



EstesRockets.com

COSMIC RAY™

1112

AGES
10+



Skill Level

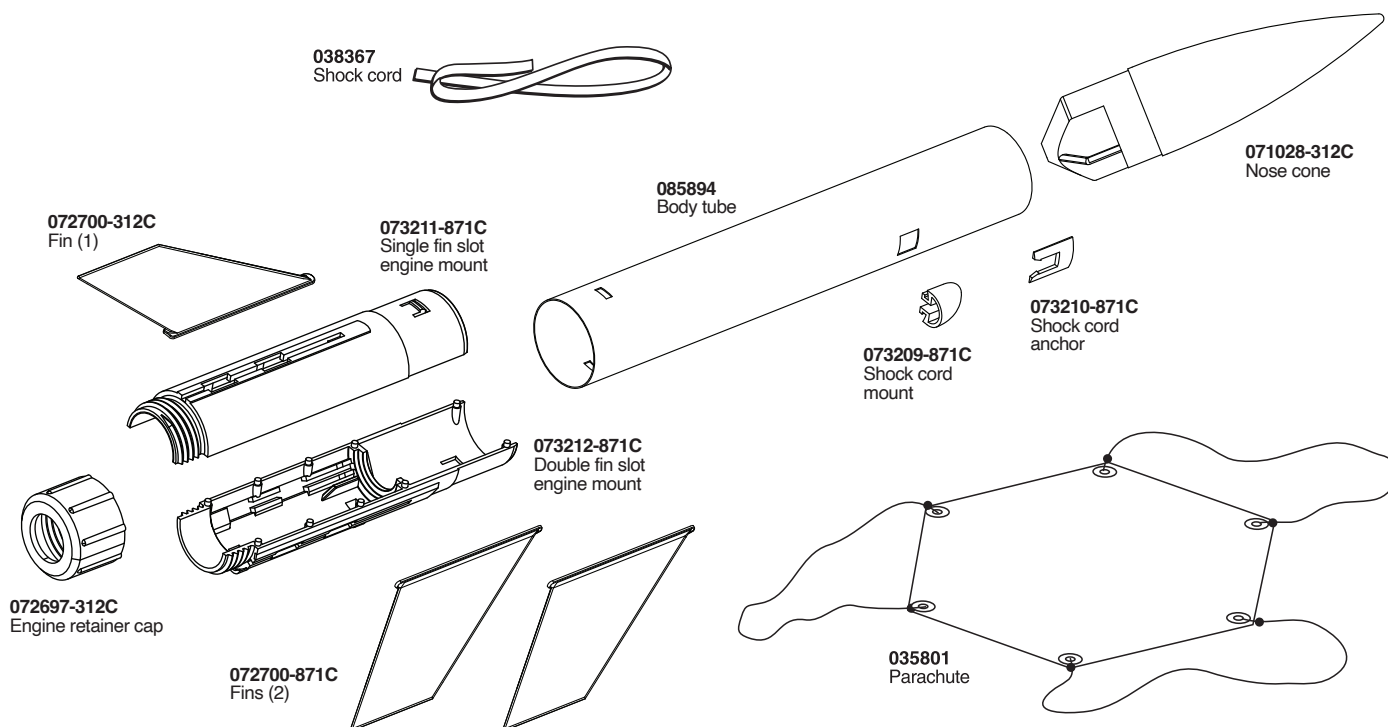
BEGINNER

MODEL ROCKET INSTRUCTIONS

KEEP FOR FUTURE REFERENCE

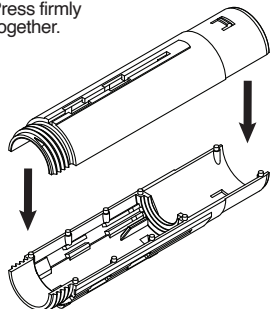
IMPORTANT: Please record date found on box and keep for future reference.

READ ALL INSTRUCTIONS. Make sure you have all parts and supplies.

