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This Instruction manual is intended to explain the steps on how to make four different types of paper airplanes: The Arrow, The Dart, The Moth, and The Ring. For a general description of why these four paper airplanes will not all fly the same, this instruction manual will include a step-by-step process of how the four types of airplanes are individually constructed. The principles are straightforward. The goal of this instruction manual is to create a way for this information to be understandable for everyone.
Materials Needed

- 4 Sheets of 8.5” x 11” Paper
- 1 Roll of Office Tape
- 1 Pair of Scissors
- 1 Empty Toilet Paper Roll

2. Proceed to a large open area in which to fly a paper plane, such as a long hallway, school gym or basketball court. If you're flying your paper plane outside, such as in a field, try to do it when there isn't any wind.

3. Begin constructing the paper airplanes.
Instructions: The Arrow Plane

1. Fold a sheet of paper in half, long-ways, and re-open it so you have a crease separating the two halves.
2. On one end of the paper, fold each corner in towards the center to the point where the inside edges are even with the centerline crease.
3. Starting at the very tip of the point, fold the paper down on each side so the inside edges line up with the center crease.
4. Flip the paper airplane over and fold it in half along the centerline.
5. Fold the first wing with the line of the fold running parallel to the centerline of the plane. Make this fold from 1/2 to 1 inch from the center.
Instructions: The Dart Plane

1. Fold the paper along the width, then unfold it in order to create two “8.5 x 5.5” squares.
2. Turn the paper in order to have a landscape view.
3. Fold the top corners towards the center crease in order to create a point. The edges of the fold should be even with the centerline crease.
4. Fold from the very tip of the point on each side of the paper, so that the inside edges line up with the center crease.
5. Flip the paper airplane over and fold the left side of the paper onto the right side along the centerline created in step 1.
6. Unfold the fold made from step 5 then, turn the paper back over so that the side with the folds is facing up.
7. Fold the left wing of the plane with the line running parallel to the centerline of the plane. Repeat step 6 for the right wing.
8. Flip the plane over and refold the plane along the crease created in step 4.
9. Lift up both wings on each side of plane.
10. Place two pieces of 1-inch tape at the bottom (rear) of the plane in order to keep the plane together.
Instructions: The Ring Plane

1. Fold your paper in half long-ways and unfold it again to create a crease to use as a guide.
2. Then either cut or tear it along the crease to create two long strips of paper.
3. Beginning on one of the long sides, fold it down evenly about 1/2 inch. Repeat this step for a total of 4 folds. Keep your folds as tight and even as possible.
4. Using something cylindrical, gently shape the strip of paper into a circle by rolling it back and forth gently and smoothing out wrinkles as they occur.
5. Once it is circular, tuck one end into the other and use tape to hold it in place. Run the tape along the length of the connection.
1. Fold a sheet of paper exactly in half, long-ways (hotdog style), and re-open and close it again, so you have a crease separating the two halves.

2. On one end on of the paper, fold each corner towards the center, to the point where the inside edges are even with the centerline crease.

3. The bottom edge of the corners that you just folded down should create a straight line across the page. Fold down this line.

4. Fold the corners down again similar to what you did in step 2, but this time only the corners should meet in the middle - leave one to two inches of straight paper at the top.

5. Where the corners of the last folds meet, you will see the point of fold 3 poking out of the bottom. Fold it up and over the two corners.

6. Turn the paper over onto the other side and fold it in half.

7. Fold the first wing so that the outside edge runs parallel to the body.

8. Fold the second wing exactly the same way as you did the first.
Clean Up

1. Recycle the paper plane when you are done with it.
2. Make sure there are no remaining pieces of paper lying around to avoid paper cuts.
Troubleshooting

Frequently Asked Questions

1. My airplane keeps diving how can I fix it?
   - If your airplane keeps diving, slightly angle the rear of the wings up.

2. My airplane keeps flying up then crashing how can I fix it?
   - If your airplane climbs then crashes, slightly angle the rear of the wings down.

3. Will my plane fly straight once I’m finished making it?
   - No, your plane may need some fine-tuning before it will fly perfectly straight.

4. Can the Dart airplane fly far?
   - No, the Dart airplane is suited for stunts and will not fly very far.

5. How do you throw the Ring airplane?
   - To throw the Ring airplane, hold it in your hand so that you are grasping the curved portion along your palm and throw it away from you with a smooth, overhanded slapping motion (letting it roll off of your fingertips).

6. Does the Ring airplane fly far?
   - No, the purpose of the plane is to get it to spin as fast as possible in order to float through the air.