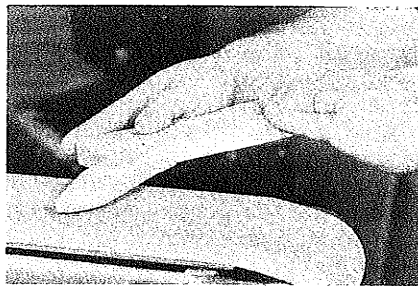
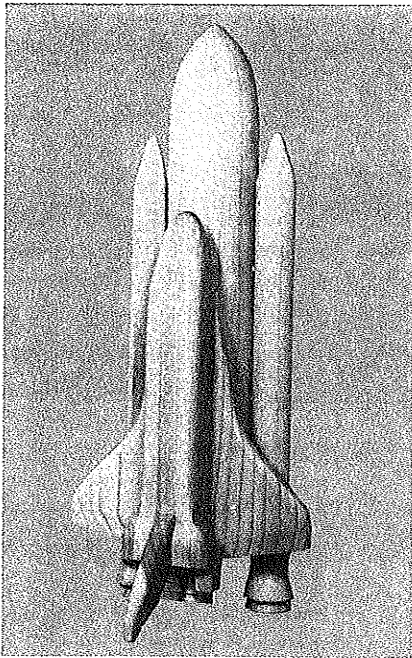


# SPACE SHUTTLE

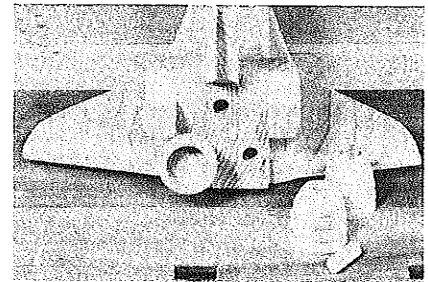
From HANDS ON Nov/Dec 79



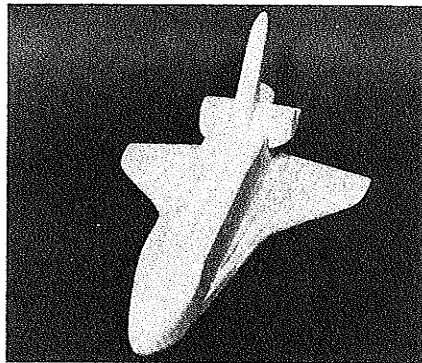
Tapering the vertical stabilizer (A) with a belt sander.

3. Glue the fuselage sides (B) to either side of the vertical stabilizer (A), taking care that the dados for the wings line up. Round the nose of the fuselage with a rasp or sander. Glue the wings (C) in place. Glue the rocket pods (D) to either side of the fuselage.

4. Drill a 3/8" hole 1/2" deep in the narrow end of the three rockets (E). Drill three more 3/8" holes 1/2" deep in the rear of the shuttle assembly. Glue pegs (H) in the 3/8" holes in the rockets (E), then glue the other end of the pegs in the holes in the rear of the shuttle assembly. When mounted, rockets should clear the vertical stabilizer (A) and the bottom edge of the shuttle by at least 1/4".



The rockets (E) are pegged to the back of the Shuttle.



Round the rocket pods (D) and the nose of the Shuttle as shown.

5. Drill two 3/8" holes 1/2" deep, 4" and 9" from the bottom (round end) of the external fuel tank (F). Rotate the tank 90° and drill two more holes the same distance from the bottom. Rotate the tank 90° again and drill two more. Drill two 3/8" holes 1/2" deep in each of the booster rockets (G), 8" and 13" from the bottom. Glue pegs (H) in the holes in the booster rockets;

In 1981, the world's first true spaceship—the Space Shuttle—lifted off on its maiden voyage. It is planned that shuttles will ferry dozens of astronauts between earth and outer space, making spaceflight as common to our children as air travel is to us. Here is a toy Space Shuttle for those young people who will one day become part of space travel.