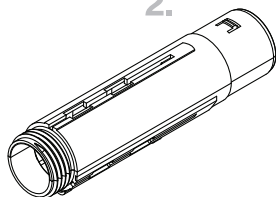


ASSEMBLE ENGINE MOUNT FIN CAN UNIT

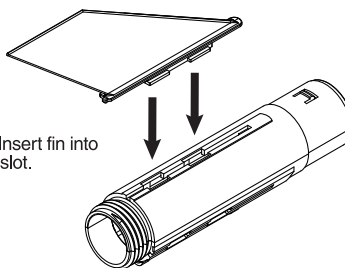
1. Press firmly together.



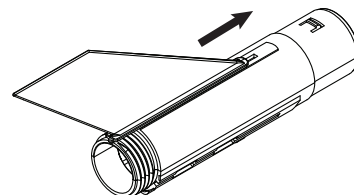
2.



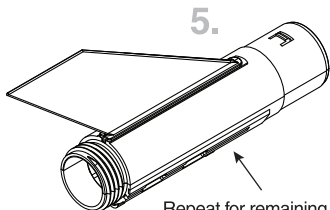
3. Insert fin into slot.



4. Slide fin forward to lock into place.

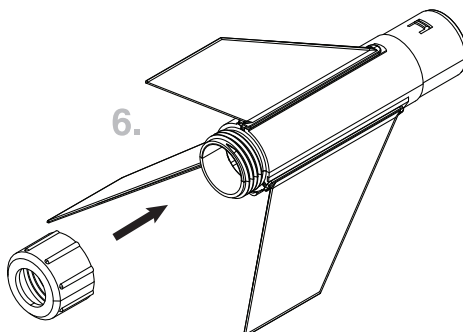


5.

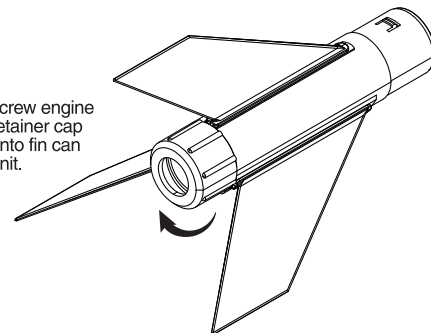


Repeat for remaining fins.

6.

