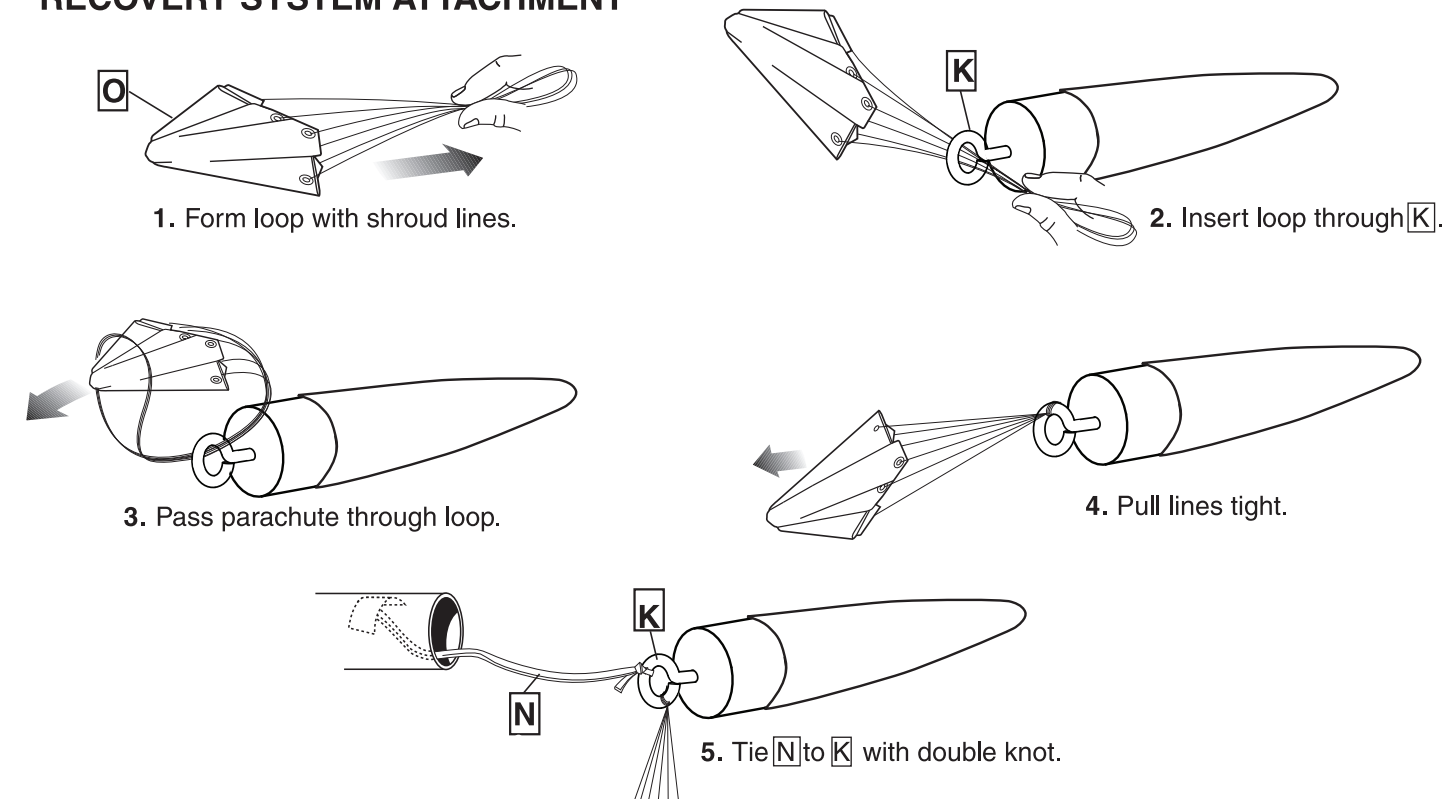
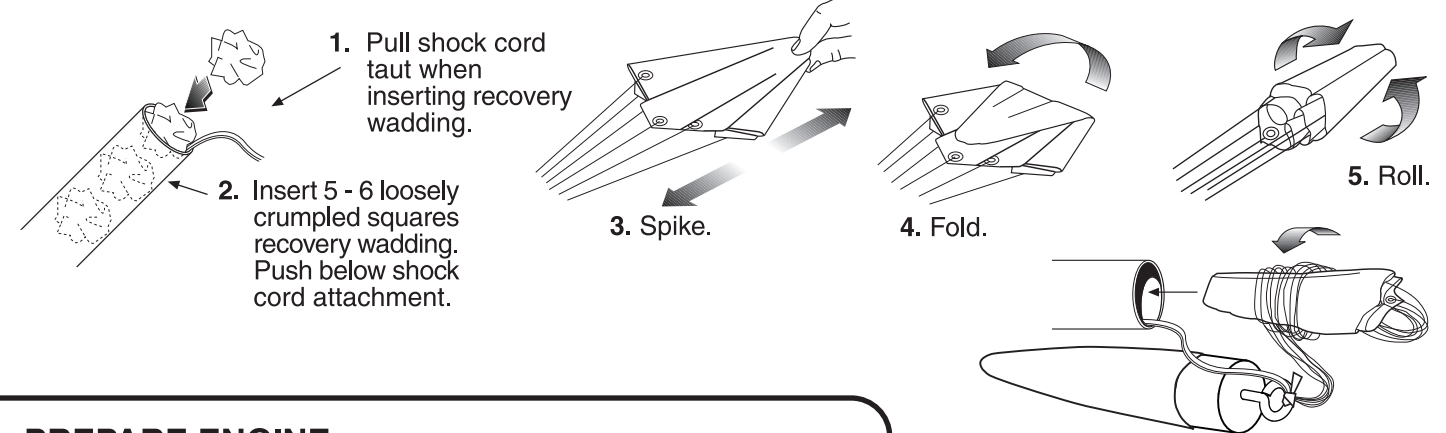


