

Making it fly



Grades K-2 | Activity Option 1 | ⌚ 50 minutes

Students will create their own paper airplanes using the template given while learning about aerodynamics.

Preparation

Use the provided template and instructions in this activity. You should practice making the planes beforehand to help students build theirs. If you would like, you can also find other templates online for different types of planes.

Step 1 (5 minutes)

Introduce the fun activity students will get to do with you today.

Step 2 (15 minutes)

Have a conversation with the students about flying and airplanes. To help guide the students, ask:

- How do you think airplanes fly?
 - With the help of the pilot or pilots
 - With the help of the wings
- What parts help an airplane fly?
 - The design and the shape of the plane
 - The powerful engine(s)
- What are some important parts of a plane? (Point them out on your paper plane or write/draw them out on a piece of paper.)
 - **Nose** - front of the plane, helps with side to side movement (yaw)
 - **Wings** - helps the plane to fly up into the air (lift) and maintain balance

Materials



Pencils/pens



Markers/
crayons



Paper



Template printouts



Plane templates



Stickers (optional)

- **Engine** – pushes the plane forward through the air (thrust)
- **Tail** – back of the plane, helps the plane to fly straight

Step 3 (15 minutes)

Tell the students they will now make their own planes and tell them to imagine anywhere they would like to fly their plane. Hold up the model(s) you have made to show them how a completed plane looks.

- Give each student a copy of the template printouts and instructions to construct their plane.
- **Instruct the students that they cannot fly their planes until their maintenance check (see below), when you have checked their parts and planes.**
- Allow each student time to fold their plane and help younger students who may need it.
- Once they have folded their plane, let them color their plane or decorate with stickers.
- Have each student label the nose, wings, engines and tails of their plane with the letters N, W, E and T.

* For some younger students, you may help them with folding their paper to create their planes.

Step 4 (10 minutes)

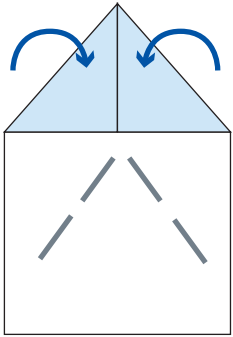
Now let's take flight!

- As their **maintenance check (see note on maintenance check in the previous section)**, check the students' planes one by one for their N, W, E and T labels. Once they have the correct labeling, send them to the designated spot.
- **Remind each student to not fly their plane until they've been told to do so, even if they are at the designated spot.**
- Ask them to prepare to make their plane fly.
- Count to 3 and let the student take flight!
 - *Allow students to repeat their flights!*

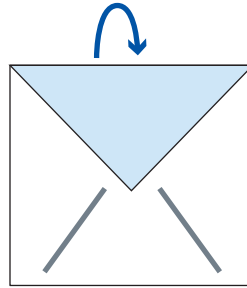
Step 5 (5 minutes)

- Invite the students to share:
 - What do they think helped their planes fly (air, wind, gravity, etc.)?
 - When they threw their airplane, their arm acted like an engine – pushing the plane forward through the air. This is called thrust.
 - The air moving over and under the wings helped provide an upward lift.
 - The air pushing back against the plane slowed it down. This is called drag.
 - The weight of the airplane also affected its flight, as gravity pulled it back down to the Earth.
 - Where did they imagine they were flying with their planes?
 - Have students use the map to show the class.
- Thank the students for a GREAT job!
- Let them know how much you learned and enjoyed being with them.

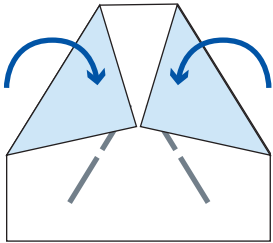
Glider instructions



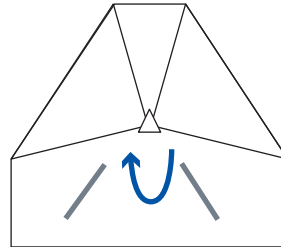
1. Fold the top left and top right corners toward the middle along fold line 1



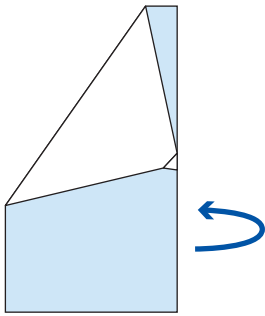
2. Fold the top point down toward you on fold line 2



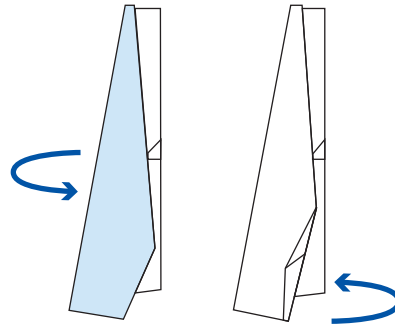
3. Fold the top left and top right corners down along fold line 3



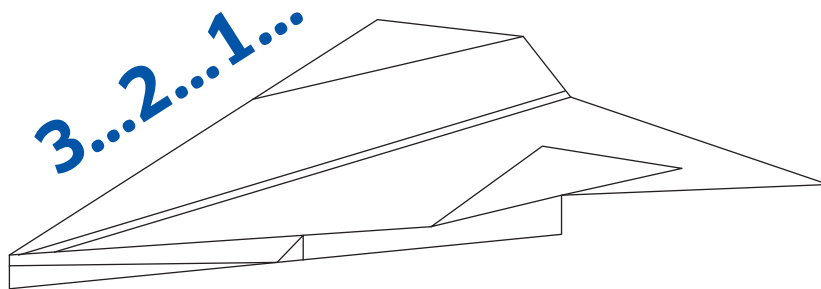
4. Fold up the small triangle along line 4 to secure the step 3 folds in place



5. Flip the plane over and fold the right side over onto the left along fold line 5



6. Fold the wings down along fold line 6 and the winglets up along fold lines 7



Let's fly!

White side -
p. 3 instructions

