



Structure of Living Things Activity for Kids

Paper Plane Challenge DIY

 Duration: **30-60 min**  Difficulty: **Medium**  Cost: **\$0 to \$5**

Use the engineering design process to make a glider inspired by bird wings.

Material List

- 1** Wooden skewer
- 1** Pair of scissors
- 1** Roll of tape
- 1** Handful of straws
- 1** Handful of coins
- 10** Sheets of sturdy construction paper

Instructions

- 1** Fold the construction paper in half lengthwise.
- 2** Fold two of the corners toward the center. Use the coin to crease the edges.
- 3** Fold the wings back over the folded corners to create the glider shape.
- 4** Have an adult help you poke a hole at the edge of the fold under the wing (see video).
- 5** Insert the wooden skewer through the hole and tape it down to create support for the wings.
- 6** Send your glider on a test flight.
- 7** Try replacing the skewer with straws which are lighter and hollow, like bird bones.
- 8** Try another test flight.
- 9** Also, you might try changing the shape of the wings to make them even narrower.
- 10** Try adding a tail. Birds use their tails to help them control their flight.
- 11** Cut a triangular piece of construction paper, insert it into the back of the fold and tape in place.
- 12** Test the glider again.
- 13** Try other modifications based on bird structures - this activity is all about designing your own & testing it!

How It Works

Using the structures of living things to help inspire engineering designs is called biomimicry. Birds and other living things have structures that serve a specific function. When humans need to solve similar problems they can turn to animals and plants for answers. In engineering, we often build and test designs over and over. It improves each time!