RECOVERY SYSTEM ATTACHMENT



PREPARE FLIGHT RECOVERY

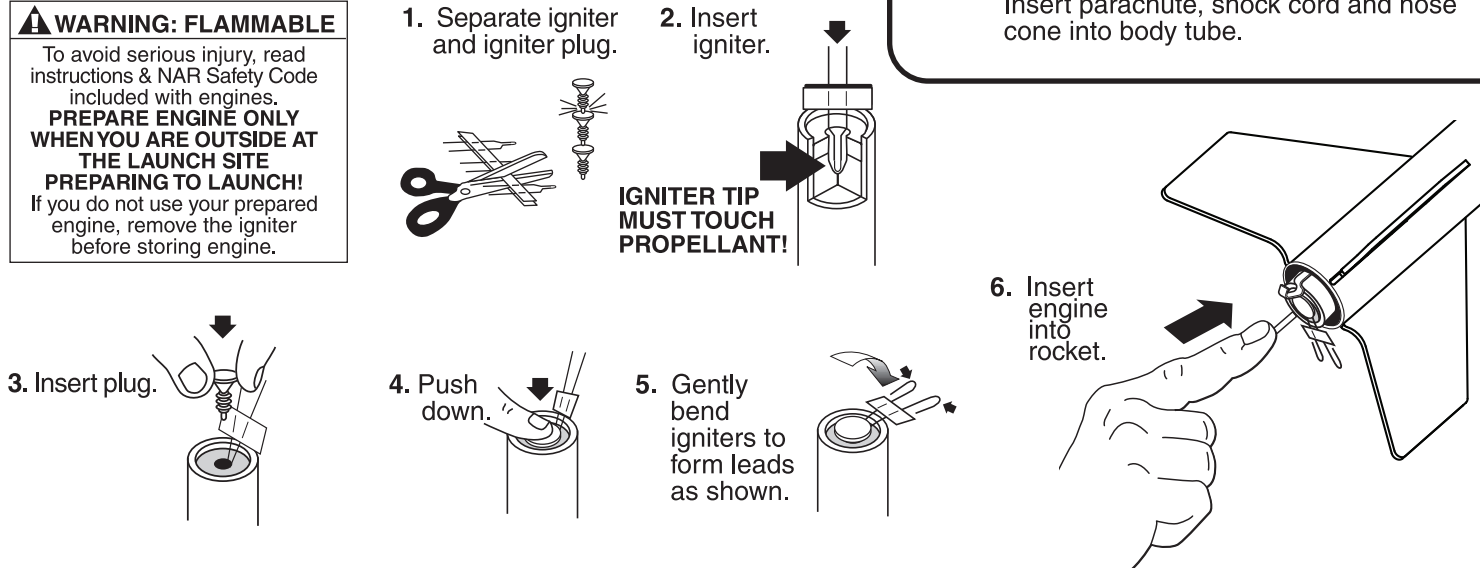
NOTE: Only Estes Recovery Wadding (302274) recommended.



