



MANUFACTURING DAY BY TEXTRON AVIATION

Design. Build. Fly.



Beechcraft

BY TEXTRON AVIATION

HANG OUT WITH US



Tag us with your creations
@TextronAviation



Tours

We offer tours to classes and educational groups at all our manufacturing and service facilities. Touring experiences are tailored to the group's needs and can be virtual or in-person.



Shadowing

Students and educators can shadow our employees based on their area of interest. Virtual and in-person offered.



High School Internships

We offer Kansas-based internships for local high school students to gain hands-on experience in the aviation industry, including Manufacturing, Marketing, Human Resources, Flight Operations, Engineering, Finance, IT, Maintenance, and more.

If you are interested in learning more, please contact Caroline Nichols, Textron Aviation K-12 Program Manager, at cnichols05@txtav.com.



Happy National Manufacturing Day!

This Manufacturing Day in a Box kit is developed for you to experience the many exciting, challenging and rewarding opportunities available to you in manufacturing.

You are among the innovators, problem solvers and leaders of the next generation, and I hope you'll consider exploring all the wonderful possibilities a career in manufacturing can provide.

Ron Draper
President & CEO
Textron Aviation



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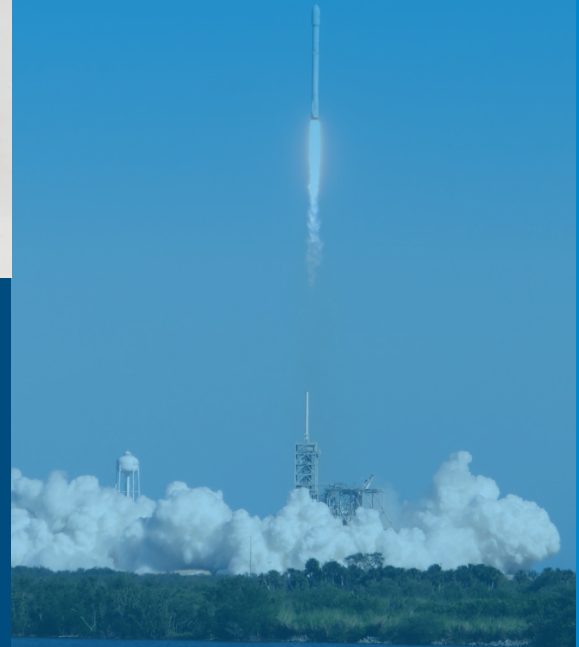


“

Textron believes in me, and they don't just believe in me; they believe in all their interns. You could work at a lot of places, but you will not, ever, get the level of respect that you receive right here at Textron Aviation.”

Chris, Aircraft Sales Representative and former intern

FOAM ROCKET



Have you ever been fascinated with the rockets launched in space? In this gravity defying activity, you will learn about rocket stability and trajectory as you manufacture your very own foam rocket. Read more to learn how to get started.

Materials

15-centimeter-long piece of polyethylene foam pipe insulation (1/2-inch size pipe)

Rubber band – size 64

Cardboard

3 Zip ties

Scissors

Ruler

String – 55 centimeters

Instructions

1. Grab the foam pipe and cut along the pre-cut edge for 5 centimeters. Then make three additional cuts at a spacing of 90 degrees around the circumference. This will result in a flared bottom of your rocket which will hold the fins later on.
2. Take a piece of 55-centimeter-long string and tie a tight loop. Next, attach the string to a rubber band using a zip tie. Run the zip tie through both the rubber band and looped string and tighten. Trim off the excess zip tie.
3. Drop the string inside the rocket towards the flared end. The rubber band should be partially outside of the rocket with the newly connected zip tie inside.
4. Attach a zip tie around the nose of the rocket and pull tight. The zip tie should be placed in front of the previous zip tie inside of the rocket. Cut off the excess zip tie on the nose.
5. Now it is time to make the fins. Grab a piece of cardstock and cut the paper into a 8.5 cm x 8.5 cm square. Now, cut the square diagonally which will result in two triangles. Grab the first triangle and draw a line from the middle to the top. Next, grab the second triangle and draw a line from the middle to the bottom. Nest the triangles together by inserting the second triangle into the first.
6. Grab the foam piece of the rocket and pull the string to the side to ensure it does not get in the way. Now insert the fins into the slits in the foam that were made earlier. Grab the last zip tie and place around the foam and under the fins. Pull tight and cut off the excess zip tie.

Launching the rocket

7. Grab the ruler and place the rubber band in the nose of the rocket on the ruler.
8. Hold the ruler tightly, and pull the rocket back using the string. Ready... Set... Launch!
9. Use the ruler to measure how far the rocket launched. Practice holding the ruler at different angles to see how far the rocket can go!

NEED
HELP?



POPSICLE STICK CATAPULT

Have you ever heard of a simple machine? Simple machines are mechanical devices that change the direction of the magnitude of a force. These machines are used to make work easier by helping move objects across the desired distance. You will make your very own simple machine in the form of a catapult. Read more below to learn how to get started!

Building the Catapult

1. First, you will need to build the platform. Grab seven popsicle sticks and stack them on top of one another. Secure the popsicle sticks attaching a rubber band on both ends of the stack.
2. Second, grab two additional sticks and tie a rubber band on one of the ends. These will be the launching sticks. Place the platform previously made horizontally between the two sticks. Tie a rubber band in a cross fashion joining the two pieces together.
3. Third, attach the plastic spoon to the launching stick with a rubber band. Now your catapult is complete!

Launching the Catapult

1. Place a marshmallow on the spoon.
2. Pull back on the spoon and release to see the marshmallow launch!
3. Experiment with building a different design to see how far you can get the marshmallows to launch!

Materials

Popsicle sticks

Rubber bands

Plastic spoon

Marshmallows

NEED
IDEAS?



PAPER ROLLERCOASTER

Have you ever been curious about the magic that allows for a rollercoaster to operate? In this thrilling STEM activity, you will get to learn about the physics behind building these exciting amusement park rides. You will become the architect and designer as you manufacture your very own rollercoaster. Read more below to learn how to get started.

Instructions

1. Prior to building, plan your design for the track on a piece of paper. Establish how many pieces you will be needing to support your rollercoaster. Add a design to your rollercoaster using the markers provided.
2. Cut along the solid lines of the templates to collect your rollercoaster segments. Next, fold along the dotted lines to acquire desired shape. Use tape to hold the pieces in place.
3. Deconstruct the box provided to use as the rollercoaster base. Next, begin taping the supporting columns to the base.
4. Next, tape the track segments together end-to-end to connect them according to your rollercoaster design.
5. After assembly, place the marble at the top of the rollercoaster and let it go. Watch to see what happens.
6. Did the marble make it to the end of the track? If yes, try adding more pieces to elaborate your design. If no, try to figure out why. Was there a certain spot that the marble got stuck in? Was there enough momentum for the marble to make it through the loops and curves? Try to adjust some of the pieces to have the marble make it to the end!

Materials

Rollercoaster template

Tape

Ruler

Pencil

Markers to design your rollercoaster

Corrugated cardboard
(use your Textron Aviation box)

Marble

WANT MORE OPTIONS?



