

# Movers

The wind can create a gentle breeze or make a powerful hurricane. An airplane couldn't fly without the wind blowing over its wings. Can the wind help you have fun? Do these activities to find out.

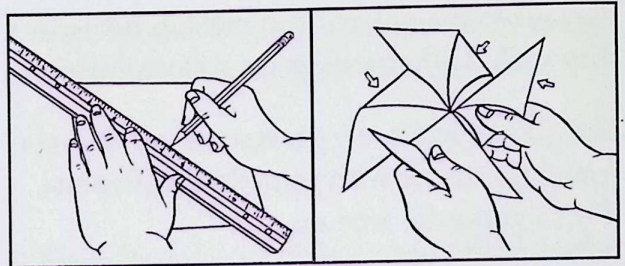
## 1. Pinwheel

Just like a windmill, a pinwheel uses wind energy to make it spin. Make your own pinwheel to see how this works.

You will need:

- A 6" square of construction paper.
- A ruler.
- Scissors.
- A straight pin.
- 2 beads.
- A pencil with an eraser.
- Masking tape or small piece of clay (if needed).

1. Using the ruler, draw a light pencil line from one corner to the opposite corner of the square of paper. Do the same with the other two corners.

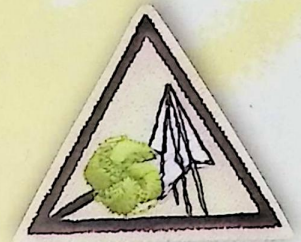


2. Make a cut 2" long along each of the lines from the corner toward the center.
3. Slide a bead onto the pin.
4. Fold the four blades as shown, but don't crease the folds!
5. Pass the pin through the center of the pinwheel. This will hold the four blades together.



6. Slide the other bead onto the pin.
7. Stick the pin into the side of the eraser.

If the point of the pin comes through, cover it with tape or clay. You are now ready to give your pinwheel a whirl!



## 2. Paper Copter

Helicopters use whirling blades to move through the air. You can see how this works by making your own helicopter out of paper.

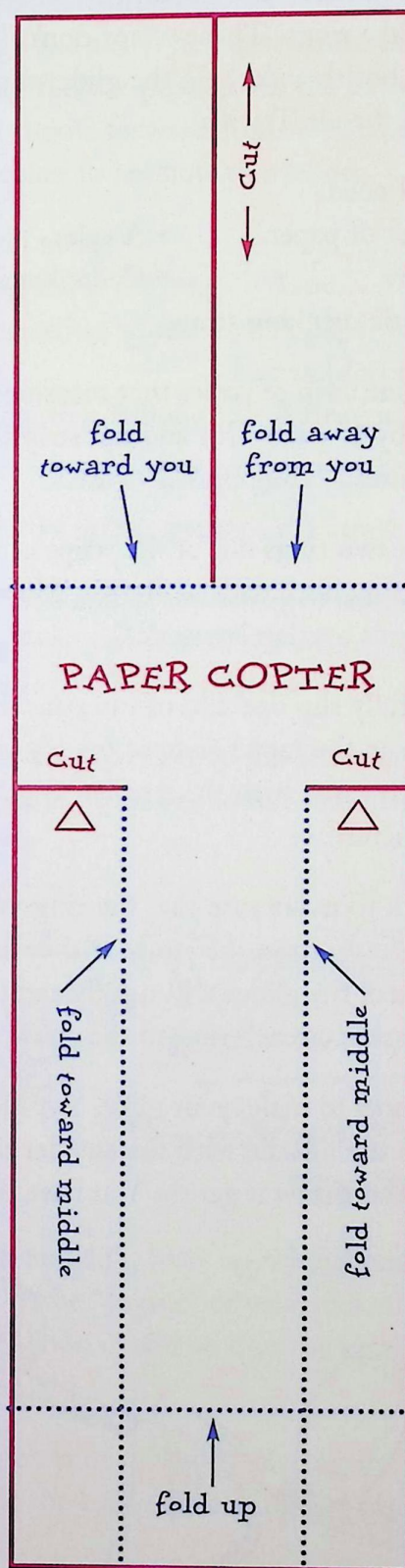
You will need:

- Helicopter pattern.
- A sheet of paper.
- A pencil.
- Scissors.
- A paper clip.

1. Trace the helicopter pattern onto a piece of paper.
2. Cut along the solid (not dotted) lines.
3. Fold the two helicopter blades in opposite directions along the dotted line.
4. Fold the sides of the helicopter toward the middle along the dotted lines.
5. Fold the bottom part of the helicopter up along the dotted lines.
6. Attach a paper clip to the very bottom of the helicopter.
7. Throw the helicopter into the air to see it whirl!

Can you make it turn faster or slower?