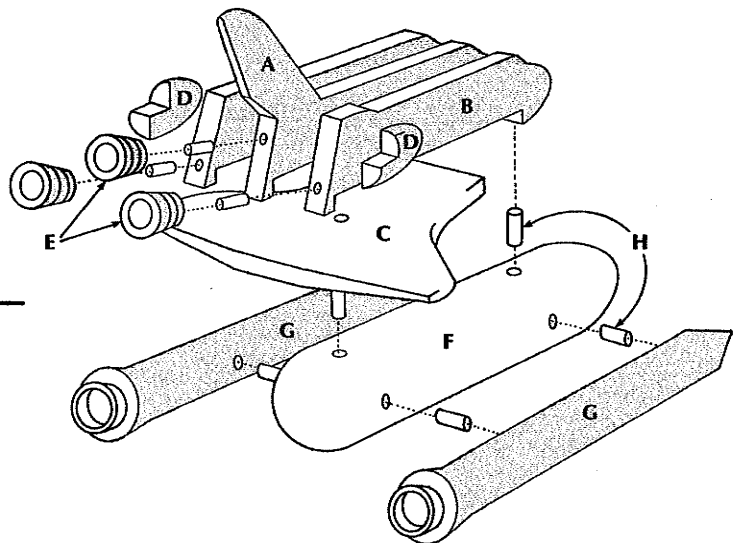
1. Cut all pieces to the proper size and shape. Turn the rockets (E), external fuel tank (F), and the booster rockets (G) on a lathe.

2. Round the leading edge and taper the trailing edge of the vertical stabilizer (A) and the wings (C), using a rasp or sander. Areas that join to other pieces should not be rounded or tapered. Round and taper only the areas that are shaded on the patterns. Also, round the rocket pods (D).

## LIST OF MATERIALS

(finished dimensions in inches)

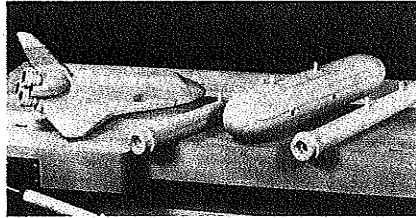
A	Vertical stabilizer	3/4 × 6 × 15-7/8
B	Fuselage sides (2)	3/4 × 3 × 14-1/8
C	Wings	3/4 × 10 × 10-1/2
D	Rocket pods (2)	3/4 × 1-1/2 × 2-5/8
E	Rockets (3)	1-1/4 dia. × 1-1/4
F	External fuel tank	3-1/2 dia. × 19-1/2
G	Booster rockets (2)	2 dia. × 19
H	Pegs (9)	3/8 dia. × 1



then, sand the protruding ends of these pegs until they fit snugly, but not too snugly, in the holes in the external fuel tank (F). Mount (but don't glue) the two booster rockets (G) on opposite sides of the external fuel tank (F), fitting the pegs in the holes.

6. Using a carpenter's square, stand the shuttle assembly on its vertical stabilizer (A), belly perpendicular to the floor. Mark the belly 8" and 13" up from the floor. Drill two 3/8" holes 1/2" deep at these marks, centered in the belly. Glue two pegs (H) in the two remaining holes

in the external fuel tank (F). These pegs should be 90° away from both the booster rockets. Sand the protruding ends of the pegs so they fit snugly into the holes of the belly of the shuttle assembly. Mount (but don't glue) the shuttle to the external fuel tank.



The Shuttle, the external fuel tank, and the booster rockets should all peg together and pop apart easily.

Now comes a moment of truth. In the launch position, the Space Shuttle should rest on the booster rockets (C) and vertical stabilizer (A), pointing straight at the stars. A few moments after liftoff (from your workbench), the booster rockets should separate easily and float back to earth while the shuttle and its external fuel tank continue upward. Upon reaching orbit (an arm's length above your head), the tank disengages. The Space Shuttle then completes its mission and glides back to your workbench for reassembly—and another mission.

ONE SQUARE = 1"

