South Carolina's Coalition for Mathematics & Science

SCCMS

Achievement by Design

South Carolina STEM Education Month

DUKE ENERGY SCIENCE NIGHT

2023-2024 Program
Webinar #3 – Kit & Activities Overview
February 27, 2024

INTRODUCTIONS

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South Carolina STEM Education Month

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PARTNERSHIPS

Special Thanks to...

Tom Peters – SCCMS - Executive Director

Amanda Dow - Duke Energy Foundation – Stakeholder Manager

Erik MacIntosh– NCSciFest – Director

Kim Moore – NCSciFest – K-12 Program Assistant

SC Science Night is sponsored by DUKE ENERGY®

CREATED BY NC SCIFEST

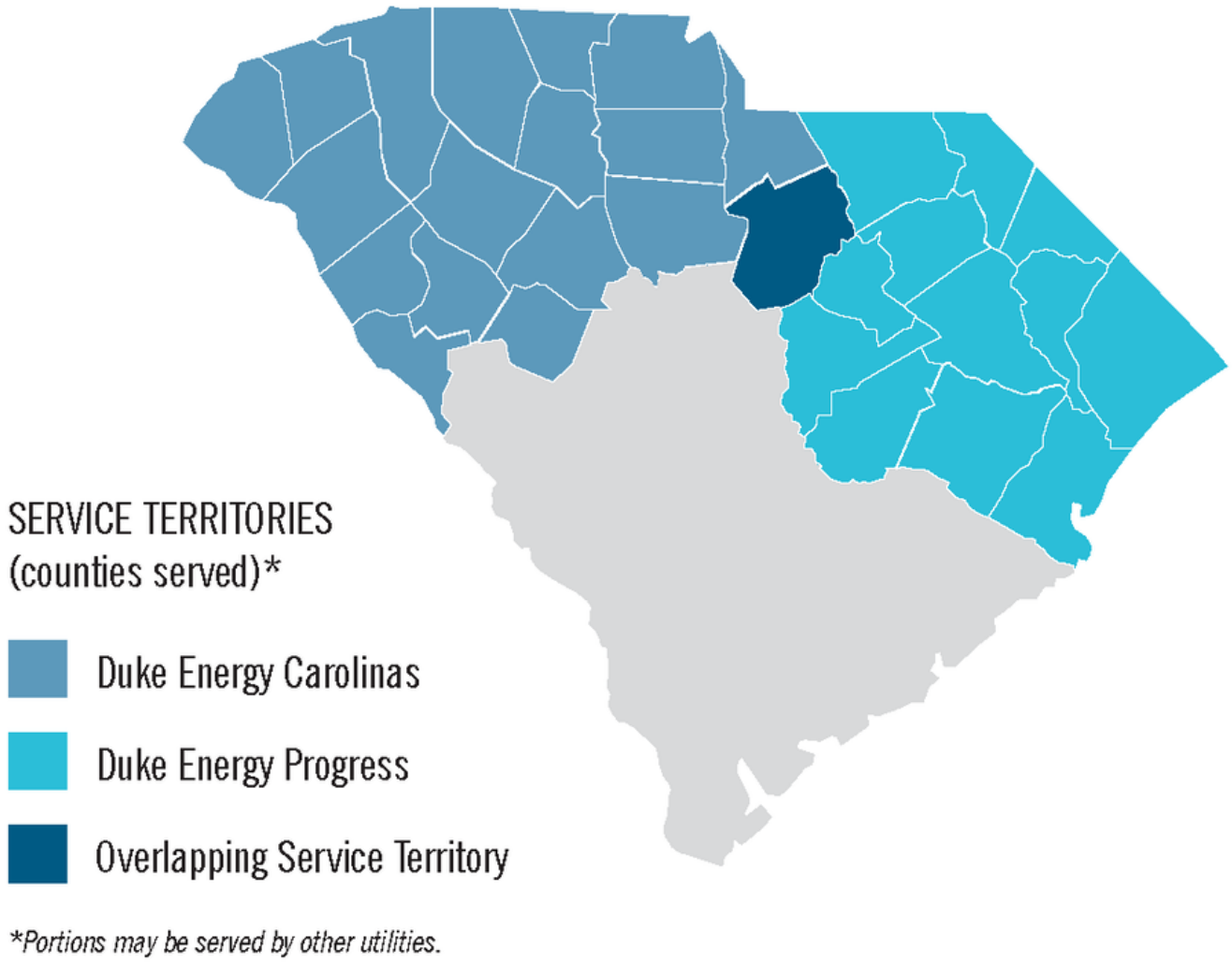
PROUDLY PRODUCED BY MOREHEAD PLANETARIUM+ SCIENCE CENTER

ADAPTED IN PARTNERSHIP WITH SOUTH CAROLINA'S COALITION FOR MATHEMATICS & SCIENCE SCCMS – Achievement by Design –

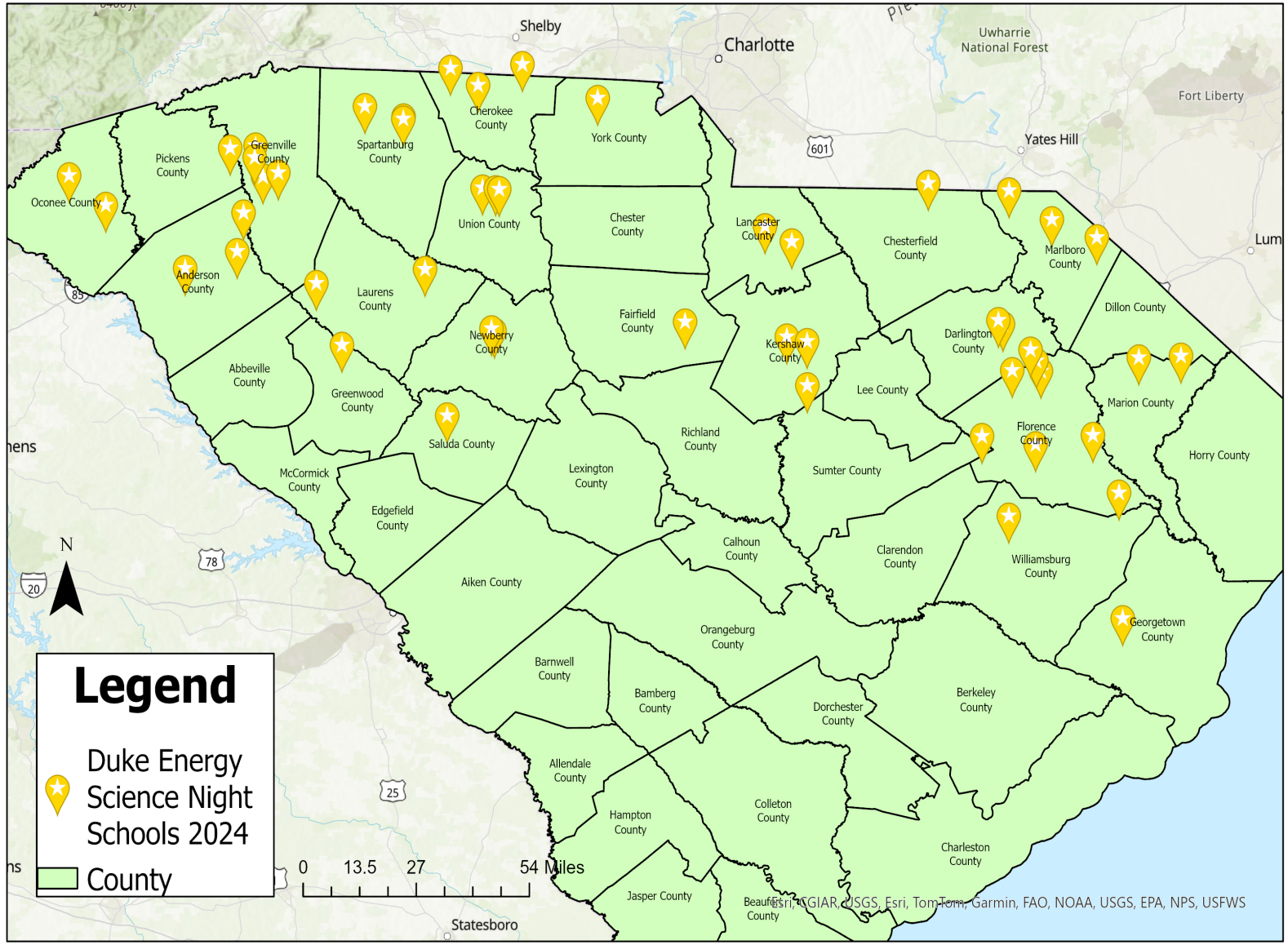
ABOUT SCCMS

- South Carolina's Coalition for Mathematics & Science
- Supporting STEM Education in South Carolina
- www.sccoalition.org

Duke Energy Service Area in South Carolina



