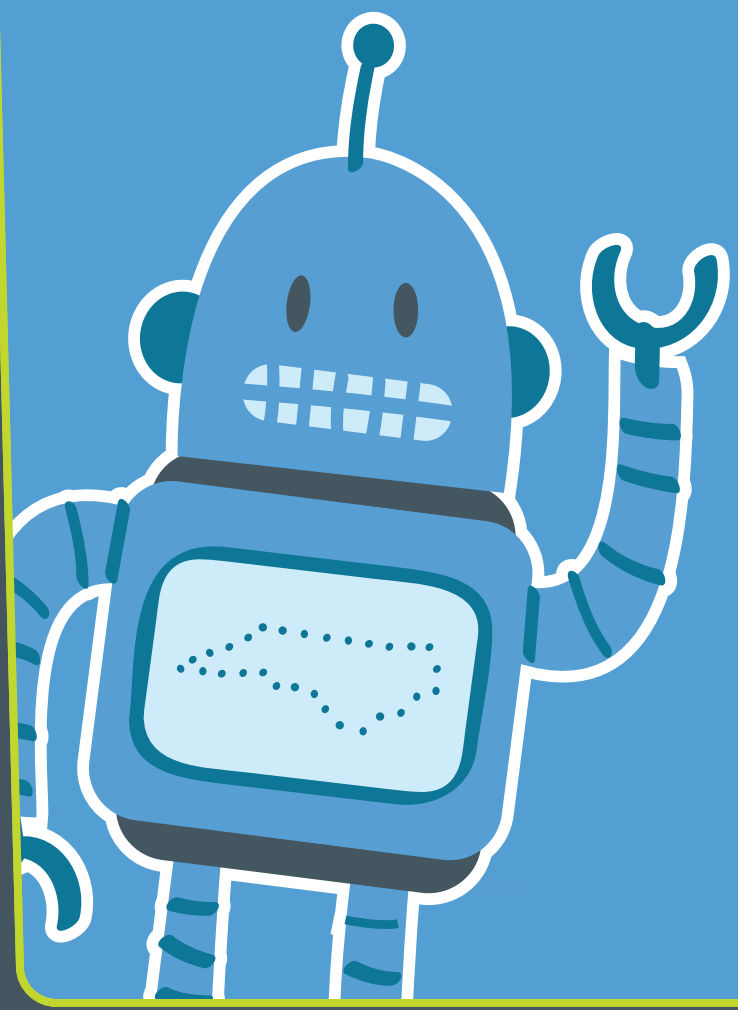
PLANNING GUIDE

SCIENCE FESTIVAL

Presented by THE BIOGEN FOUNDATION

Duke Energy SCIENCE NIGHT



Duke Energy
SCIENCE NIGHT

Funding for the North Carolina Science Festival's Duke Energy Science Night initiative for elementary schools is provided by the Duke Energy Foundation, which seeks to power vibrant communities in their service region through the support of education programs and initiatives that emphasize science, technology, engineering and math (STEM). The Duke Energy Foundation invests in high-performing, sustainable programs and initiatives that help build a diverse workforce of the future, including those that create greater access to and participation in STEM-related informal and out-of-school educational opportunities.

WELCOME LETTER

Greetings from the North Carolina Science Festival!

Welcome to the team! By hosting a Duke Energy Science Night, you are joining the North Carolina Science Festival in celebrating and showcasing science across the state. We are delighted to have your participation, and we are thrilled to see so many teachers deeply committed to excellent science education. With your help, we will be able to reach thousands of students and their families, from the mountains to the coast.

The goal of the Duke Energy Science Night program is to generate enthusiasm among students and families for science and technology by giving them a chance to explore science together. The activities provided cover a wide range of science, technology, engineering and math topics and are designed to be engaging, hands-on and accessible! We want students and parents to enjoy themselves, to see that science is fun, to learn something new and to work together.

Hosting a successful Science Night takes some work, and we know you're busy! We want to make planning your event as easy as possible. This planning guide is designed to take all of the guesswork out of hosting a Science Night. Please make use of the resources in this guide, and don't hesitate to contact us with questions or concerns. We're here to support you!

Thank you for joining the North Carolina Science Festival in our mission to engage public audiences in science and technology while inspiring future generations. We're glad to have you on board!

