A photograph of an AP Rocket Launcher, a clear plastic tube, and a plastic cap. The launcher has a pressure gauge and a warning label. The background is a grid pattern.

AP Rocket Class Pack

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E D U C A T I O N

Introduction

Simple to build, these tube rockets really fly when launched from the AP Launcher – the air-powered rocket launcher – with as little as five pounds of air pressure!

Included Materials

- 30 – 12" body tubes
- 30 plastic caps
- 3 sheets of fin patterns (10 each)*

*Cut these apart and divide them among the 30 kits.

Other Materials & Tools (not included)

- Scissors
- Transparent tape
- 1/2" dowels (optional)
- Acrylic paint, spray paint, or decals (optional)
- Pencil or marker
- Glue stick
- AP Rocket Launcher and air pump

Teacher Tips

Photocopying: The two inside pages of this guide make up one horizontal 8.5" x 11" page – simply open the guide to lay flat on the photocopier to make copies of the instructions for your students.

Putting on the Caps: The plastic caps can be difficult to put on the body tubes without bending the tube. To prevent this, you can insert a 1/2" dowel into the tube while placing the cap.

You will need:

- 1 – 12" body tube
- 1 plastic cap
- 1 fin pattern
- Piece of transparent tape
- 1/2" dowel rod (optional)
- Acrylic paint, spray paint, or decals (optional)
- AP Launcher and air pump (for launching)
- Pencil or marker
- Scissors
- Glue stick

Building a Tube Rocket

1. Cut out the four shapes on your fin pattern. Three of these are fins; the rectangular one is a fin alignment pattern.
2. Wrap the fin alignment pattern around one end of your body tube so the labels and arrows face out. Using a piece of transparent tape, secure the pattern around the body but not to the body. The pattern should be approximately 1/8" to 1/4" above the end of the tube.

3. With a pencil or marker, make a small mark on the body tube where the three labels on the fin alignment pattern are pointing (Figure 1). Be sure to mark where both the top and bottom arrows are pointing. Slide the pattern off the tube.



Figure 1

4. Carefully, apply the glue stick to one of the fins on the side with the dotted line labeled "Glue." Align that fin with one of the fin marks on the body tube. Make sure the wide end of the fin lines up with the mark near the end of the tube (Figure 2).



Figure 2

5. Repeat Step 4 with the other two fins and fin marks. Let the glue dry completely. If you wish to paint your rocket or add decals, do so now.

6. Next, put the plastic cap on the tube end opposite the fins (Figure 3). This will be tight, so you need to be careful not to bend the tube. If your teacher provided a dowel rod, you can insert it into the tube to prevent the tube from bending.

Tip: To make the cap go on a bit easier, you might try to stretch the cap's hole with your finger or thumb (Figure 4).

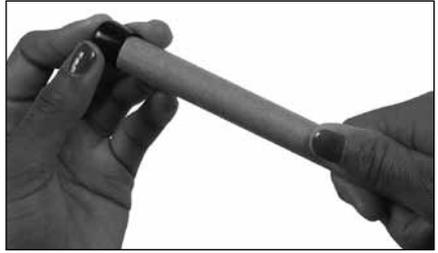


Figure 3



Figure 4

You are ready to launch the rocket on the AP Launcher. Be sure to follow the launcher and your teacher's instructions – especially the safety instructions!



A completed tube rocket

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