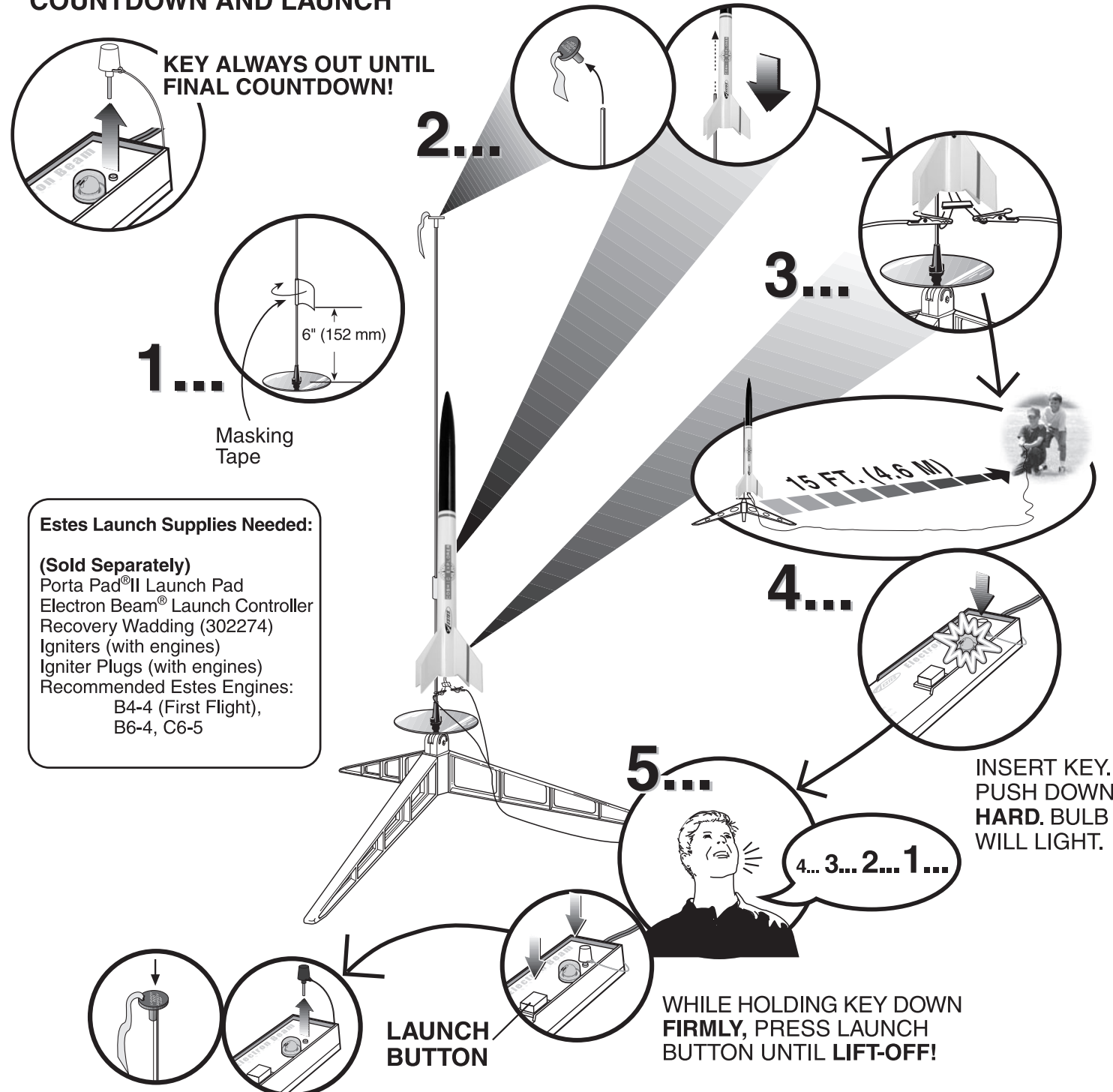
NOTE: Recovery wadding and parachute must slide easily into body tube. If too tight, redo.

