

World Space Week 2026

Theme : Rocket Revolution

STRAW ROCKET LAUNCH

Build it!
Blow it!
Fly High!

Design,
Experiment,
Launch
and Learn!



STRAW ROCKET LAUNCH

CHALLENGE

Design, build, and launch a custom paper rocket powered entirely by your breath! Can you construct an airtight rocket tube and launch it high into the sky or land it right on your target?

MATERIALS NEEDED

You will need:

- **Printed Rocket Template:** Using the provided sheet (or cut-outs from construction paper)
- **Wider Straw / Plastic Pipette:** To serve as the sealed body sleeve on the back of the rocket
- **Narrower Drinking Straw:** To act as the launcher straw
- **Scissors:** Child-safe safety scissors for cutting templates
- **Tape or Glue:** To seal the top of the wide straw/sleeve airtight and secure it
- **Coloring Supplies:** Markers, crayons, or colored pencils to decorate your rocket

Keep the rocket **lightweight**. Heavy decorations can reduce its flight height.

STEP-BY-STEP GUIDE

Step 1

Color & Cut Out Your Rocket

Choose a rocket design from the provided template sheet. Color and decorate it bright and bold using markers, crayons, or colored pencils. Once decorated, carefully use your scissors to cut around the outer rocket outline.

Step 2

Prepare the Airtight Rocket Sleeve

- If using a plastic pipette: Cut off the bulb at the bottom end, keeping the hollow cylinder tube.
- If using a wider drinking straw: Cut a length of the straw (approx. 2 to 3 inches). Fold the top end over and tape it down completely shut.

CRITICAL REQUIREMENT: The top of this sleeve **MUST** be 100% airtight so no air escapes when launched!

Step 3

Attach the Sleeve to Your Rocket

Place your cut-out paper rocket face down. Center your sealed plastic sleeve or wide straw vertically on the back side of the rocket. Secure it firmly using clear tape or glue dots.

Step 4

Load & Launch!

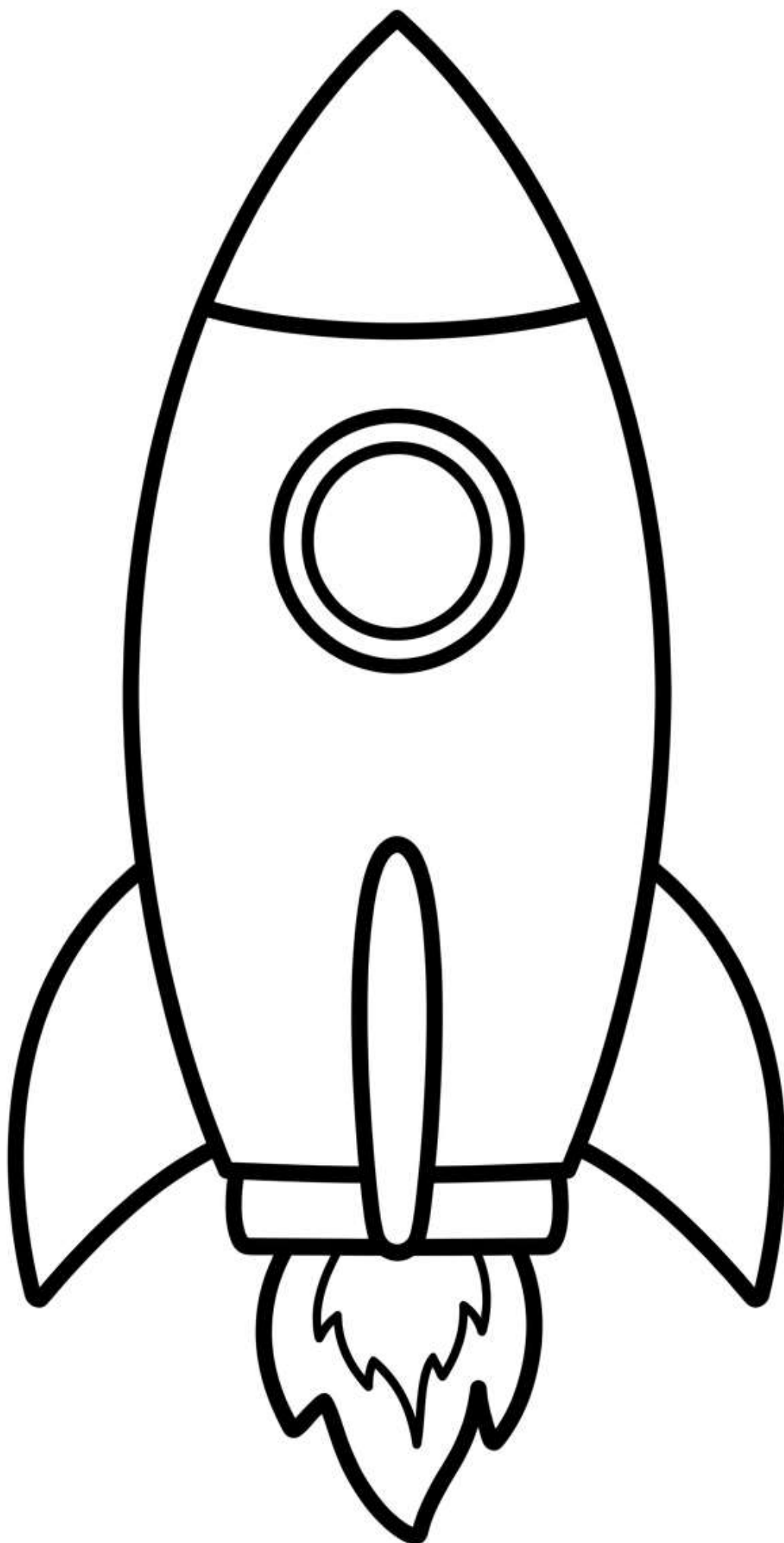
Insert the narrower drinking straw into the open bottom of the rocket sleeve. Hold the launcher straw, aim high into a safe, open direction, take a deep breath, and blow hard into the straw!