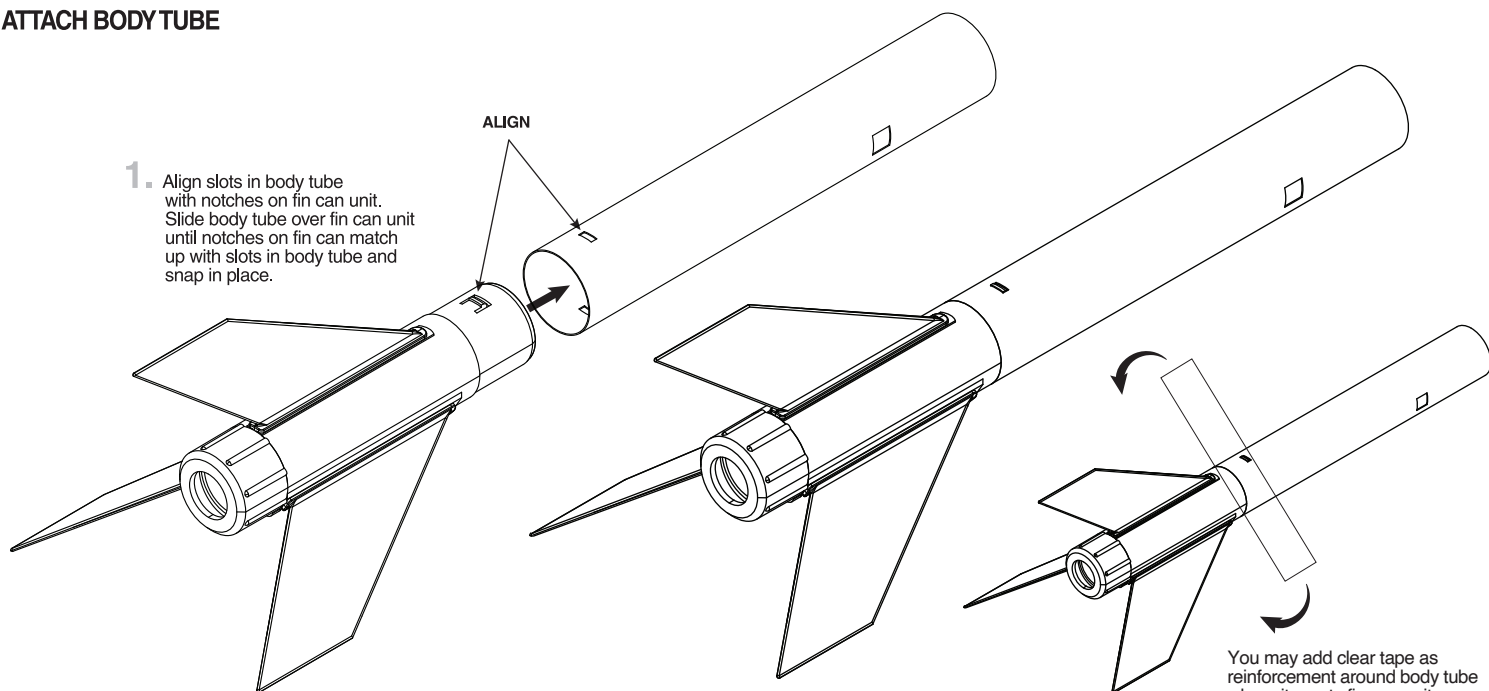


7. Screw engine retainer cap onto fin can unit.



ATTACH BODY TUBE

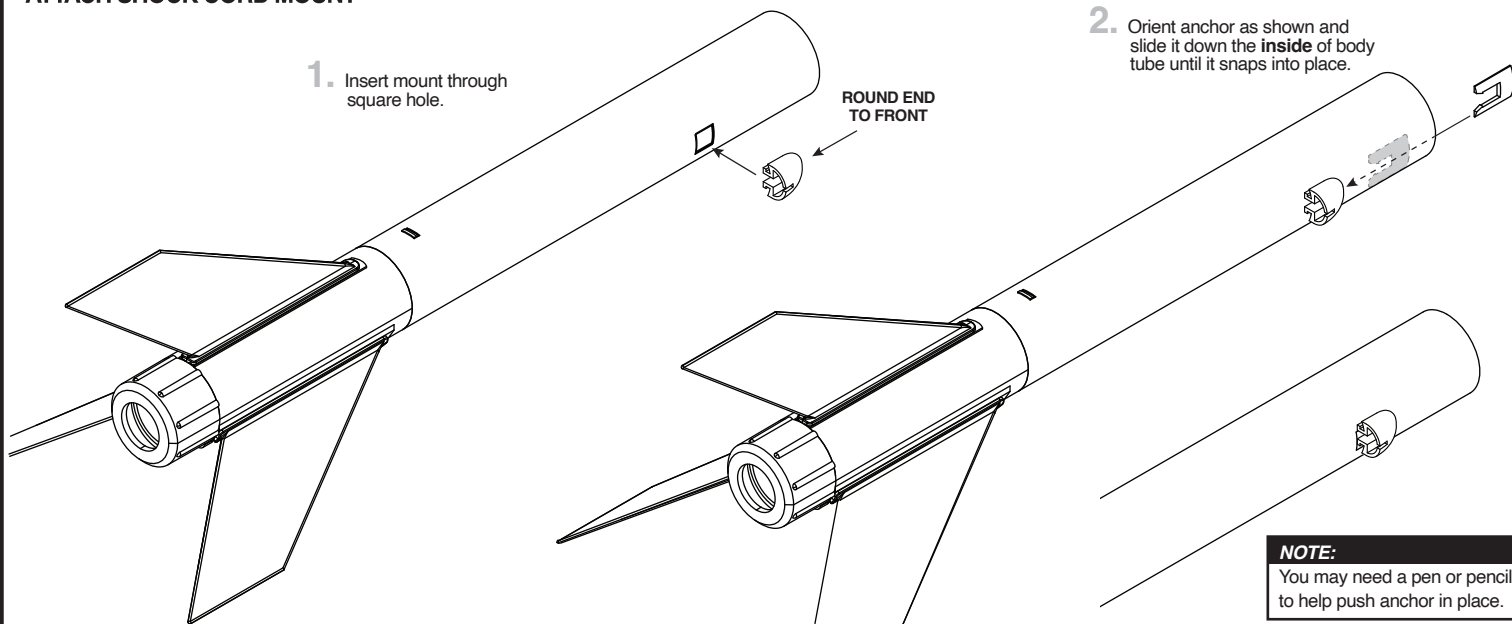
1. Align slots in body tube with notches on fin can unit. Slide body tube over fin can unit until notches on fin can match up with slots in body tube and snap in place.



