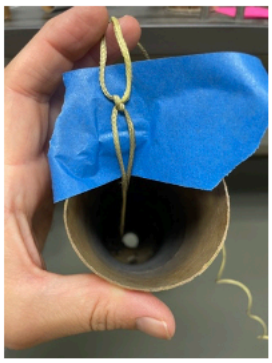
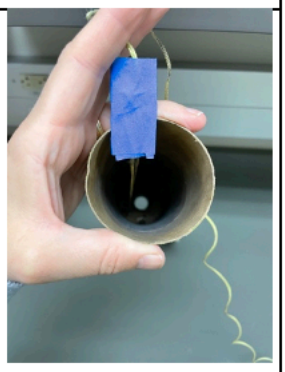
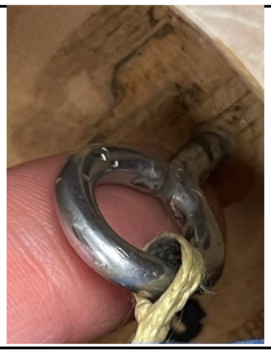
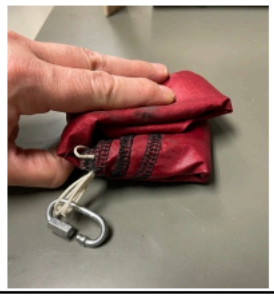
SINGLE STAGE ROCKET LAUNCH PROCEDURE

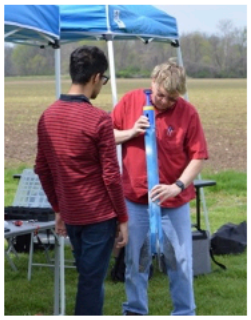
1. Equipment inventory:

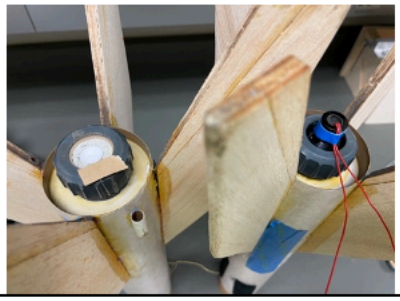
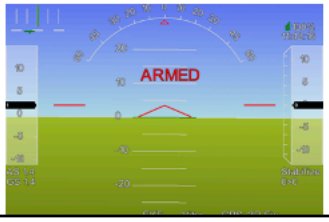
- ☐ Motors:
  - **1..1.** Estes D12-3, E12-4, E16-6 or F15-4 (S2)
  - **1..2.** Aerotech F67-4 (B)
- ☐ Igniters
- ☐ Parachutes
  - **1..1.** Nylon (36,48,58)”
  - **1..2.** 30” Dino Chutes
- ☐ Recovery Wadding
- ☐ Kevlar Shock Chord
- ☐ Tools:
  - **1..1.** Long Needle Nose Pliers
  - **1..2.** Screwdriver
  - **1..3.** Sandpaper
  - **1..4.** Scissors
- ☐ Launch Stand
- ☐ Launch Controller
- ☐ Batteries for launch controller
- ☐ Electronics Bay
- ☐ Dummy Payload (Equivalent Weight of Electronics Bay)
- ☐ Duct Tape
- ☐ Masking Tape

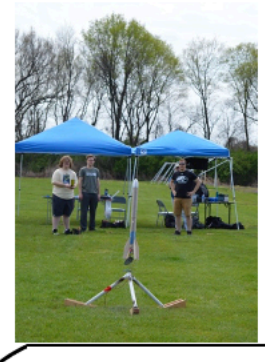
	2. Launch site and weather conditions meet all local and NAR launch safety requirements	**https://www.nar.org/safety-information/model-rocket-safety-code/**
	3. Permission has been obtained to launch at the selected site.	
	4. Wooden bulkhead in Supper body tube is secured with screws.	

	5. Shock cord is tied securely to bulkhead eyebolt and motor mount eyebolt.	 
	6. Cord is taped to prevent zippering.	 
	7. Both upper and lower eyebolts are closed and sealed with superglue.	
	8. Recovery wadding has been placed in lower body tube. **NOTE:** Be sure to position wadding all around shock cord.	
	9. Parachute swivel is securely attached 1/3 of the way down the shock cord from the upper body tube.	 

	10. Lower shock cord is rolled up and placed into lower body tube.	
	11. Parachute is folded, and lower shroud line loops are all captured by the quick link.	
	12. Quick link is attached to the swivel and closed tightly.	
	13. Parachute is packed into lower body tube.	
	14. Upper body tube is placed on lower body tube. The connection moves (does not stick) but is not too loose.	

	15. The motor has a thrust ring. **NOTE:** If using an F15-4 motor, be sure to wrap duct tape around the nozzle end at least 6 times to properly secure motor.	 
	16. The motor is installed in the motor mount and the retainer ring is securely closed.	
	17a. If this is an integrity launch (motor Estes F15-4), skip to step 20.	
	17b. For launching with Aerotech F67-4, electronics payload is prepared. (See Electronics Payload instructions.)	
	18. Electronics payload or dummy payload is placed securely into rocket. **NOTE:** Be sure antenna goes into hole in bulkhead.	

	19. Nosecone is installed on rocket and secured with screws.	
	20. Rocket is placed on launch stand and lugs slide freely.	
	21. Ignitor is installed and has been secured.	
	22. Motor ignitor leads are separated from each other and launch system ignition leads are safely attached.	
	23. Electronics payload is armed in Mission Planner, and satellites are acquired.	

	24. All personnel are evacuated to a safe distance.	
	25. Count down (loudly enough that everyone can hear.)	**5, 4, 3, …**
	26. Launch Rocket.