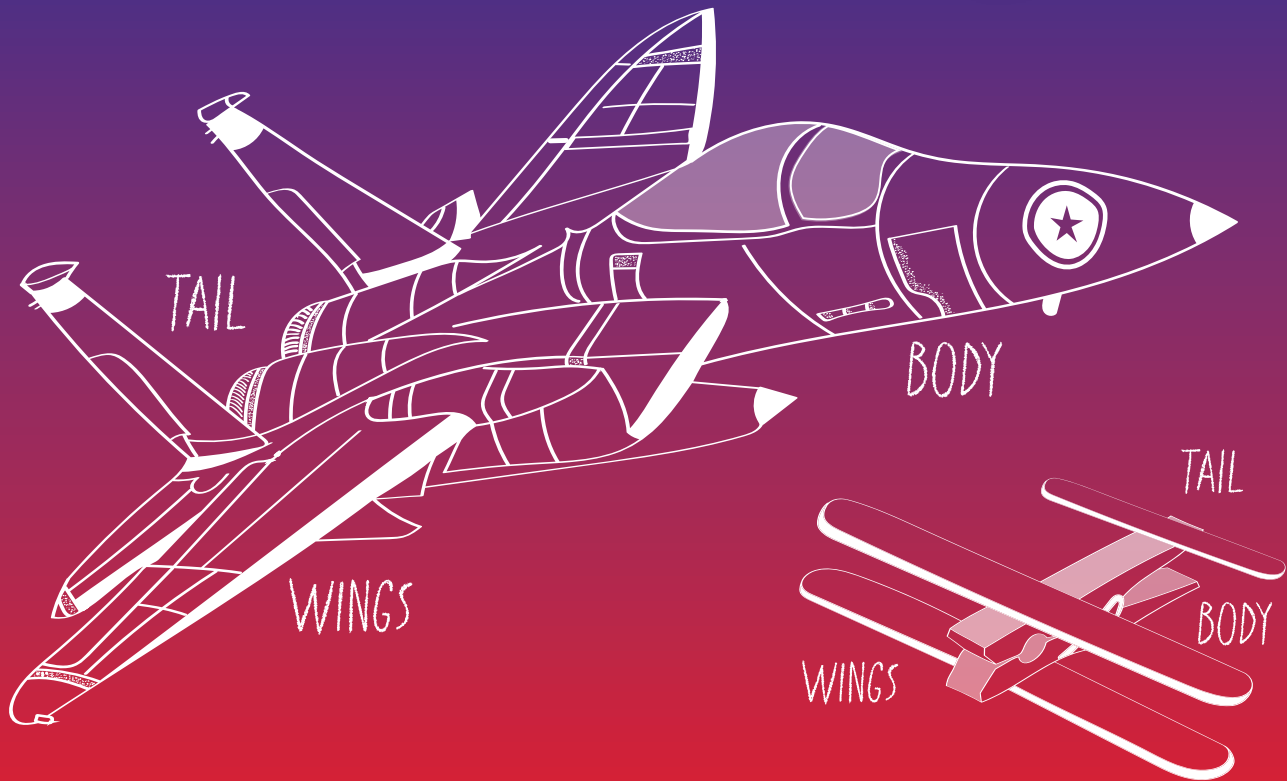


DREAM. BUILD. BECOME.

ACE METAL
FOUNDATIONS

By IACMI

Craft Stick Flyers



Craft Stick Flyers



Prior Knowledge

This activity requires little prior knowledge. Students should possess a simple understanding of balance to ensure stability and foundational experience building simple crafts.

Craft Stick Flyers

Lesson Overview

This activity introduces young learners to the world of manufacturing through a simple, creative airplane building activity. Students will assemble their own wooden airplanes using clothespins, craft sticks, and hot glue, mimicking the way real products are built from individual parts on a production line.

This lesson reinforces early engineering skills, follows a clear sequence of assembly steps, and encourages creativity through decorating and customizing their flyers. While building, students learn the idea that every product is made from parts, and assembling those parts in the correct order is an important skill in manufacturing.

Vocabulary

Body: The main part of the airplane that everything else attaches to

Wings: The flat parts on the side of an airplane that help it glide through the air

Tail: The small flat piece at the back of a plane that helps keep it steady

Assembly: Putting parts together in the right order to make something new



Figure 1: An F-16 fighter jet uses advanced materials and engineering to stay strong, lightweight, and fast during flight



Figure 2: A commercial airplane uses lightweight, strong materials to carry passengers safely and efficiently through the air.

Craft Stick Flyers

The Foundations of Making

Have you ever wondered how things are made? Every toy, every chair, every car, and every airplane starts as a bunch of pieces. Makers and builders put those pieces together, one step at a time, until the whole thing is finished.

Today, you get to be a maker, too!

In today's activity, we will be making our own Craft Stick Flyer. Just like real builders, you'll use a few different parts for the plane's body, wings, and tail, and you'll put them together in order. When pieces come together to make something new, we call that assembly.

Builders in factories do this every day. They follow steps, check their work, and make sure the parts they use fit just right. If something looks loose, or crooked, they fix it so that the final product is strong and ready to use.

As you build your flyer, you'll be practicing the skills that builders use every day, and as you complete this activity, you'll have made a real product by yourself, just like a builder or an engineer.

Materials

Materials Supplied in Kit

Per Student

- 2 jumbo craft sticks
- 1 standard craft stick
- 1 wooden clothespin

Teacher Use

- 1 hot glue gun
- 10 hot glue sticks

Materials Supplied by Teacher

- Markers (for decorating aircraft)



Craft Stick Flyers

Activity Directions

Step 1: Material Preparation

- Pre-heat hot glue gun at a “teacher station” away from students.
- Distribute 2 jumbo craft sticks, 1 standard craft stick, and 1 wooden clothespin to each student.
- Distribute markers or your preferred coloring medium.

Step 2: Decorate each plane part

- Encourage the students to decorate their craft sticks and clothespin. Students will want to color in both sides of their craft sticks, and all sides of their clothespin for the best effect.
- Remind students to write their name on the bottom side of their clothespin to avoid future mix-ups.

Step 3: Assembly

- Call a small group of students to line up at the hot glue station
- Take the student’s clothespin (this will be the body of the plane).
- Add two tiny dots of hot glue on the top:
 - One near the clamp end (front)
 - One about halfway down the clothespin (toward the back)
- Have the student place:
 - A jumbo craft stick across the glue dot at the front (main wings)
 - A regular craft stick across the back dot (tail)
- Flip the plane over and add one small dot of glue under the front wings.
- Attach the second jumbo craft stick directly under the first to complete the wing pair.



Craft Stick Flyers

Discussion Prompts or Reflection

- Can you show me the body of your plane?
- What job/function do you think this piece does? (point to any part of the plane)
- What do you think would happen if your plane's wings were uneven?
- What was the trickiest part of building your flyer?

Variations and Enrichment

- Encourage students to design their plane before building, then compare their finished product to their original plan.
- If time is short, encourage students to make a monoplane instead of a bi-plane.

Foundation Exploration

- **Airplane builders (aerospace engineers)** use some of the same steps in designing, planning, and building planes every day.
- **Toy makers** use the design and assembly process to build toys from lots of small pieces. They make sure everything fits together safely before the product is ready for market.
- **Manufacturing technicians** help make things people use every day, like bikes, tools, backpacks, and even school supplies. They follow steps in a sequential order to ensure that each product is put together correctly.