PREPARE ENGINE

**⚠ WARNING: FLAMMABLE**  
To avoid serious injury, read instructions & NAR Safety Code included with engines.  
**PREPARE ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE**  
**PREPARING TO LAUNCH!**  
If you do not use your prepared engine, remove the igniter before storing engine.



COUNTDOWN AND LAUNCH



PRECAUTIONS

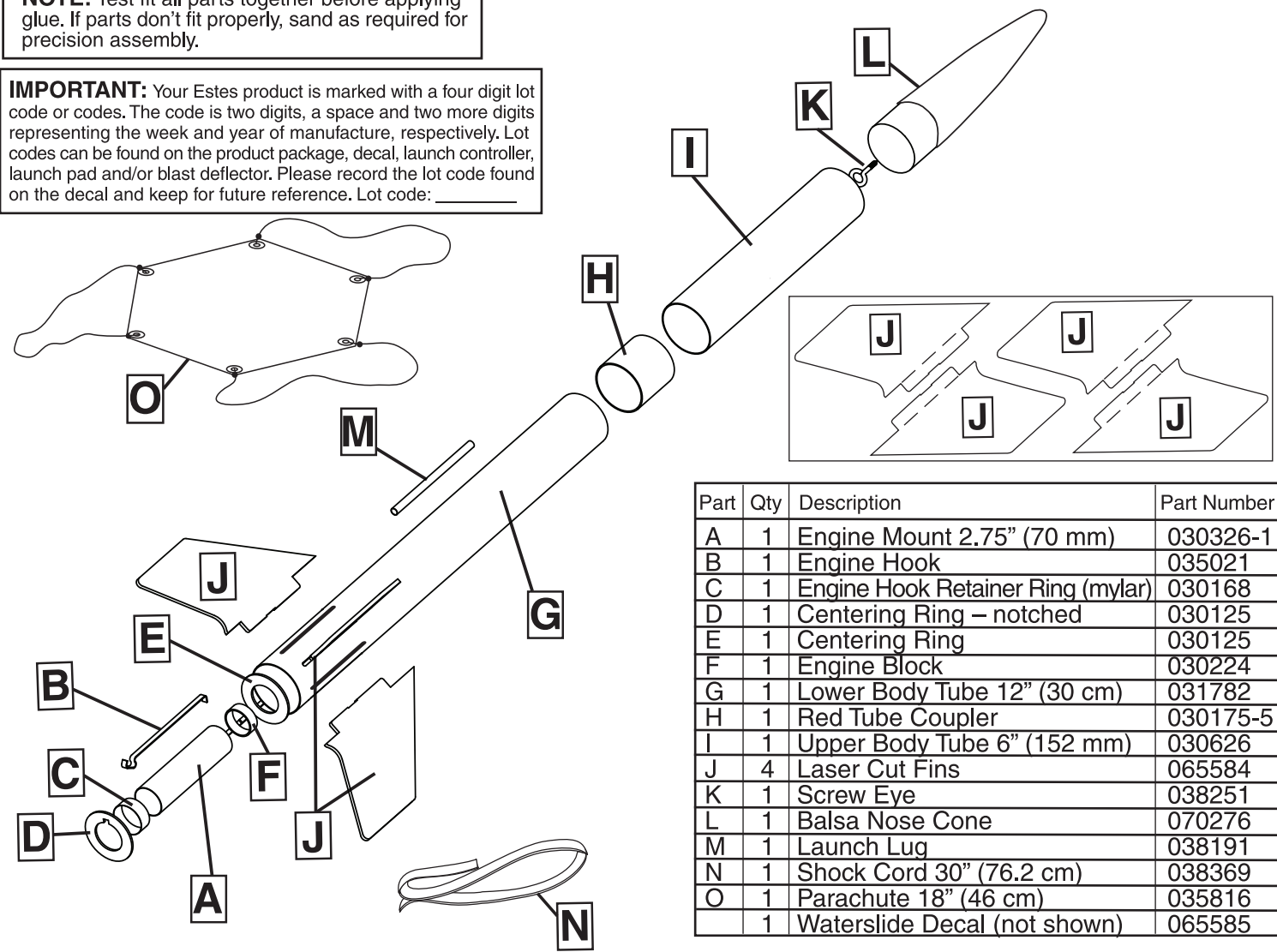


Cosmic Explorer™ #2421  
FLYING MODEL ROCKET KIT INSTRUCTIONS  
KEEP FOR FUTURE REFERENCE

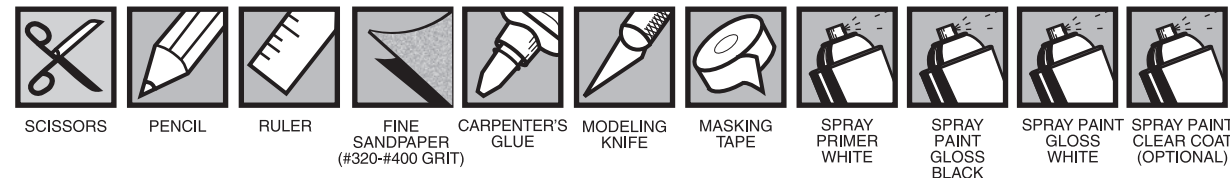
ASSEMBLY TIP: Read all instructions before beginning work on your model. Make sure you have all parts and supplies.

NOTE: Test fit all parts together before applying glue. If parts don't fit properly, sand as required for precision assembly.

IMPORTANT: Your Estes product is marked with a four digit lot code or codes. The code is two digits, a space and two more digits representing the week and year of manufacture, respectively. Lot codes can be found on the product package, decal, launch controller, launch pad and/or blast deflector. Please record the lot code found on the decal and keep for future reference. Lot code: \_\_\_\_\_



SUPPLIES In addition to the parts included in the kit you will also need:





TUBE MARKING GUIDE AND SHOCK CORD MOUNT

(Make a copy if you want to keep instructions.)

FIN

LL

FIN

SECTION 3

SECTION 2

SECTION 1

FIN PREPARATION

1. Sand both sides of balsa sheet with fine sandpaper (#320 or #400 grit).

2. Cut J from sheet.

3. Stack fins together. Sand edges smooth.

4. Sand leading edge round.

ROUND LEADING EDGE

TRAILING EDGE

ROOT

LEADING EDGE

TRAILING EDGE

ENGINE MOUNT ASSEMBLY

NOTE: For the assembled fins to fit properly, it is very important to measure, mark and assemble the ENGINE MOUNT carefully.