Sincerely,

Jonathan Frederick
Director
North Carolina Science Festival

Denise Woodward
Statewide Programs Coordinator
North Carolina Science Festival

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IN THE BOX

HERE'S WHAT YOUR BOX CONTAINS. GO AHEAD, DIG IN!

- Planning Guide – the one that's currently in your hands. This guide has all the information you need to plan a successful and fun Duke Energy Science Night.
- Materials for 12 exciting science activities. Each activity has:
  - » A laminated Activity Guide with everything you need to know on one sheet of paper.
  - » A laminated Instruction Sheet (or two) for each activity.
  - » A Table Card with the name of the activity.
  - » A bag (or bags) of the materials you will need for each activity.
  - » Acvitity Guides, Instruction Sheets, Table Cards and bags of materials are all color coded and labelled for easy matching.
- 3-ring binder containing the Activity Guides, Instruction Sheets and Table Cards...oh and this planning guide!
- Promotional materials from the North Carolina Science Festival. Your Science Night is an official Festival event, so be sure to spread the word about all of the other great events that are part of the Festival.

Please inventory your materials as soon as you receive your kit. If anything is missing, let us know immediately so we can send you a replacement.

Contact information is listed on page 21.

If you lose the Planning Guide or any of the other documents, don't worry. You can download and print out replacements from our website. Just go to this address and find what you need:

www.ncsciencefestival.org/k-12-activities password: greatoutdoors

PLANNING

AS YOU BEGIN PLANNING YOUR SCIENCE NIGHT, HERE'S A LIST OF GENERAL THINGS TO CONSIDER.

A detailed planning timeline can also be found on pages 9-11.

DATE

- The Science Festival will take place April 7-23, 2017, but you can host your event anytime in March or April.
- If the date of your event changes, please notify us of that change as soon as possible so we can update our records. Contact information is listed on page 21.

TIME, LENGTH AND SIZE

- 90 minutes to 2 hours is the optimal length of time for a Science Night. For larger crowds, plan for a 2 hour event.
- Most schools have their Science Night sometime between 5 and 8pm on a weeknight. Others opt for a daytime or weekend event. Consult with administration and pick a time that works best for your school community.
- We have provided materials for up to 200 people and parents are encouraged to participate with their children! If you plan for more than 200 students and family members to attend, you will need to prepare by supplying the additional materials.

LOCATION AND LAYOUT

- Lots of different models are used for this. Scheduled rotations (a bell rings every 15 minutes and groups travel to a new activity), one big room (the cafeteria or gym is turned into a big science party), classrooms (each activity gets it's own room), or great outdoors (tables setup outside on the blacktop). Most Science Nights are some combination of locations that works best for your school.
- You will want to include a welcome table to orient families to the event and provide a space to distribute Festival giveaways. Put one or more volunteers at this table in charge of keeping a rough estimate of attendees.

LIBRARY INVOLVEMENT

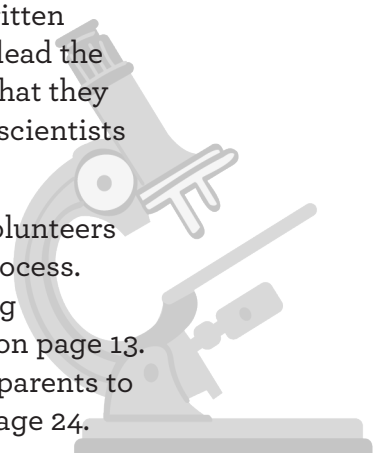
- Consider getting your school Media Specialist/Librarian involved!
  - » Will he/she offer a science themed read aloud as an activity station?
  - » Could the librarian or media and technology team host a How-To workshop on technology or a "tech playground"? Science apps or fun science websites can be available for families to explore.

PUBLICITY

- As soon as you set the date, post it on both your internal staff and external public calendars, and on your school website!
- Visit www.ncsciencefestival.org/k-12-activities to find posters to download and print.
- Communicate clearly with students and parents about the Science Night and when it's happening.
- Often local newspapers will send a reporter to cover your great event! Contact your local media using the press release template available on page 22 of this guide or online at: www.ncsciencefestival.org/k-12-activities.

