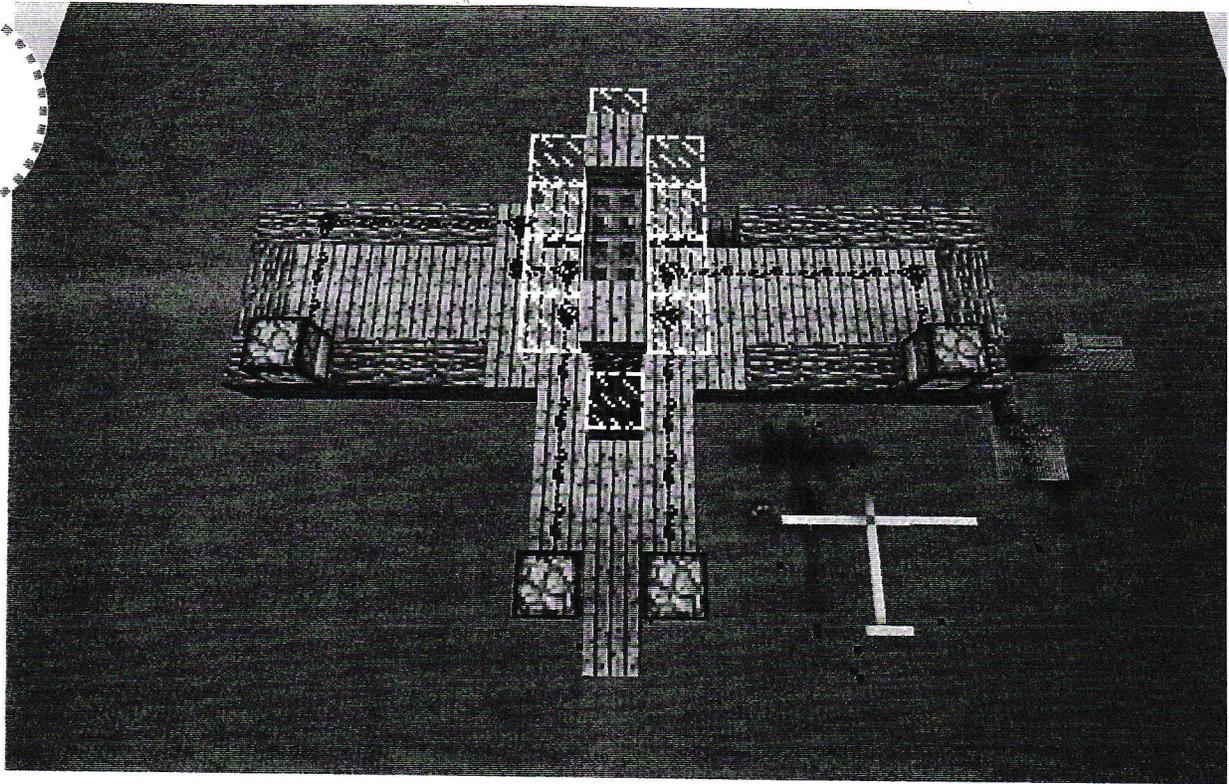


Flying Machine



Paper airplanes have a long history that goes back to the manufacture of paper and the art of origami in China and perhaps Japan. Leonardo da Vinci wrote of a parchment aircraft and tested paper versions of his ornithopter, an aircraft that flew by flapping its wings like a bird.

In this lab, you'll fold and fly paper airplanes in the family activity, then let your imagination run wild while crafting airships inside of Minecraft.

You may be familiar with paper airplanes, such as the classic dart, condor, delta wing, bullet, and stealth bomber, or even experimentals like the flying ring. In this family activity you'll have the chance to craft a few paper airplanes for a fun family flying competition. Ready to put your imaginative flying designs to the test?

Family Activity: Paper Airplanes

■ APPROXIMATE TIME TO COMPLETE

30 minutes

■ MATERIALS

Several sheets of paper, 8-1/2 x 11 inches (21.6 x 27.9 cm)

1. Build several paper airplane models (see figs. 1-6).
2. Set the flying arena. It could be a hallway, sidewalk, or backyard. Set a line to throw behind and check that the wind is calm.
3. Try out these paper airplane challenges: longest distance, shortest distance, longest timed flight, shortest timed flight, wackiest flight, highest flight, and the near-miss flight. The winner of the near-miss flight challenge will have a plane that almost crashes yet continues its flight.
4. Once you've tried making and flying a classic paper airplane, try customizing by adding flaps, rudders, elevators, and weights to improve the design.

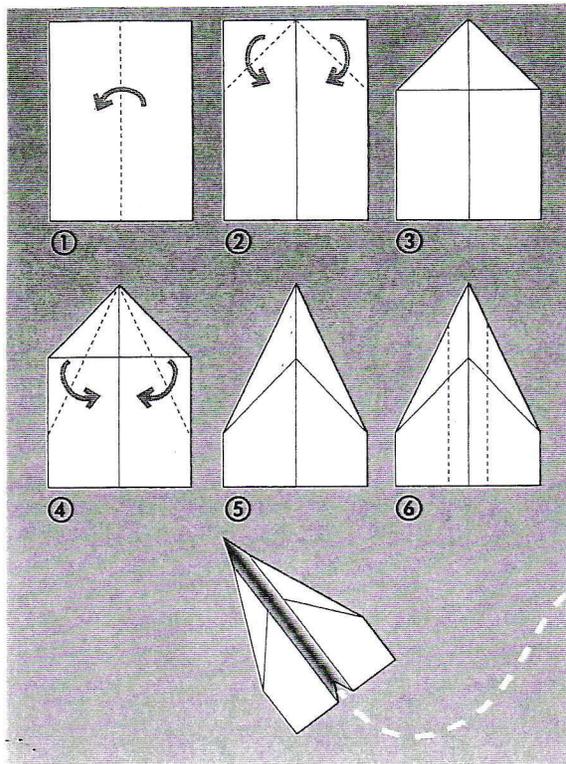


Fig. 1-6: Follow these simple steps to make basic paper planes, then let them fly!



ONLINE RESOURCE

There are hundreds of different types of paper airplanes that are ready to be put to the challenge. Check out this site for templates: <http://goo.gl/tBxJJ6>.

MORE TO EXPLORE

Takuo Toda holds the world record of 27.9 seconds for the longest time his paper airplane was in the air. Joe Ayoob holds the distance record of over 226 feet (69 m).