2024 Duke Energy Science Nights In 50 SC Schools



Duke Energy Science Night Participating Schools 2024

SC STEM EDUCATION MONTH

- March 14 – April 14, 2023 (starts on Pi Day!)
- Theme – Opportunity in the EcosySTEM
- Inviting students, educators, business / industry and government to celebrate STEM education.
- STEM Day at the Capitol – April 10, 2024

www.scstemmonth.org

#SCSTEMMonth

#SCEcosySTEM

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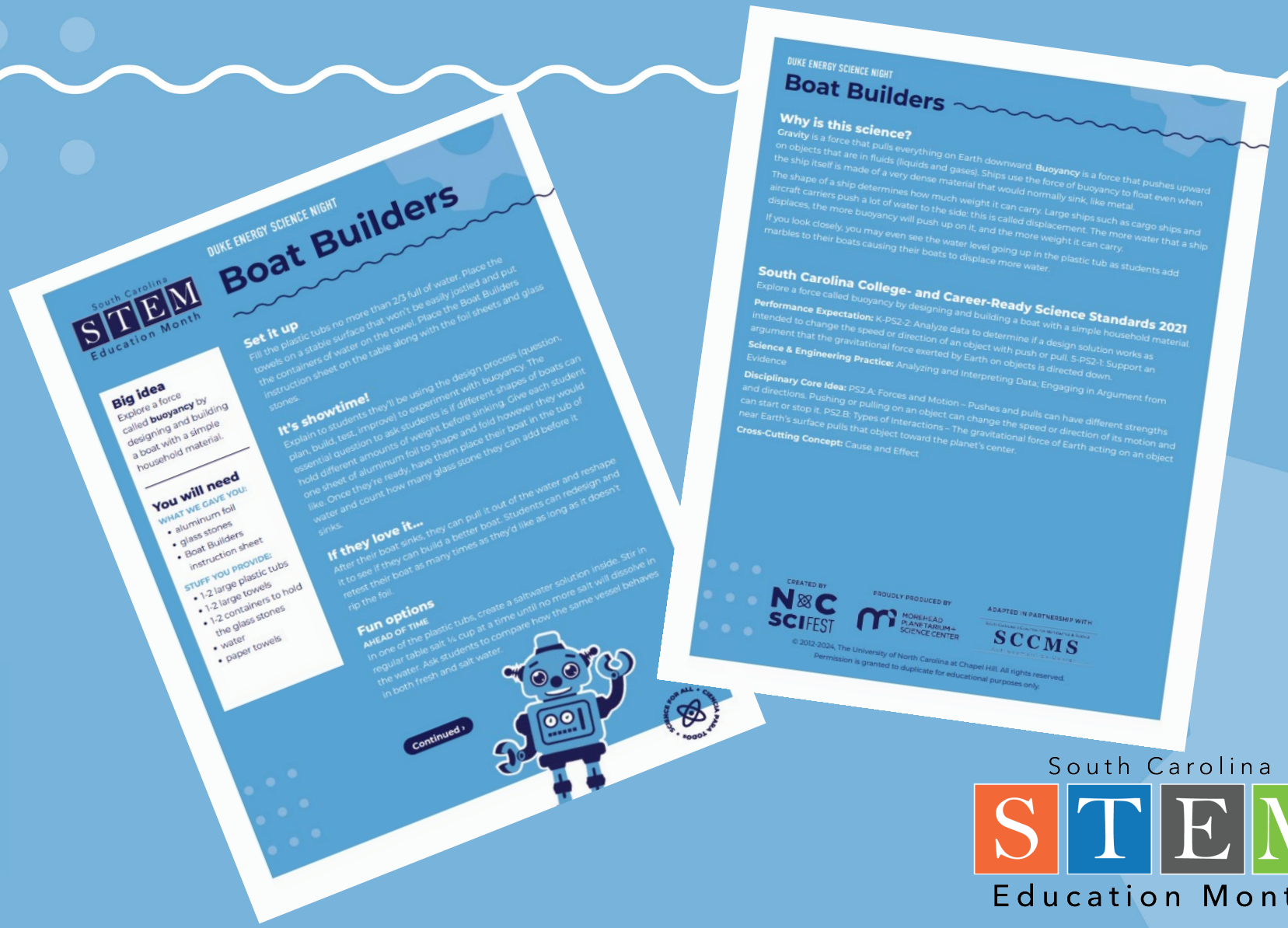
ACTIVITY GUIDES & INSTRUCTION SHEETS