ATTACH SHOCK CORD MOUNT

1. Insert mount through square hole.

2. Orient anchor as shown and slide it down the **inside** of body tube until it snaps into place.

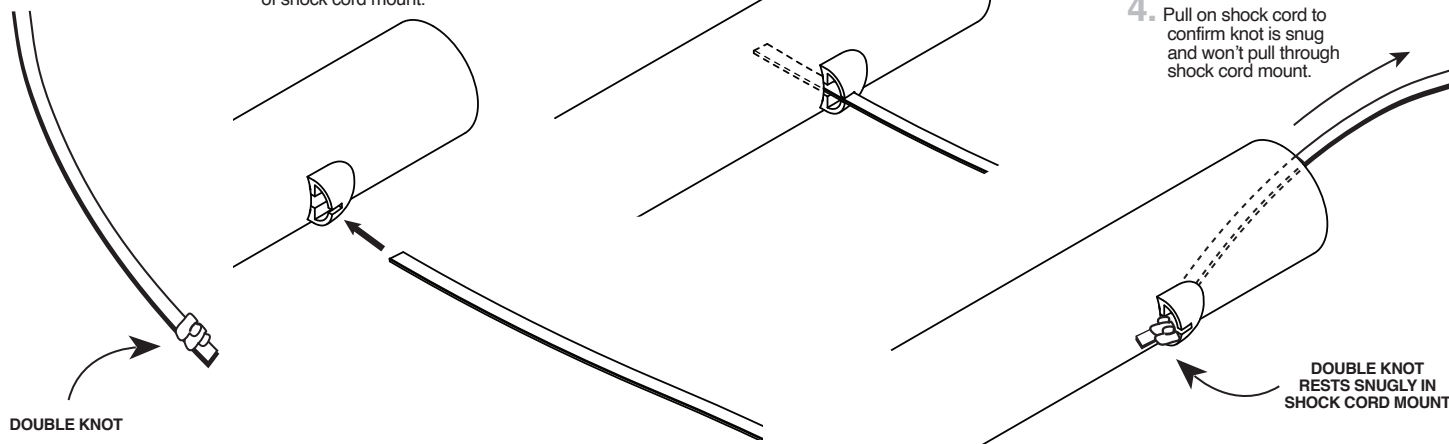


INSTALL SHOCK CORD

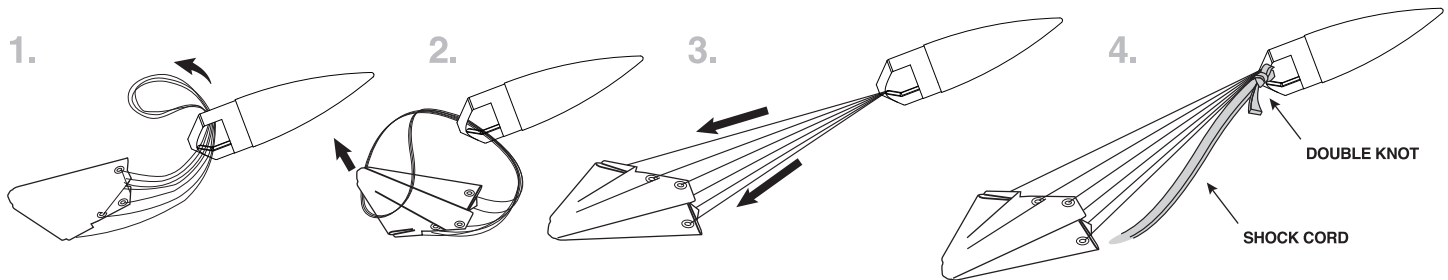
1. Tie double knot in end of shock cord.
2. Insert **unknotted** end of shock cord through opening of shock cord mount.

3.