VOLUNTEERS

- You will need 15-30 volunteers to lead the activities. Volunteers can be teachers, staff, parents or guardians. Consider recruiting local high school students to help with the Science Night, and give them an appropriate level of responsibility.
- Volunteers can work the entire event or in shifts, depending on your needs. Try to schedule enough overlap that no activity will be left without a facilitator during a transition.
- Seek enthusiasm over expertise! All activity guides are written for anyone to effectively lead the activity. Assure parents that they do not need to be rocket scientists in order to help!
- Be sure to reach out to volunteers early in your planning process. More details on recruiting volunteers can be found on page 13. A template letter asking parents to volunteer is located on page 24.



ADDITIONAL MATERIALS

- Some activities need additional materials such as water, paper towels, scissors or a yardstick. We try to keep this to a minimum.
- You will also need to gather some materials such as clean, empty coffee cans or gallon jugs or soda bottles. You can collect these yourself or send home requests to your students' families.
- A complete list of materials you will need to provide is available on page 8. Be sure to consult this list well in advance of your Science Night.
- It's helpful to label things like scissors or yardsticks that get borrowed from a classroom with a small strip of masking tape and the room number/teacher's name. Put a volunteer in charge of returning all these borrowed items.

SET-UP AND CLEAN-UP

- Be sure you have the help you need to set up and clean up the event.
- You will want to have some volunteers arrive early to help with set-up and stay late to help clean up afterwards.
- Set-up will include arranging tables and chairs, providing trash cans for some activities, distributing activity materials to each station and hanging any necessary signs. Prioritize your volunteers as they arrive among these different tasks.
- Your school's custodial staff may be able to help, but check with them early in the planning process, especially if you need tables brought from storage.

FOOD

- Prior hosts have reported increased parent participation when they provided dinner for families before the event begins. This can be as simple as a table full of cheese pizzas or a pot-luck dinner. Local businesses may be willing to donate or discount food for the event in return for positive press, so ask around!
- Selling snacks to fundraise for science materials, equipment or field trips is another fun idea. Check with your school's Parent-Teacher Organization to ask if they'd like to organize this addition.

ACTIVITY NEEDS

HERE'S WHAT EACH ACTIVITY MUST HAVE IN ORDER TO BE SUCCESSFUL.

The number of facilitators is a minimum. If you have more volunteers, great!

#	ACTIVITY	SPACE	PEOPLE	OTHER
1	Garden-in-a-Glove	Table	2 facilitators	
2	Build-a-Bubble	Table	1-2 facilitators	Outdoors works best!
3	Gross Goo	Table	2 facilitators	Prepare for some messy fun!
4	Binary Bangles	Table	2 facilitators	Instruction intensive
5	Sound Sandwiches	Table	2 facilitators	
6	Light the Way	Table	1-2 facilitator	A room that can have some lights turned off
7	Fingerprints	Table	1-2 facilitators	Garbage can needed for trash
8	Rainbows	Table and open floor space	1-2 facilitators	Space needed for drying wet paper
9	Paper flying machines	Table and large open space	1-2 facilitators	Flying space should face away from foot traffic
10	Magnetic Racers	Large, open floor space, table	1 facilitator	Non-carpeted surfaces work best
11	Create-A-Coaster	A wall and large open space, table	1–2 facilitators	Chairs required for activity
12	Neutral Buoyancy	Table	1 faciltator	This activity can get splashy!
N/A	Welcome Table	Table	1-2 volunteers	Place at entrance to your event
			Total: 17-24 volunteers	Lean towards more volunteers than less

MATERIALS

HERE'S THE COMPLETE LIST OF MATERIALS YOU WILL NEED TO COLLECT, PURCHASE OR SOLICIT.

FURNITURE

- 13 tables: 12 for activities, 1 welcome table
- More tables if you provide food
- ~23 chairs for facilitators, welcome table staffers and Activity #11
- Trash and recycling bins

MATERIALS YOU SUPPLY

- water
- paper towels
- copies of the At-Home Garden-in-a-Glove guide
- large mixing container
- scissors
- 2–4 clean, empty 2-liter soda bottles with caps
- 1-cup measuring cup
- wet wipes
- yardstick or tape measure (for 2 different activities)
- garbage bag
- paper
- 2 clean, empty milk jugs or coffee tins

OPTIONAL ITEMS

- supplies for creating bubble wands (hangers, plastic soda rings, funnels, etc.)
- paper & pencils or white boards and dry erase markers
- extra copies of the Binary instruction sheets
- paper
- stopwatches
- magnets
- materials that float or sink
- bulletin board paper and markers if you want to do a Community Mural. See page 18.