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2024 ACTIVITIES

Activity	Concept	Activity Details
Boat Builders	Buoyancy	Design and build a boat with simple materials.
Capillary Flowers	Botany	Explore capillary action while making a colorful paper flower.
Fingerprints	Life Science	Explore the 3 main fingerprint patterns.
Light It Up	Conductivity	Explore electrical circuits through transfer of energy.
Moon Craters	Earth, Moon, & Sun	Explore what causes craters in the moon.
Paper Flying Machines	Forces & Motion	Build different flying machines to explore forces of flight.
Solar Eclipse Art	Earth, Moon, & Sun	Learn about solar eclipses while making a work of art.
Sound Sandwich	Sound	Discover why we can hear and sometimes feel sound.
Stomp Rockets	Forces & Motion	Build a rocket and blast it into the air.
UV Bracelets	Earth, Moon, & Sun	Make a bracelets using special beads to learn about UV light.

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2024 Duke Energy Science Night

NCSciFest

10 videos 24 views Updated 3 days ago

Play all Shuffle

Funding from the Duke Energy Foundation allows NC Science Festival staff to produce this program for elementary schools across the state. The Duke Energy Science Night program is designed to help schools host a fun science event for their students and families with the use of a resource kit that includes hands-on activities, a planning guide, activity instructions, materials for up to 200 participants, and the support of NCSciFest staff.

1 

Moon Craters - Duke Energy Science Night Activity

NCSciFest • 4 views • 3 days ago

2 

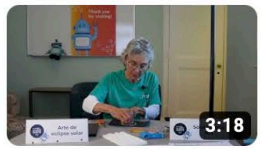
Boat Builders - Duke Energy Science Night Activity

NCSciFest • 1 view • 3 days ago

3 

Fingerprints - Duke Energy Science Night Activity

NCSciFest • 1 view • 3 days ago

4 

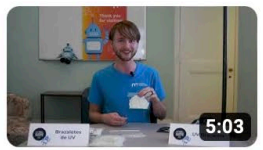
Solar Eclipse Art - Duke Energy Science Night Activity

NCSciFest • 4 views • 3 days ago

5 

Capillary Flowers - Duke Energy Science Night Activity

NCSciFest • 3 views • 3 days ago

6 

UV Bracelets - Duke Energy Science Night Activity

NCSciFest • 2 views • 3 days ago

7 

Sound Sandwiches - Duke Energy Science Night Activity

NCSciFest • 4 views • 3 days ago

BOAT BUILDERS

- **Requires items not included in kit:**
  - Large tubs of water, towels to catch spills, small plastic containers.