STEM FLIGHT EXPLORATION & EXPERIMENTS

- **Angle Test:** Try launching your rocket straight up (90°), at a slight angle (45°), and flat (0°). Which angle helps your rocket travel the farthest distance?
- **Puff Strength:** Compare a gentle blow to a sudden, strong burst of air. How does air pressure affect the launch height?
- **Custom Fins:** Add paper fins or extra tape to the sides. Does adding weight/fins make the flight straighter or cause it to tumble?

SAFETY RULES

- Never aim or launch rockets directly at people, pets, or faces.
- Always launch in clear, open spaces outdoors or in large indoor areas.
- Keep drinking straws hygienic and do not share mouthpieces.

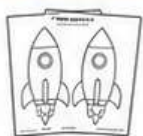


STRAW ROCKET BUILD & LAUNCH CHALLENGE

MAKE • TEST • LAUNCH!

Design your rocket on paper, add a pipette sleeve, and blow hard to watch your straw rocket soar!

MATERIALS NEEDED



Free Rocket Template (2x)



Markers / Crayons



Scissors



Tape or Glue Dots



Plastic Pipettes (wider, 2x)



Launcher Straw (narrower, 1x)

HOW TO MAKE YOUR ROCKET



Color your rockets using markers or crayons as you like.



Carefully cut out your rocket along the outlines.



Cut the pipette bulb off and tape the sleeve securely to the back of the rocket.

HOW TO LAUNCH YOUR ROCKET



Slide your narrower launcher straw into the wide pipette sleeve.



Aim your straw rocket in a safe direction away from others.



Take a deep breath and blow firmly into the straw.

TIPS FOR BETTER FLIGHTS

- ✓ Use light weight decorations.
- ✓ Keep the rocket body light.
- ✓ Make sure the pipette sleeve is securely taped.
- ✓ Blow hard and fast for maximum thrust.
- ✓ Experiment with fin size and shape for best results.

SAFETY REMINDERS

- ⚠ Launch in a clear area.
- ⚠ Do not aim at people or face.
- ⚠ Do not put the straw in your mouth beyond the end.
- ⚠ Do not reuse damaged pipettes or straws.
- ⚠ Keep the area clean.

STRAW ROCKET CHAMPION!



Straw rocket champion!

GUIDELINES

STRAW ROCKET BUILD & LAUNCH CHALLENGE

1. CHALLENGE

Build a straw rocket and launch it the farthest!



2. MATERIAL NEEDED

- Free Rocket Templates (2x)
- Markers / Crayons
- Scissors
- Tape or Glue Dots
- Plastic Pipettes (wider, 2x)
- Launcher Straw (narrower, 1x)

3. STEP-BY-STEP GUIDE

1. DESIGN

Color your rocket using markers or crayons.

2. CUT

Cut out the rocket along the outlines.

3. ASSEMBLE

Cut the pipette bulb off and tape the sleeve to the back of the rocket.

4. LAUNCH SETUP

Insert the narrower launcher straw into the wide pipette sleeve.

5. LAUNCH

Take a deep breath and blow firmly into the straw.

6. MEASURE

Measure the distance travelled and try again!

4. SCIENCE & FLIGHT

Your rocket flies because of air pressure (thrust) created by your breath.

You can experiment with:

- Fin size and shape
- Nose cone shape
- Body length
- Decoration weight

5. SAFETY

- ⊘ No people/pets
- ⊘ Outdoor/Open spaces
- ⊘ Clean straws

BE A YOUNG SPACE ENGINEER!

Experiment, improve and try again. Innovation takes you higher!