PLEASE NOTE

Some of the Fun Options provided for each activity require additional supplies to be purchased that are not listed here. Take the time to read through these and decide which, if any, you want to include in your Science Night. Be sure to add these additional items to your shopping/donations list.

TIMELINE

HERE'S OUR SUGGESTED TIMELINE FOR MAKING SURE YOUR SCIENCE NIGHT IS A SUCCESS!

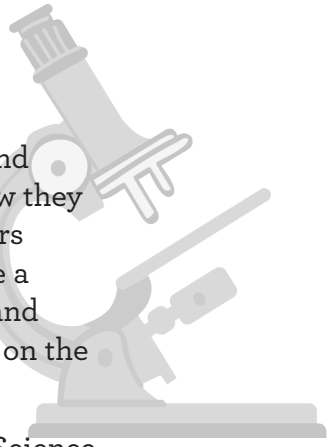
SIX WEEKS

- Read through the Planning Guide and all 12 Activity Guides so you know what to expect.
- Put the Science Night on your school's calendar & website.
- Communicate with your library or media center about the event.
- Submit information to the school newsletter. See template on page 23.
- You will start recieving regular emails from us with tips and advice on how to make your night a success.

FOUR WEEKS

- Notify your PTA organization and ask if they will advertise the event in their newsletter or at meetings.
- Send a letter home with students announcing the event and asking for volunteers. See page 24.
- Check the materials list on page 8. See what you have and what you need. Also, check the "Fun Options" section of each activity guide. You may want to purchase additional supplies to implement these options.
- Extend an invitation to your school district officials.
- Notify your local newspaper. See page 22 for a press release template.

TWO WEEKS



- Go shopping for additional materials.
- Communicate with parent and teacher volunteers about how they will be helping. For volunteers assigned to an activity, make a copy of their activity guide and direct them to the resources on the Festival website.
- Add information about The Science Night to your school website. See template on page 23.
- Make a map of your set-up and plan where everything will go.
- Speak to your custodial staff about helping with set-up and break-down.
- Put out Festival promotional items in your school's main office and hang your Science Night banner.

ONE WEEK

- Remind parents to attend the event. Ask them to bring bags for take-homes. See page 24 for letter template.
- Gather the school supplies for the activities, page 8.
- Have students make Science Night posters in class. Hang them up to advertise.
- Make any copies needed.

MORNING OF EVENT

- Make an announcement about the event.
- Remind students that the Science Night is tonight!
- Hang up any directional signs that visitors might need.

TWO HOURS BEFORE

- Set up tables and chairs.
- Distribute to each table:
  - » Activity guide
  - » Table card
  - » Bag(s) of materials
  - » Additional supplies needed
- Lay out at welcome table:
  - » Festival giveaways
  - » Citizen science handouts

AS VOLUNTEERS ARRIVE

- Direct them to their station.
- Allow them to read activity guide and set up station.
- See if they have any questions and if they feel confident facilitating the activity.

AS PEOPLE ARRIVE

- Welcome them to the Science Night!
- Distribute Science Festival promotional materials.
- Direct families to the activities and encourage them to jump in and get started!
- Keep a count of how many people attend. We'll ask you to report this after your event.

DURING SCIENCE NIGHT

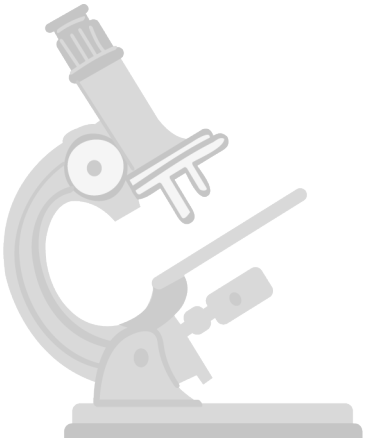
- Keep volunteers supplied with what they need.
- Do crowd control: if you see a large crowd at one activity and no one at another, encourage people to check out the other activity.
- Take photographs! We can't wait to see them! Use #ncscifest to share them on social media.
- Take a moment to pause and take-in all the happy, engaged students around you.

AT END OF EVENT

- Thank everyone for coming to the Science Night.
- Announce that Duke Energy Science Nights are part of the North Carolina Science Festival and encourage people to visit our website to find more events.
- Encourage everyone to "be a citizen scientist!" and pick up a handout.
- Distribute leftover Festival pencils and/or bookmarks to parent and teacher volunteers as a thank-you.