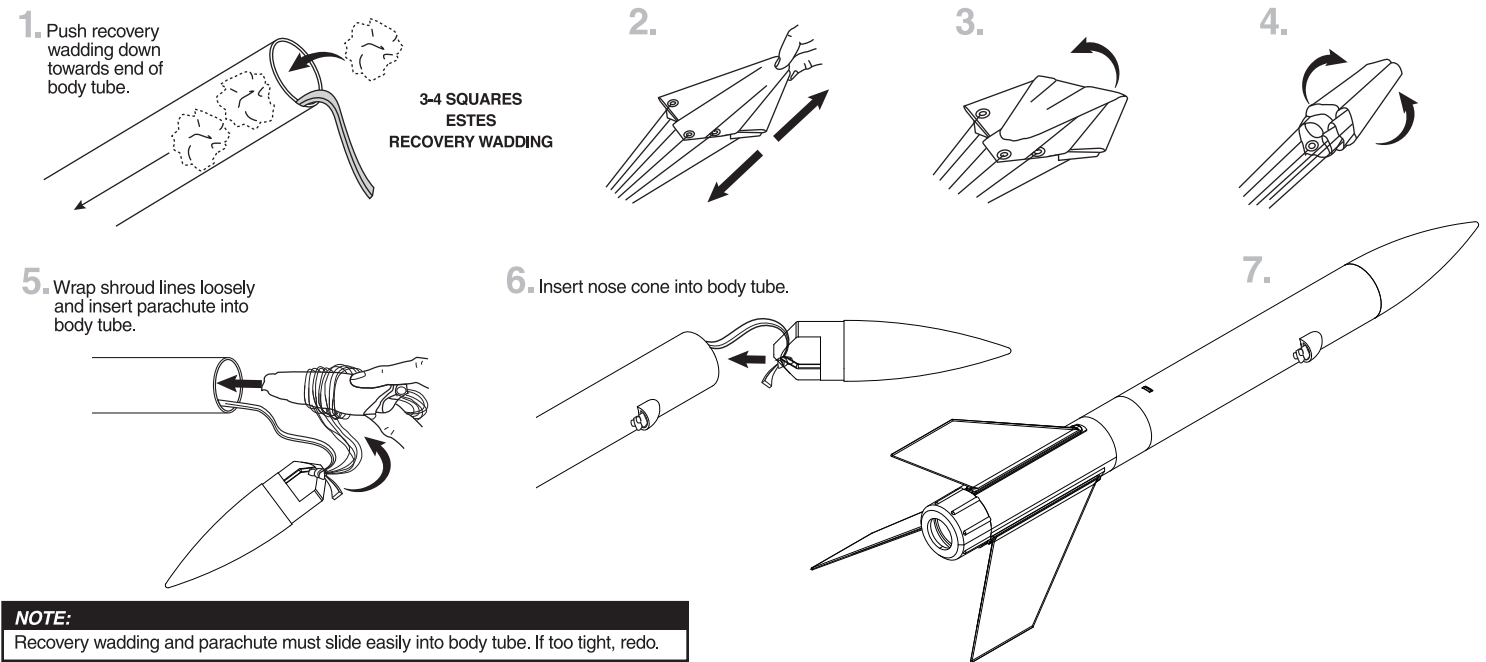
4. Pull on shock cord to confirm knot is snug and won't pull through shock cord mount.



