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|  | ***FLYING MODEL ROCKETRY***MRG_Chap 5_Pic 2 ***SAFETY***  ***N.A.R. MODEL ROCKET SAFETY CODE***  **1. MATERIALS.** My model rocket will be made of lightweight materials such as paper, wood, rubber, and plastic suitable for the power used and the performance of my model rocket. I will not use any metal for the nose cone, body, or fins of a model rocket.  **2. MOTORS.** I will use only commercially-made NAR-certified model rocket motors in the manner recommended by the manufacturer. I will not alter the model rocket motor, its parts, or its ingredients in any way.  **3. RECOVERY.** I will always use a recovery system in my model rocket that will return it safely to the ground so it may be flown again. I will use only flame resistant biodegradable recovery wadding if required by the design of my model rocket.  **4. WEIGHT AND POWER LIMITS.** My model rocket will weigh no more than 1,500 grams (53 ounces) at lift-off and its rocket motors will produce less than 320 Newton-Seconds (4.45 Newtons equals 1.0 pound) of total impulse. My model rocket will weigh less than the motor manufacturers recommended maximum lift-off weight for the motors used, or I will use motors recommended by the manufacturer for my model rocket.  **5. STABILITY.** I will check the stability of my model rocket before its first flight, except when launching a model rocket of already proven stability  **6. PAYLOADS.** My model rocket will never carry live animals except insects, or a payload that is intended to be flammable, explosive or harmful.  **7. LAUNCH AREA.** I will launch my model rocket outdoors in a cleared area, free of tall trees, power lines, buildings, and dry brush and grass. My launch area will be at least as large as that recommended in the following table.  ***Motor Type Minimum Site Dimensions (feet)***  A 100 B 200 C 400   **8. LAUNCHER.** I will launch my model rocket from a stable launch device that provides rigid guidance until the model rocket has reached a speed adequate to ensure a safe flight path. To prevent accidental eye injury, I will always place the launcher so the end of the rod is above eye level or I will cap the end of the rod when approaching it. I will cap or disassemble my launch rod when not in use and I will never store it in an upright position. My launcher will have a jet deflector device to prevent the motor exhaust from hitting the ground directly. I will always clear the area around my launch device of brown grass, dry weeds, or other easy-to-burn materials.  **9. IGNITION SYSTEM.** The system I use to launch my model rocket will be remotely controlled and electrically operated. It will contain a launching switch that will return to **‘Off’** when released. The system will contain a removable safety interlock in series with the launch switch. All persons will remain at least 15 feet from the model rocket when I am igniting model rocket motors totaling 30 Newton-Seconds or less of total impulse and at least 30 feet from the model rocket when I am igniting model rocket motors totaling more than 30 Newton-Seconds of total impulse. I will use only electric igniters recommended by the motor manufacturer that will ignite the model rocket motor(s) within one second of actuation of the launching switch.  **10. LAUNCH SAFETY.** I will ensure that people in the launch area are aware of the pending model rocket launch and can see the model rocket’s lift-off before I begin my audible five-second count down. I will not launch a model rocket so its flight path will carry it against a target. If my model rocket suffers a misfire, I will not allow anyone to approach it or the launcher until I have made certain the safety interlock has been removed or that the battery has been disconnected from the ignition system. I will wait one minute after a misfire before allowing anyone to approach the launcher.  **11. FLYING CONDITIONS.** I will launch my model rocket only when the wind is less than 20 miles per hour. I will not launch my model rocket so it flies into clouds, near aircraft in flight, or in a manner that is hazardous to people or property.  **12. PRE-LAUNCH TEST.** When conducting research activities with unproven model rocket designs or methods I will when possible, determine the reliability of my model rocket by pre-launch tests. I will conduct the launching of an unproven design in complete isolation from persons not participating in the actual launching.  **13. LAUNCH ANGLE.** My launch device will be pointed within 30 degrees of vertical. I will never use model rocket motors to propel any device horizontally.  **14. RECOVERY HAZARDS.** If a model rocket becomes entangled in a power line or other dangerous place, I will not attempt to recover it |
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Cadet Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_