- **Additional Idea:**
  - How many stones does it take to sink your boat?

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CAPILLARY FLOWERS

- **Requires items not included in your kit:**
  - Pitcher of water to refill cups, paper towels for easy clean-up.
- **Setup tip:**
  - 3 tables/stations: 1 for conducting the experiment, 1 for coffee filters to dry, 1 for making flowers.

- **Additional Idea:**
  - Make a real capillary action flower the day before your event.

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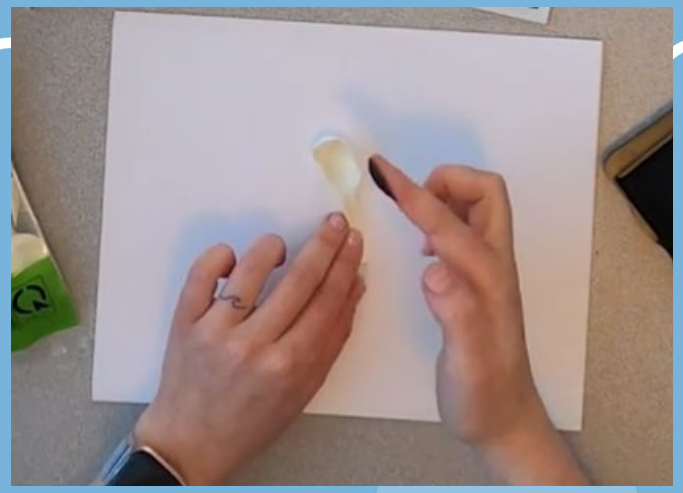
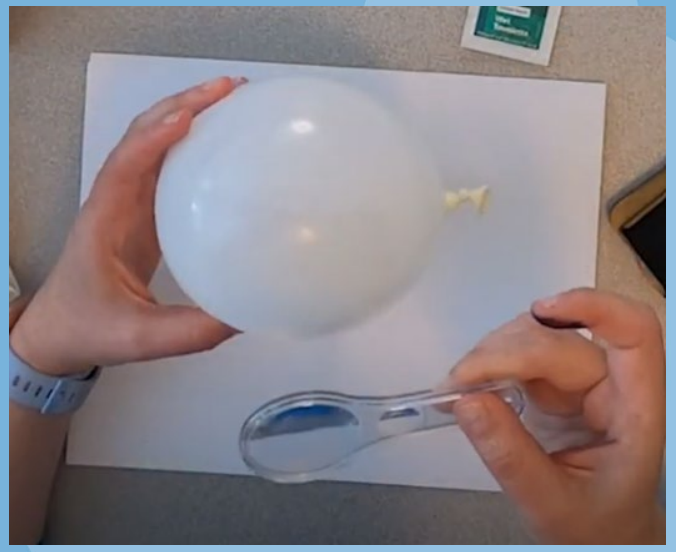
FINGERPRINTS

- **Requires items not included in your kit:**
  - Printer paper
- **Set up tips:**
  - Keep a trashcan near by.
- **Troubleshooting:**
  - The more the balloon is blown up, the more the ink spreads out making it more difficult to see the fingerprint.





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LIGHT IT UP

- **Additional Ideas**
  - Have a group stand in a circle holding hands. The person on one end of the circle touches a metal piece while the person on the other end of the circle touches the other metal piece to close the circuit.