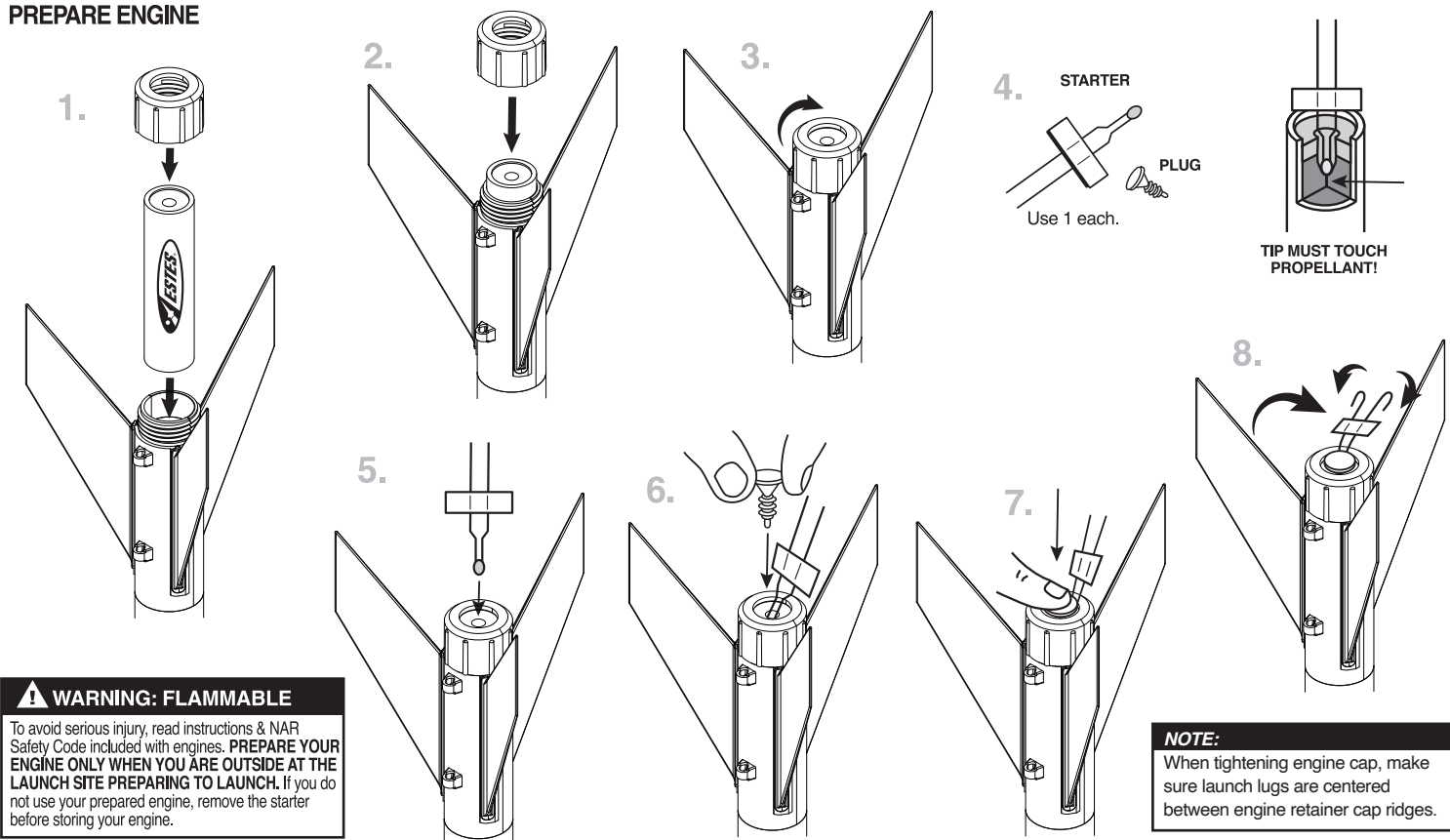
ATTACH PARACHUTE AND SHOCK CORD



PREPARE FLIGHT RECOVERY



PREPARE ENGINE



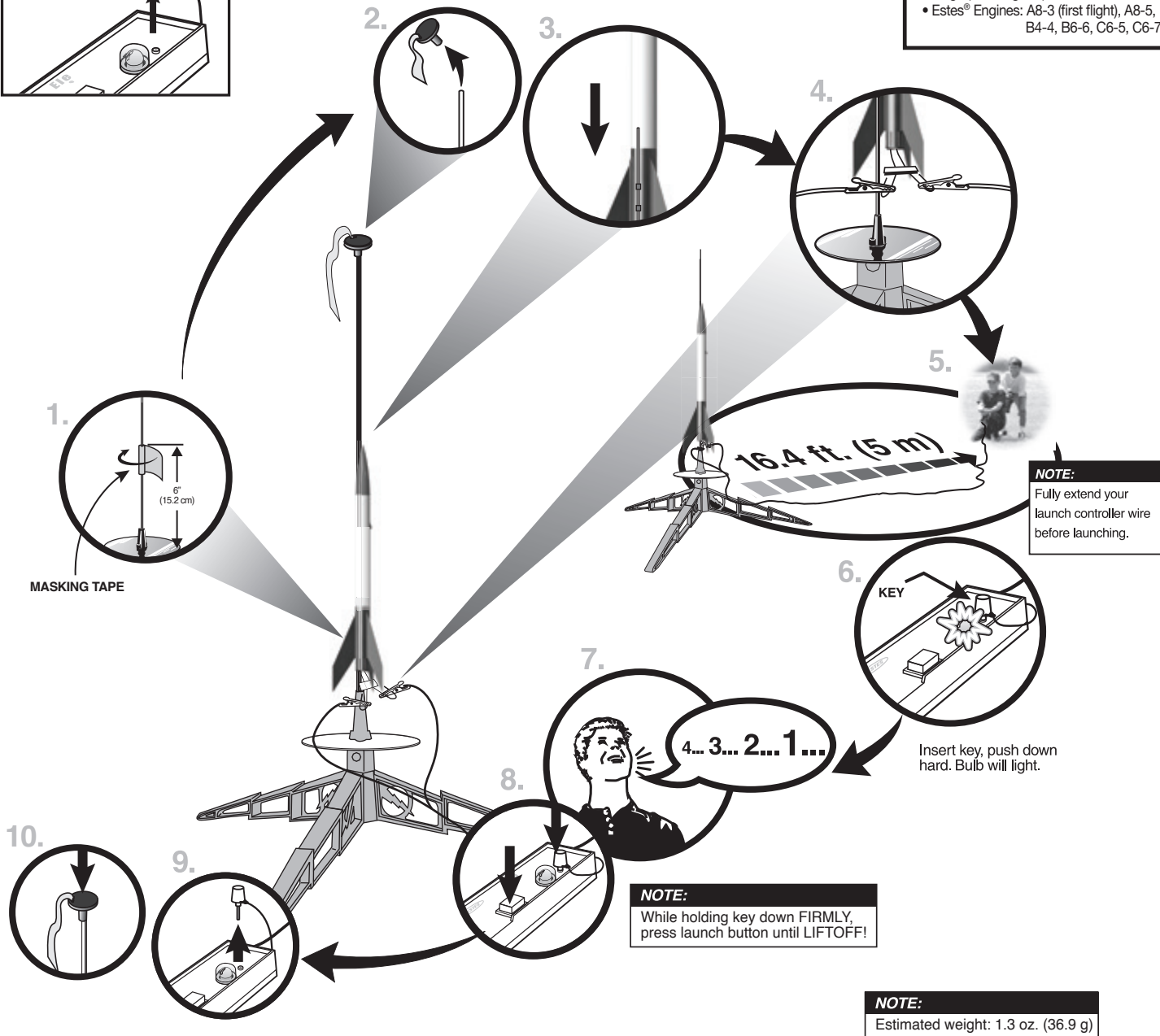
COUNTDOWN AND LAUNCH

NOTE:

Key always out until final countdown!

ESTES® LAUNCH SUPPLIES NEEDED (Sold Separately)

- Porta-Pad® II Launch Pad
- Electron Beam® Launch Controller
- Recovery Wadding
- Starters (with engines)
- Plugs (with engines)
- Estes® Engines: A8-3 (first flight), A8-5, B4-4, B6-6, C6-5, C6-7



PRECAUTIONS



NAR SAFETY CODE



NO DRY GRASS
OR WEEDS

PRE-LAUNCH CHECK For safety, never launch a damaged rocket. Check the rocket's body, nose cone and fins. Also, check the engine mount, recovery system and launch lug(s). Repair any damage before launching the rocket.

FLYING YOUR ROCKET Choose a large field (500 ft. [152 m] square) free of dry weeds and brown grass. The larger the launch area, the better your chance of recovering your rocket. Football fields and playgrounds are great. Launch only with little or no wind and good visibility. Always follow the National Association of Rocketry (NAR) SAFETY CODE (enclosed).

MISFIRES TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET! Disconnect the micro clips and remove the engine. Take the plug and starter out of the engine. A burned starter means the starter tip was not touching engine propellant. Install a new starter; be sure the tip is touching propellant inside engine. Repeat the steps under Countdown and Launch.

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