

Instruction for printing and assembling the CAP Rocket

Printing

Print the Rocket pattern on your color printer using white, heavy card stock (approx. 110 lb weight paper).

Materials Needed

Rocket pattern printed on white heavy index card stock

1 Scissors

Elmer's type glue and/or Stick Glue

10-12 inches of flat 1/8 inch elastic

1 cubic inch modeling clay

3" by 24" parachute material or very light, brightly-colored nylon material

3 spent Estes rocket motors

launch rod or small Phillips screw driver

1 toothpick

ruler or straight edge

scotch tape

Construction

1. Carefully cut out all pieces.

2. Roll the main rocket body (1. Rocket tube) with the text rolled up inside to strengthen the tube. Glue into shape.

Tip: Roll the tube around a spent engine to see how the lines on either side of the CAP seal meet.

3. Tri fold and glue (5. engine stop ring) and shape into ring. With a stick, apply a ring of glue 2.5 inches inside the bottom of tube.

Note: Use a spent engine to push the engine ring into position, and press it into place against tube body with a stick or screwdriver.

4. Glue (7. shock cord attachment) to both ends of approx. 12 inches of 1/8 inch elastic.

5. If you are making a booster for the egg lifter, skip to step 6.

a. Form (2. nose cone) into shape and glue.

b. Wrap (8. nose cone collar) around top of rocket tube and glue last inch into place.

Tip: Insert a spent engine into top of tube to help shape nose cone collar.

c. Slip collar off of tube and tack inside tab of collar.

d. Glue white tabs of nose cone to inside of collar making sure nose cone is straight.

e. Glue one shock cord attachment into nose cone above the collar.

f. Roll approx. one cubic inch of modeling clay into a thin "snake" and feed clay into nose, pressing into place with the eraser end of a pencil.

Note: If modeling clay is unavailable, glue a fishing weight or 2 pennies into nose cone

6. Fold all three (3. fin) in half along leading edge and fold tabs up.

7. Fold (4. fin stiffener) and tack with glue along leading edge.

Note: Yellow and black area will become the trailing edge of fins.

8. Smear thin coat of glue to entire back side of (3. fin) and insert (4. fin stiffener).

9. Attach fins to rocket tube.

10. Roll (6. Launching lug) into tube and attach to rocket tube.

Note: Make sure launching lug does not interfere with fins.

Note2: Use rod or small screwdriver to help form launch lug.

11. Glue other end of (7. shock cord attachment) to top end of rocket tube.

12. Construct a streamer or parachute and attach to approximate middle of shock cord.

TIP: Several coats of spray-on "clear coat" strengthens the fins and makes the rocket look good to. Or you can use a color spray paint and decals to give your rocket your own unique look.

Launching

Refer to CAP Model Rocketry Program ([CAPM 50-20](#)) and observe all safety considerations in the [NAR Safety Code](#) whenever conducting rocket launches.

TIP: Wrap about 1 tsp tempera paint powder into a square of wadding material and place on top of wadding to make a visual marker when the ejection charge fires.

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