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MOON CRATERS

- **Troubleshooting:**
  - Remember to remove plastic sheet that blocks the battery.
- **Additional Recommendations:**
  - Drop different sized and shaped rocks from different heights or angles to see how it impacts the craters made.
  - Using the flashlight – hold at an angle to represent a half moon to help see differences in craters made.

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PAPER FLYING MACHINES

- **Setup tips:**
  - Use masking tape to make a “runway”.
  - Mark distance measurements to participants can see how far their flying machine travels.

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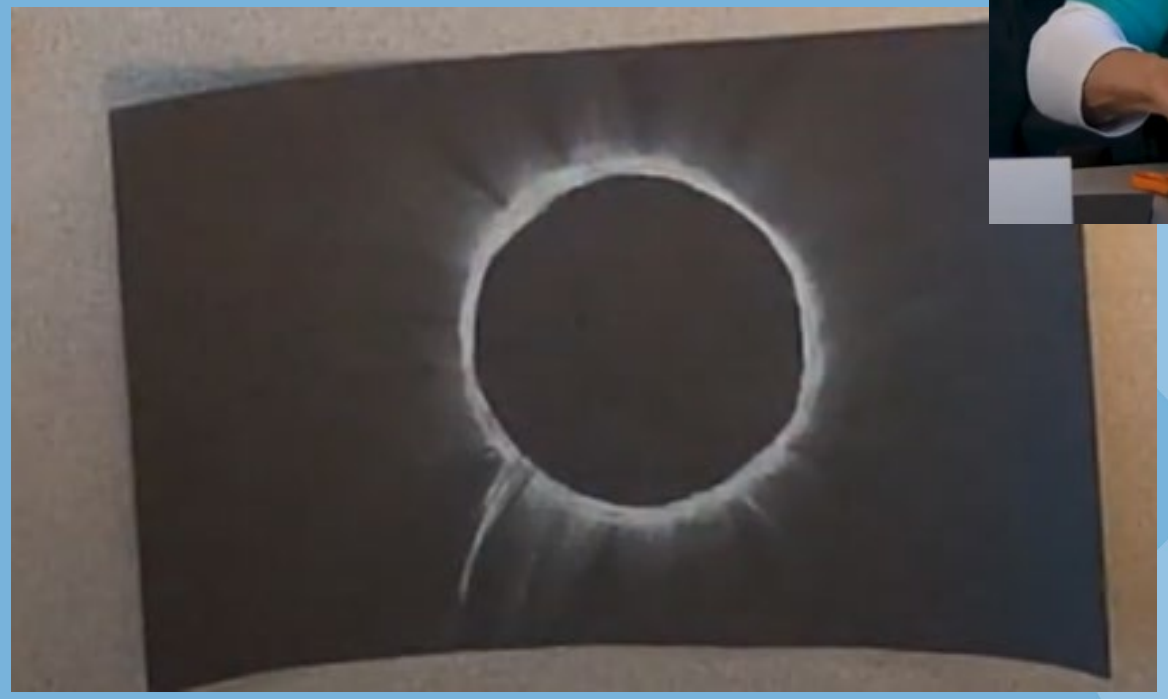
SOLAR ECLIPSE ART

- **Requires items not included in your kit:**
  - Pencils, scissors, tissues are recommended for easy cleanup.



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SOUND SANDWICH

- **Troubleshooting:**
  - Make sure larger rubber band is only wrapped around one of the craft sticks.
  - Make sure small rubber bands are wrapped tightly on each end – younger participants will need help with this.
  - Make sure the participant is blowing air through the craft sticks and not through the straws.
- **Additional Recommendations:**
  - Encourage participants to see if they can make different pitches by adjusting their sound sandwich.

