Activity Option 1: Making It Fly (40 mins)
Students will create their own paper airplanes using the template given while learning about aerodynamics.

Preparation
Use the provided template and instructions in this document. 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 they will get to do with you today.

Step 2 (5 minutes):
Have a conversation with the student about flying and airplanes. To help guide the student, 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 - help the plane to fly up into the air (lift) and maintain balance
  - 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 student 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 the student a copy of the template printouts and instructions to construct their plane.
- Instruct the student that they cannot fly their planes until their maintenance check*, when you have checked their parts and planes.
- Allow the 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.

Materials:
- Pencils/Pens
- Paper
- Markers/Crayons
- Template printouts
- Plane Templates
- Stickers (optional)
Grades K-2

- Have the 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**, check the student’s 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 the 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 student to share:
  - What 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 slows it down. This is called drag.
    - The weight of the airplane also affected its flight, as gravity pulls 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 student 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!