TO CLEAN UP

- Save any leftover materials for future use, everything is yours to keep.
- Return classroom supplies to their usual locations.
- Do a victory lap around your school/pat yourself on the back! You've just completed a massive undertaking that's ensured your families had an authentic, meaningful hands-on science experience.



BY MAY 1

- Complete the post-event survey that will be sent to you. If you do not recieve the survey get in touch with us: see contact information on page 21.

PUBLICITY

YOU'LL WANT TO LET EVERYONE KNOW ABOUT YOUR EVENT. HERE'S HOW TO PUBLICIZE IT.

Here are some things to keep in mind as you publicize your event.

- Help us maintain our consistent messaging by using the correct and complete names for your Duke Energy Science Night and the North Carolina Science Festival.
- You can use our logo on your website to publicize your Science Night, but it can't be modified in any way. Logos in color and b&w available at: www.ncsciencefestival.org/get-involved/host-an-event/resources-for-events/
- Make your description of the event concrete by listing some of the specific activities that families will have the chance to do, or by describing how this event will benefit your school community.
- Emphasize that this event is for students *and* their families! Parents should plan to attend and engage with the activities.
- Let your excitement for the event be contagious! Talk with your students about what activities you're most excited for.

VOLUNTEERS

YOUR SCIENCE NIGHT DEPENDS ON VOLUNTEERS. HERE'S HOW TO FIND, RECRUIT AND MANAGE THEM.

WHO TO RECRUIT

- School Admin, teachers, and staff: recruit your school colleagues six weeks in advance. Could you have 5 minutes at a staff meeting to hype the event?
- Parents: send a letter four weeks in advance
- Local science professionals: seek outside volunteers six weeks in advance

HOW TO RECRUIT

- Assure volunteers that they *do not* need to be science experts to help facilitate a Science Night activity! All the activity guides have been written for a facilitator without a science background.
- Be prepared with general information about the Science Night and exactly what you are asking them to do.
- A template for a letter to parents is included on page 24.
- When someone expresses interest in being a volunteer, get his or her contact information and a firm time commitment.

HOW TO MANAGE

- Keep an organized list of your volunteers' names, contact information and any specific interests or concerns.
- At least two weeks in advance, assign your volunteers to specific duties, and communicate those assignments.
- Provide copies of the activity guides to activity facilitators in advance of the event. Not all of your volunteers will read them, but some will appreciate being prepared. Don't worry about facilitators who don't read ahead: activity guides are designed to be understandable in about 20 minutes.
- Remind your volunteers about the Science Night a week ahead of time and again one to two days in advance.

GET THE WHOLE SCHOOL INVOLVED

- Encourage students to see that science is everywhere by getting the whole school involved.
- Some activities will lend themselves to particular staff members. Sound Sandwich would be extra fun led by the music teacher. Do any staff members help maintain a garden on campus? Give them the Garden-in-a-Glove activity to facilitate.
- Reach out to the staff at large to see who would run an extension activity. Would your art teacher organize a large science mural students could work on during your Science Night (more information about this idea on page 18)? Could the music teacher discuss the science of sound? Encourage as much unique involvement as possible!

HELP THEM SUCCEED

- When volunteers arrive at the Science Night, welcome them! Escort them to their station and give them time to familiarize themselves with the activity. Help them out if they have questions and make sure they are comfortable before the event begins.
- Your level of stress will transfer to the volunteers around you. It's always stressful to organize an event for your community, but even if you're nervous and worried about turn-out or messy activities, show volunteers how excited you are about what the students and their families will get from the event. Your enthusiasm will get them started on the right foot!
- During the event, circulate among the activity tables. Ensure that the volunteers have the materials they need and that everything is going well at their station.
- As the event winds down, let your volunteers know your clean-up procedures. If you need help, be specific about asking for it.
- Thank your volunteers for their help in making your Science Night a success! We've included Festival pencils as a small token of appreciation for them.

ADDITIONAL CONCERNS

THOSE EXTRA THINGS TO THINK (BUT NOT STRESS) ABOUT.

- Some activities get messy, encourage your volunteers to come dressed in expectation of that. Suggest teachers and staff bring a change of clothes and shoes so they can relax and enjoy themselves without worrying about stains on nice work attire.
- Consider having a first aid kit available at the welcome table or a plan in place for accessing the nurse's office.
- Where are the closest broom and mop? Just in case.
- Will any areas of the school be off limits? If so are they clearly marked/ blocked off?
- Is there more than one entrance to your school campus? Inform parents ahead of time about which entrance to use or mark it clearly.