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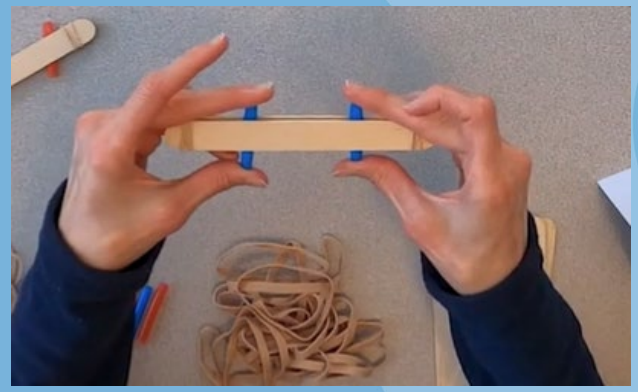
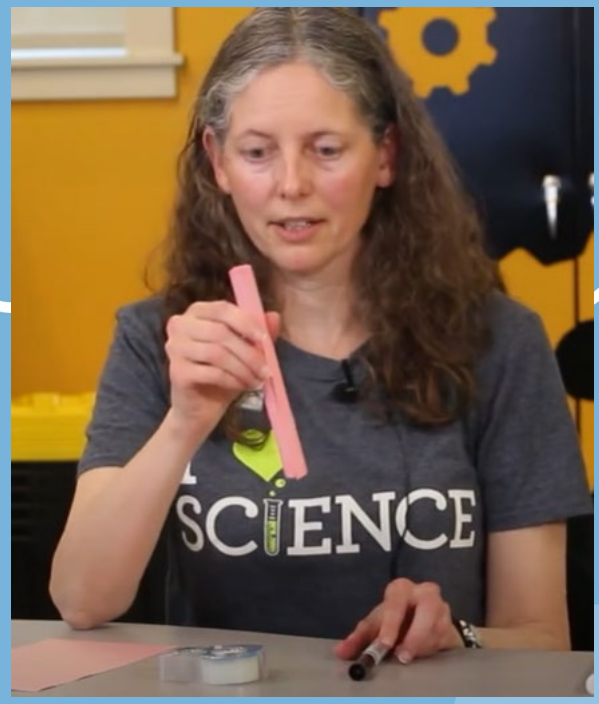
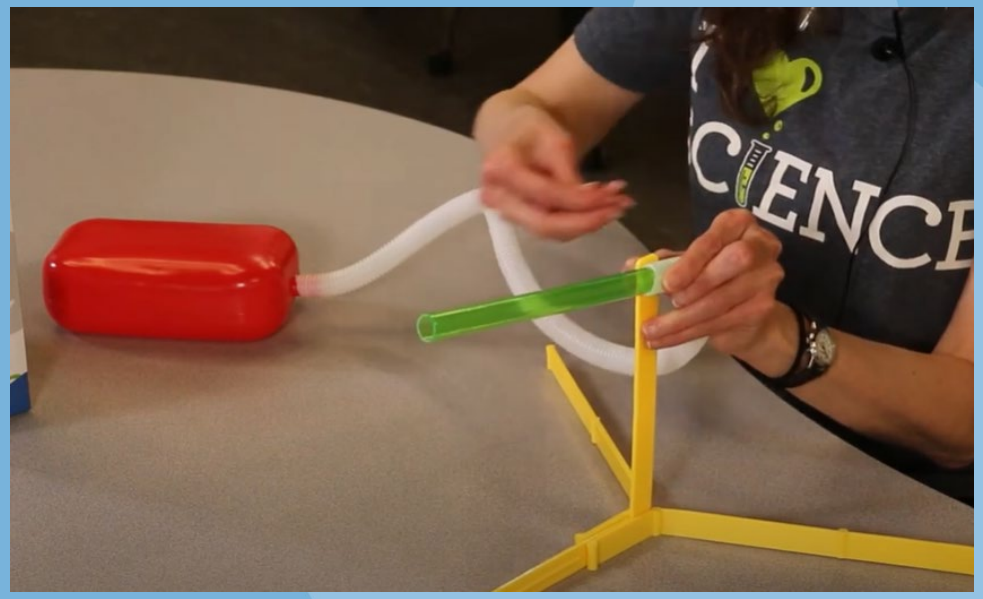


STOMP ROCKETS



- **Set up Tips:**
  - Outside or in a large indoor space with high ceilings (gymnasium).
  - Follow along with video to build a model and assemble the launcher.
- **Additional Recommendations:**
  - Use a marker to help make the body of the rocket the right size.
  - Adult should be staffing the launcher at all times.