1. Remove D and E.

2. Measure and mark A as shown.

3. Cut small slit at mark.

4. Insert B in slit.

5. Slide C just past 1 1/2" (38 mm) mark.

6. Apply glue to both edges of C. Wipe excess glue. Let dry.

7. Slide E to B.

8. Slide D with notch over B to 1/2" (13 mm) mark.

9. Test fit J over C before gluing D and E.

10. Apply glue to both sides of D and E. Avoid applying glue to B at notch. Let dry.

11. Apply ring of glue to inside end of A. Insert F until it stops. Let dry.

Complete Engine Mount Assembly

ENGINE MOUNT INSTALLATION

1. Apply ring of glue inside of G.

2. Align B with LL and slide engine mount assembly into G until tube ends are even.

3. Apply ring of glue to inside of G. Let dry.

TUBE MARKING

1. Cut tube marking guide from instructions.

2. Tape guide to between slots. Mark LL at arrows.

3. Remove guide. Use a door frame and extend LL entire length.

4. Measure and mark LL as shown.

FIN ATTACHMENT

1. Apply glue to root edge of J. Allow to dry 1 minute. Apply 2nd layer of glue.

2. Attach J centered in slot.

3. Repeat for remaining J. Let dry.

Fin Alignment Guide

Use fin alignment guide for accurate fin alignment.

LAUNCH LUG ATTACHMENT

1. Sand M with fine sandpaper.

2. Apply glue to "LL" forward of mark. Position M centered on "LL" forward of mark. Let dry.

UPPER BODY TUBE ATTACHMENT

1. Measure and mark H.

2. Apply ring of glue inside G. Insert H to mark. Wipe excess glue. Let dry.

3. Apply ring of glue inside I. Slide G into I. Wipe excess glue. Let dry.

NOSE CONE ASSEMBLY

1. Screw K centered into L.

2. Test fit L in I. Sand as required for fit.

HELPFUL HINT: IF NOSE CONE FIT IS...

TOO LOOSE

ADD MASKING TAPE.

TOO TIGHT

SAND FOR FIT.

SHOCK CORD INSTALLATION

1. Cut shock cord mount from instructions.

2. Apply glue to section 2. Place N on glue. Fold forward.

3. Apply glue and fold forward.

4. Squeeze tight!

5. Apply glue to shock cord mount and insert in body tube. Hold until glue sets. Let dry.

ROCKET FINISHING

NOTE: We have found Testors spray primer (Testors #2948 White Primer), Testors One Coat Lacquer spray paints (color of your choice), Testors Model Master spray paints (color of your choice) and Testors Gloss Lacquer (#1961) to be excellent for providing a long lasting and durable finish on your rocket. Always be sure to spray your models outside or in a well ventilated area.

STEPS FOR A QUALITY FINISH:

1. Insert shock cord into body tube and hold in place with paper.

2. Lightly sand body tube, fins and nose cone with fine sandpaper (#320 or #400 grit).

3. Apply glue fillet to fins and launch lug joints.

a. Let glue dry overnight.

4. Use a stick inserted into the engine mount tube of the rocket for painting.

5. Apply 1-2 light coats of white primer to rocket body and nose cone, lightly sanding with fine sandpaper (#320 or #400 grit).

a. Let dry between each coat.

6. Spray paint main rocket body and fins gloss white.

a. Let paint dry overnight (24 hours is best).

7. Measure 12" (30.5 cm) from bottom of rocket and mark.

8. Apply masking tape around rocket tube below mark.

9. Wrap lower end of rocket with protective cover and apply tape to cover and rocket. Make sure white paint is completely covered.

10. Spay upper section of rocket gloss black.

a. Let paint dry overnight (24 hours is best). Remove masking tape.

11. Grip the nose cone by the screw eye with a clip or pliers for painting.

12. Spray nose cone gloss black.

a. Let paint dry overnight (24 hours is best).

13. Apply water slide decals where shown.

a. Cut the decal to be applied from the decal sheet, trimming close to the decal edge.

b. Hold the decal in warm water until decal begins to curl.

c. Remove the entire decal, position in place and slide the decal from the backing material and onto the model as close to final position as possible.

d. Gently blot out excess water with a clean paper towel.

e. Let decals set overnight before applying protective clear coat.

14. When decals are dry, spray entire rocket (body and nose cone separately) with a light coat of Testors Gloss Lacquer (#1961). This will provide added protection and shine to your Cosmic Explorer™ rocket!

12" (30.5 cm)

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