FACILITATION

HERE'S HOW YOU AND YOUR VOLUNTEERS CAN MAKE THESE ACTIVITIES A HUGE SUCCESS.

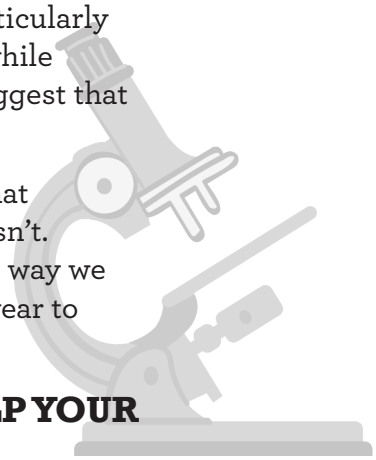
HOW TO READ THE ACTIVITY GUIDES

Each activity guide is divided into sections to make it easy to read and understand.

- Activity Name and Number
  - » Appears on top of front side
  - » Color-coded number matches labels on the materials and packaging
- Big Idea
  - » Sums up what the activity is all about
- You Will Need
  - » Lists the materials we supplied and the ones you provide
- Set It Up
  - » Tells you how to set up the activity station
- It's Showtime
  - » Explains how to easily guide families through the activity
- Fun Options
  - » Ahead of Time: provides options for the teacher to consider
  - » During the Science Night: provides options for the facilitator to consider
- Why is this Science?
  - » Explains how the activity relates to science, technology, engineering or mathematics
  - » Gives a basic explanation of the science going on in the activity
- Take it Back to the Classroom or North Carolina Connection
  - » Take it Back to the Classroom: for teachers, suggests ways to extend this activity into lesson plans for the classroom
  - » North Carolina Connection: for facilitators and teachers, shows how the activity is related to North Carolina's history & culture

SUGGESTIONS FOR FACILITATORS

- Carefully read the entire activity guide, front and back.
- Set up activity and do a practice run or make an example.
- Read "Why is this Science?" section. Even if students aren't interested in hearing this information, it gives you valuable background knowledge.
- When students and their parents approach the activity, be excited to help them try something new!
- Try to let the student set the style of your interaction: some students will be forthcoming and will direct the encounter, while others will need coaxing and encouragement. Be sensitive to different communication styles.
- Ask lots of questions! You want to have a conversation, not deliver a lecture.
- If you have multiple visitors at your station, direct your conversation to include all of them. Be sure each child gets a chance to answer questions and participate.
- If one student seems particularly engaged in the activity while others are struggling, suggest that they work together.
- Keep mental notes on what works well and what doesn't. This feedback guides the way we improve activities from year to year!



HOW YOU CAN HELP YOUR FACILITATORS

- Download copies of the activities and instructions in Spanish and have a printed copy at each station. You can find those on our website at www.ncsciencefestival.org/k-12-activities. This way, all families can take part in the activity, even if your facilitator is not bilingual.
- Circulate during the event. Check that your facilitators have everything they need.
- Do crowd control: if you see a large crowd at one activity and no one at another, encourage people to check out the other activity.
- Take photographs. We look forward to seeing your events on social media! Tag us: #ncscifest

EXTENSIONS

HERE ARE SUGGESTIONS FOR EXTENSIONS DURING THE EVENT, IN YOUR CLASSROOM AND AT HOME.

We encourage you to make the night unique to your school community! Don't be bound to only the activities in the kit; here are some suggestions for how to expand your event!

DURING SCIENCE NIGHT

Community-Created Mural

Hang a large piece of bulletin board paper near the welcome table and set out markers. Encourage students and their families to contribute drawings by seeding the paper with prompts. For instance:

- Draw yourself doing science!
- How do science and technology make your life better?
- What's your favorite invention?

Or use your mural to focus on one theme of science. Ask students to draw animals and plants in an ecosystem, or planets and stars in outer space.

Meet a Scientist

Consider adding a Meet a Scientist booth. Recruit from your local community! Are any of the parents at your school scientists or involved in STEM related fields? Is there a local college or STEM business you could contact that would be willing to visit your school for outreach?