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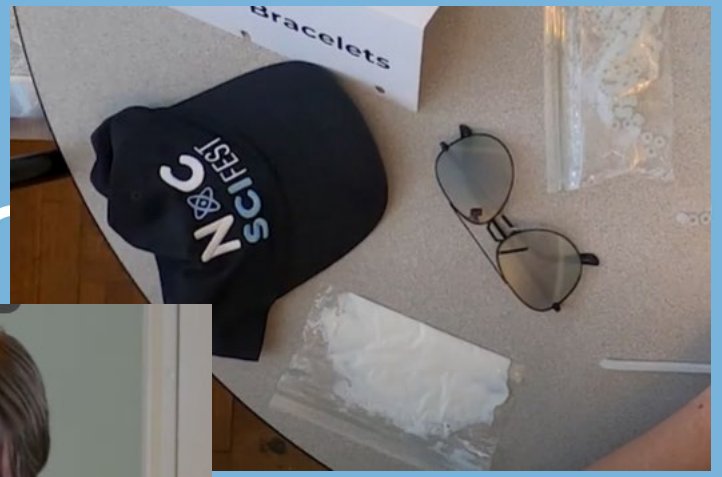
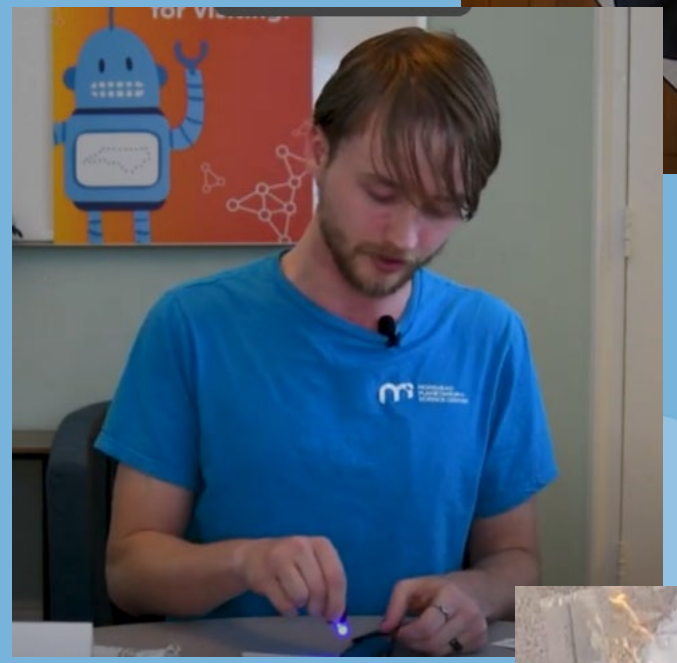
UV BRACELETS

- **Requires items not included in your kit:**
  - Sunglasses, hat, sunscreen, etc.
- **Additional Recommendations:**
  - If you use sunscreen – keep in a plastic baggie to reduce messes.





- **Safety Note:**
  - Beads are a choking hazard for little ones.
  - Do not look directly into UV light.

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TIMELINE

- **Feb 27, 2024: Webinar - Kit and Activity Overview**
- **Mar - Apr 2024: DESN Events! Yay!**
- **Apr 25, 2024: Evaluation and feedback due to SCCMS**
- **May 2, 2024: Webinar - Program debrief and feedback**

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Questions?

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