HINTS ON SHOWING FILMS

- A sound slidefilm projector can be used to show the silent filmstrips, as well as the sound slidefilm. A Chevrolet dealership may be able to supply the projector and screen. Other sources will include schools or clubs. Or a projector may be rented. If you are not familiar with operation of the projector, make sure you read the instructions or have someone demonstrate the projector for you.
- It's always wise to have the screen in place, record on the turntable and the projector focused on the first frame before you announce the film showing. This will prevent loss of time.
- Preview all films for yourself and your assistants before the start of the Clinic program so that you will all be thoroughly familiar with the material covered.
- When showing the silent filmstrips, the boys should be provided with note paper, pencils and, if possible, clipboards to help them take notes. Also, the room should have some light to permit note-taking.
- In the case of the silent films, the person who presents the film should stand next to the screen with a pointer to direct the boys' attention to different parts of the picture. Have an assistant advance the film, on signal from you.
- Begin each frame by reading the text aloud, just as it is shown on the screen. Read slowly and distinctly so that everyone can hear. Continue until the film is concluded.
- In most cases you will wish to repeat the film to allow the boys to ask any questions they may have, regarding individual construction details.

HOLDING THE BOYS' INTEREST THROUGHOUT THE CLINIC PROGRAM

Contests and other activities will help keep the boys enthusiastic and anxious to attend sessions regularly.

Simple, inexpensive door prizes may be given at Clinic sessions to encourage the boys to participate. Prizes can also be given for best attendance -- best constructed and neatest jobs -- first racer constructed, and others.

The boys will appreciate and compete for such prizes as a free milk shake at the local drugstore, free movie tickets, model cars, flashbulbs and film, flashlight, tools, spray paint, model glue, bicycle decorations, and other items.

Local merchants and business people will usually be willing to help provide the kinds of prizes needed.

The sponsoring newspaper or radio or TV station should be invited to run a short feature on your Clinic activity. This will help stimulate the boys' enthusiasm and motivate them to attend regularly and to complete their racers.

Also, you can do a great deal to promote regular, consistent attendance by setting up a system of notifying and reminding boys by postcard or telephone when and where forthcoming activities are to be held. This will prevent a great deal of confusion and waste effort.

TO THE DERBY DIRECTOR . . .

HELP 'EM DOWN THE HILL with SOAP BOX DERBY CLINICS

Experience in some communities shows that many boys who sign up for the Derby unfortunately drop out before race day.

As you know if you have faced this problem, the cause often is lack of guidance and stimulation from adults. Many communities have found a solution in the form of Soap Box Derby Clinics which give the boys a chance to get together and work under the supervision of adults.

The accompanying Soap Box Derby Clinic Kit is provided to help you organize such a Clinic program -- one which will meet the needs of boys in your community.

Films are included to stimulate the boys' enthusiasm and to show them how to construct a racer in logical, step-by-step fashion. The films can be supplemented by demonstrations, talks, or lectures by qualified individuals.

Guidance of this type will help the boys do a better job and assure you a better turnout on Derby Day.

Detailed instructions for setting up and conducting Clinics are provided in the Clinic Plan Book included in this Kit.

THE PEOPLE YOU NEED TO SET UP A CLINIC PROGRAM

On a minimum basis, Clinics can be put on by one man, who can show the boys the films and provide encouragement. However, your Clinics will be more successful if you set up a regular Clinic Committee. You should find it easy to get men to help if you simply invite co-operation. Most men find deep satisfaction in helping guide the boys to successful completion of their racers.

Following is an outline of topics you might wish to cover in presenting the Clinic idea to your Derby Committee or other group to secure co-operation.

CLINIC PRESENTATION OUTLINE

Why Clinics Are Needed

- As many as 40% of boys may drop out before completing their racers.
- In many communities, this situation has been overcome by Clinics, which provide boys guidance and stimulation on a regular basis.
- A Clinic program could be an important aid to us in getting a good turnout for our race.

Clinic Kit Makes It Easy To Set Up Program

- We have been provided with a Kit giving detailed suggestions for organizing and conducting Clinics.
- Slidefilms are included to help build boys' enthusiasm and to show step-by-step procedure for building a racer.

People Needed To Run Clinics

- We'll need a Clinic Director who will be responsible for scheduling sessions, notifying boys, showing films, giving boys guidance at various stages of construction.
- Two or three other men are needed to help show films, to help procure materials, to assist in advising the boys, to help with publicity.
- Familiarity with tools and woodworking procedures would be very helpful but by no means absolutely necessary.

Clinic Program Will Be Enjoyable for Everyone

- Boys enjoy a project such as building a racer, and this makes it a pleasure to work with them.
- You will have the satisfaction of knowing that you have contributed to making the race a success.
- We now want volunteers -- who will take the job of Clinic Director? Who will assist?

Getting Started

- The Committee's first step is to read Clinic Plan Book and preview films. (It is also important to become completely familiar with the Official Soap Box Derby Rules Book.)
- Next, work out schedule of sessions and begin publicizing Clinic program to let boys know help is available.

USE THIS CONVENIENT CHECK LIST TO MAKE SURE YOU'VE COVERED ALL THE ESSENTIAL STEPS IN PLANNING YOUR CLINIC PROGAM

Suitable locations selected? (See page 3.)
People available to give talks, demonstrations and specialized guidance on design and construction of a racer?
Schedule of Clinic sessions planned?
Advance notice and publicity handled?
Sources for tools and materials available? (See page 5.) (Also, consult Official Rule Book.)
Projector and screen available? (See page 10.)
Prizes and awards available?

YOU WILL BE A WINNER ON RACE DAY

. . . When you experience the satisfaction of seeing your boys qualify and finish the local race safely.

Furthermore, you can take personal pride in the fact that you have helped a group of boys participate in a genuinely constructive activity which contributes to skill, character, and good sportsmanship.

WHEN YOU HELP BOYS BUILD RACERS, YOU HELP BUILD BETTER BOYS!



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