



## NAR Education Resource CD-ROM v1.0

### **Launch Lesson Overview**

Why launch model rockets? Launching model rockets with students will reinforce concepts learned in the classroom. Launching will excite, encourage and reward students for mastering difficult concepts. It can be used to gather data for projects using the scientific method. Building and flying model rockets can be a terrific experience for the teacher and students to learn together by doing. See “How High Did It Go” ([How\\_High\\_Did\\_It\\_Go.pdf](#)) in the simulations menu and “Guide to Youth Rocketry Programs” ([youthprogs.pdf](#)) in the launch menu for more excellent guidance on building and flying rockets with your students.

### **Construction**

We will assume that all of your students will be building the same rocket from a kit. Picking the right rocket for your launch is very important. You should choose a kit that is appropriate to the age of the students. The kit should also fit into your/their budget. The altitude and performance of the kit should match the size of the field that you will be flying from. You don't want all of your students to loose their rockets as they drift away or decorate nearby trees and power lines with rockets. Use of the simulation programs included on this CD can help you determine which kit will fit your flying field. The “Guide to Model Rocketry Manufacturers” ([manufacturer\\_directory.pdf](#)) in the launch menu will provide you a list of many manufacturers and retailers where you can purchase kits.

When building the kits, be sure to have all of the necessary tools on hand. Some supplies can be shared while others need to be provided for each student. The best way to ensure proper construction is to build the rocket yourself before the class. Make notes on which parts of the instructions are confusing. Build slowly and provide adequate supervision for difficult construction steps or steps that involve hobby knives. Encourage students not to work ahead so that they don't inadvertently ruin their rocket kit.

### **Launching**

Launch day is a busy and exciting time. Everybody is running around and talking in loud voices. A plan is needed to keep the situation from getting out of hand. First, read the Model Rocket Safety Code ([model\\_rocket\\_safety\\_code.pdf](#)) in the launch menu. Safety must be the first concern at any launch. Many educators have the students read and sign a copy of the safety code before attending a launch. Others launch their rockets with an NAR section or have members of the section attend their launch. NAR sections are a ready source of information and manpower for model rocket launches. You can see if there is one near you in the “List of Current NAR Sections” ([NARseclist.pdf](#)) in the launch menu.

If the students are very young, have additional supervision available to keep the students who have yet to launch or are done launching away from the flight area. If the students are a little older they can be given responsibilities when not launching. Assigning student crews to tracking, recovery, trash, launch rod cleaning (use steel wool, they get dirty after many student rockets), pad assignment, and other jobs keeps them from becoming bored and makes them feel more like part of the launch.

Last, have fun. Building and flying model rockets should be enjoyable for everyone involved.