Additional Activities

Feel free to add any additional activities you like! Consider having each grade level present what they're currently learning in science to connect parents to the classroom. There are hundreds of wonderful ideas for science night activities available online. Try one of these websites:

- www.HowToSmile.org: All the Best Science and Math Activities
- www.exploratorium.edu/explore/topics/#top: Things to Make and Do
- www.exploratorium.edu/science_explorer/: Science Explorer

As you look for additional activities, use these guidelines to choose good ones:

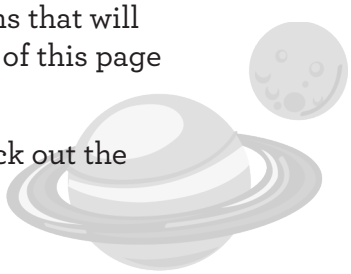
- Will the activity appeal to all genders and ages, including adults?
- Is the activity a good springboard for families to do further exploration at home?
- Will the activity be able to accommodate teams of two or three family members?
- Is the activity quick and hands-on?
- Does the activity use a short list of readily available materials?

IN THE CLASSROOM

- Consider taking on a Citizen Science project as a classroom. See page 26 in the Appendix. These don't need to take up a lot of time and online projects could be done as a brain-break between subjects.
- Explore the resources offered and challenges suggested by various competitions: Science Olympiad, NC FIRST Robotics, Future Cities and Odyssey of the Mind.

AT HOME

- Encourage families to try any experiments they enjoyed again at home! You can follow-up after Science Night with a list of links to hands-on activity resources to keep families engaged and learning together.
- Citizen Science projects rely on ordinary citizens to help scientists collect data. You can contribute to real scientific studies and there are lots of fun, easy-to-join options.
- Page 26 in the appendix describes some Citizen Science options that will work well for families in North Carolina. You can make copies of this page and distribute it.
- Encourage families to visit www.ncsciencefestival.org and check out the calendar to see what events are happening in your area.



ONLINE RESOURCES

- Visit our website, www.ncsciencefestival.org/k-12-activities where we have provided links to additional resources and information regarding the Science Night activities in action.
- Steve Spangler's website, www.stevespanglerscience.com, has lots of great videos of science demonstrations and activities.
- The Exploratorium's website, www.exploratorium.edu, has amazing resources for teachers and parents, including lots of fun activities to try.

EVALUATION

WE NEED YOUR FEEDBACK. HERE'S WHAT WE'RE ASKING YOU TO DO.

WHY

The North Carolina Science Festival is committed to growing and improving each year. To that end, we will be informally evaluating each Science Night, and will use the results to help guide our future planning.

WHAT

After your Science Night, we will ask you to report back your event statistics, including number of participants, as well as feedback on the experience. While we will not ask for surveys from participants, we have both English and Spanish templates; if you would like to use them for your event, contact us. See page 21 for contact information.

WHEN

Please complete your response as soon as possible, and no later than May 1, 2017.

CONTACT

QUESTIONS? CONCERNS? SUGGESTIONS? VISIT THE WEBSITE OR CALL US! WE WANT TO HELP.

WEBSITE

The North Carolina Science Festival website has everything you need.

Visit www.ncsciencefestival.org/k-12-activities to find all of the following:

- Downloadable PDFs of the planning guide, activity guides, instruction sheets and table cards in both English and Spanish
- Downloadable templates for the newspaper press release, school website blurb and letters to parents
- Downloadable poster to promote and advertise your Science Night
- Links to additional resources and information regarding the Science Night activities
- Links to other handy resources

In addition, be sure to check out the Festival calendar to find awesome events in your area: www.ncsciencefestival.org/calendar

CONTACT

If you can't find what you're looking for on the website, give us a shout at ncscifestschools@unc.edu or:

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919-962-3274

Jonathan Frederick
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919-843-8329

APPENDIX

PRESS RELEASE FOR NEWSPAPERS
TEMPLATE IS ALSO AVAILABLE ONLINE

SCHOOLS: PLEASE REPLACE ALL BRACKETED ITEMS
WITH APPROPRIATE INFORMATION ABOUT YOUR SCHOOL EVENT AND
DELIVER THIS NEWS RELEASE TO YOUR HOMETOWN MEDIA OUTLETS

FOR IMMEDIATE RELEASE [date of release]
Contact: [name], [phone]

DUKE ENERGY SCIENCE NIGHT TO BE HELD AT [SCHOOL NAME]

[School Name] will host a Duke Energy Science Night on [date], [time], at [school location]. This is an official event of the 2017 North Carolina Science Festival.