**Try It!**



## Ring Glider

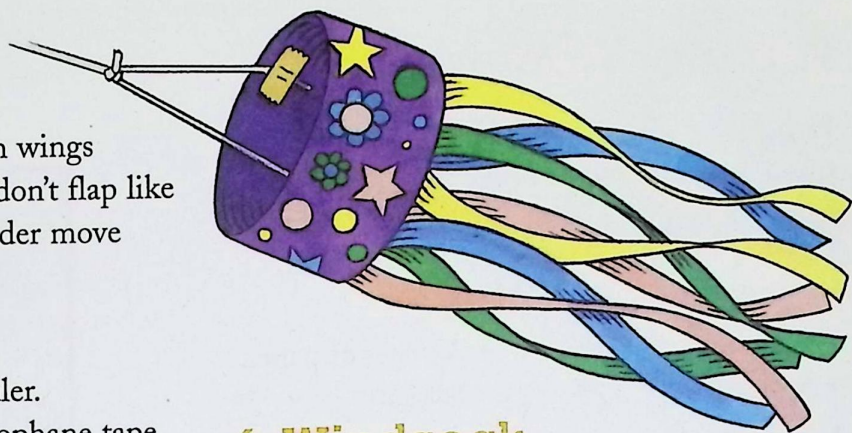
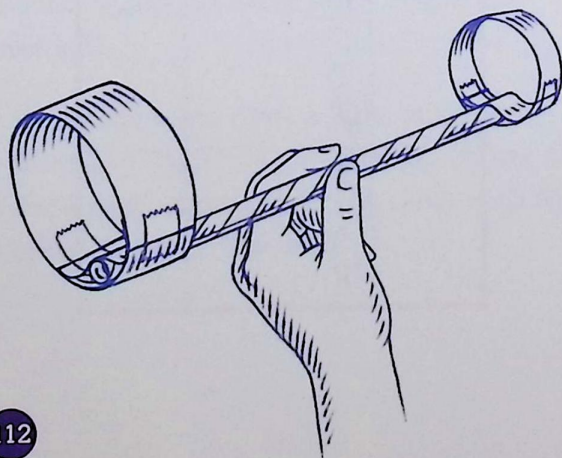
Have you ever seen a glider with wings shaped like rings? These wings don't flap like a bird's, but they do help the glider move through the air. Try it!

You will need:

- A sheet of paper.
- A ruler.
- Scissors.
- Cellophane tape.
- A plastic drinking straw.

1. Cut one strip of paper that measures 7" long by 1" wide. Cut another strip that measures 5" long by 1/2" wide.
2. Make two rings out of the strips of paper by taping both ends as shown. Make sure the ends overlap by about 1".
3. Carefully slip one end of the straw in between the taped ends of the big ring. Do the same with the smaller ring. See the picture.
4. Check to make sure that the rings stand straight up from the straw. If they are crooked, the glider will not fly right. Tape the inside of each ring to the straw.

Here's how to make your glider fly: Hold the straw in the middle with the smaller ring in front, then throw it gently. You have liftoff!



## 4. Windsock

Make a windsock to find out the direction the wind is blowing.

You will need:

- A large sheet of construction paper (6" wide by 18" long).
- Tissue paper (about 2' long).
- Crayons.
- A 30" piece of string.
- Stickers (if you want).
- Glue.
- A ruler.
- Masking tape.
- Stapler.
- Scissors.

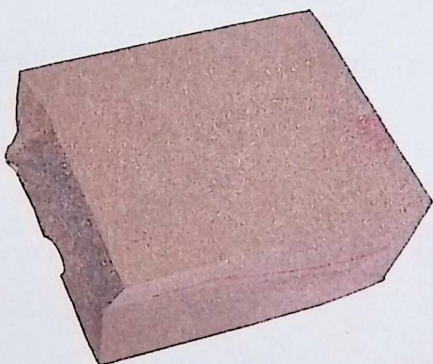
1. Decorate one side of the construction paper with crayons or stickers.
2. Make a ring by gluing the ends of the construction paper together. Make sure your design faces out!
3. Cut eight streamers 2' in length and paste them to the inside of the bottom of the ring.
4. Tape each end of the string to the inside of the top of the windsock to make a handle.
5. Hang the windsock outside where it won't get wet, then watch it play with the wind!

## 5. Lunch Bag Kite

Fill a lunch bag with wind to make a kite!

You will need:

- A paper lunch bag.
- Markers or crayons.
- Stickers (if you want).
- Scissors.
- Tape.
- A long piece of string.
- Tissue paper, ribbon, or lightweight fabric.
- Hole puncher.



1. Decorate the bag.
2. Tape 12" strips of tissue paper, ribbon, or fabric to the bottom of the bag.
3. Fold down 1" of the open end of the bag at the seam (where the bag is glued together).
4. Punch a hole through the folded-over part.
5. Put a piece of tape over the hole on the inside and outside of the bag.
6. Punch a hole in the tape with a pencil.
7. Tie one end of the string or yarn through the hole. Your kite is ready to fly!

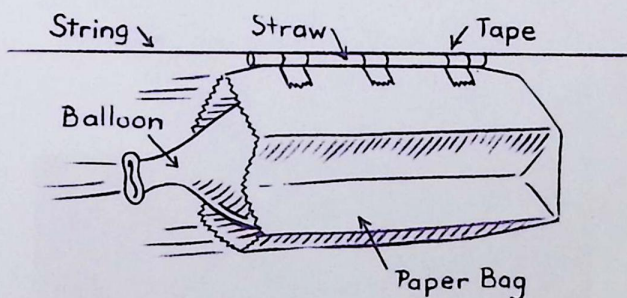
## 6. Balloon Rocket

Rockets, like airplanes, need fuel to move through the air. When gases from this burning fuel are pushed out the back, the rocket shoots forward. You can make your own rocket to see how this works.

You will need:

- String about 10' long (nylon string works best).
- A long, thin balloon.
- Tape.
- A paper lunch bag (decorated).
- A drinking straw.

1. Slide the string through the straw.
2. Tie each end of the string to something (like two chairs). Pull the string tight. This is the track for your rocket.
3. Tape the paper bag to the straw as shown. Slide the paper bag to one end of the string.



4. With an adult, blow up the balloon. This will be the "engine" of your rocket. Hold the balloon closed so that the air does not get out!
5. Launch your rocket by placing the balloon inside the bag, then letting go. Blast off!