Duke Energy Science Night will feature hands-on activities designed to help children and their families explore science, technology, engineering and mathematics (STEM). This event is for [School Name] students and their families. For more information, contact [school telephone].

[School Name] is one of 150 North Carolina elementary schools selected to host Duke Energy Science Nights in 2017. Support from the Duke Energy Foundation allows the Festival to provide each selected school with all materials needed for the activities. The Duke Energy Foundation seeks to power vibrant communities through investments in high-performing, sustainable initiatives that emphasize STEM, including programs that help create greater access to and participation in STEM-related informal and out-of-school educational opportunities

Duke Energy Science Nights are an educational initiative of the North Carolina Science Festival presented by the Biogen Foundation, with statewide science programming for all ages. Most Festival events are scheduled during two Festival weeks in April — those weeks span April 7–23 this year. Festival events include hands-on activities, science talks, lab tours, nature experiences, exhibits, performances and other events, hosted by many different organizations within North Carolina. Most Festival events are free.

The North Carolina Science Festival is produced by Morehead Planetarium and Science Center (University of North Carolina at Chapel Hill). For more information about the Festival, visit www.ncsciencefestival.org.

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NOTICE FOR SCHOOL WEBSITE, NEWSLETTER, ETC. TEMPLATE IS ALSO AVAILABLE ONLINE

[School Name] is excited to announce our Duke Energy Science Night on [date] at [time]! Join us in exploring science, technology, engineering and mathematics through engaging hands-on activities such as Magnetic Racers, Make-A-Rainbow, and Binary Bangles. We welcome students and families for a night of science and fun! Look for more information sent home with your child or call us at [contact phone number].

Duke Energy Science Nights are an initiative of the North Carolina Science Festival. The North Carolina Science Festival is a two-week celebration of science with events statewide. The 2017 Festival will be held April 7-23, 2017. For the complete calendar of events, visit www.ncsciencefestival.org.

ANNOUNCEMENT LETTER TO PARENTS TEMPLATE IS ALSO AVAILABLE ONLINE

Dear parents and guardians,

You are invited to [School Name]'s Duke Energy Science Night on [date] at [time]. The Science Night is an opportunity for you and your child to explore science together! Hands-on activities will introduce a range of science, technology, engineering and math topics in a way that is fun and easy to understand. You won't want to miss this chance to learn together and enjoy making glowing goo, racing magnetic cars, building submarines and much more! Siblings are welcome too!

Our school was selected to host a Duke Energy Science Night by the North Carolina Science Festival, a two-week celebration of science with events across the state, occurring April 7-23, 2017. For more information about the North Carolina Science Festival and a full calendar of events, visit www.ncsciencefestival.org.

Want to help with the Science Night? We need volunteers and supplies!

We need parents who will help run activities. You do *not* have to be a science expert to volunteer! We've made it easy for anyone to run the activities, even if you don't remember anything from your science classes. We also need parents to help with set-up and the welcome table during the event. If you can help, please contact [Name] at [phone number/email].

Thanks for your help, and we look forward to seeing you on [date] at [time].

Sincerely,

[Name]

[Grade/Class]

[School Name]

REMINDER LETTER TO PARENTS
TEMPLATE IS ALSO AVAILABLE ONLINE

Dear parents,

We hope that you are planning to join us for [School Name]'s Duke Energy Science Night on [date] at [time]. You and your child will have the chance to do 12 different fun activities that explore science!

[Provide useful logistical information here: parking, directions, bringing snacks, etc.]

Please bring a bag with you to hold the take-home items that your child will make by participating in these activities.

See you on [date]!

- [Name]

BE A CITIZEN SCIENTIST!

CITIZEN SCIENCE IS A PARTNERSHIP BETWEEN THE PUBLIC (THAT'S YOU!) AND SCIENTISTS.

You don't have to be a scientist to work on a real scientific study. You can do these projects at home, in class or online.

OUTER SPACE

Find planets with life on them, watch out for solar storms or explore galaxies far, far away with the projects at Zooniverse!

Log into the site, do a quick tutorial on how to classify galaxies or look for storm warning signals and then click through as many or as few as you like.

Visit www.zooniverse.org to participate in online citizen science projects that help astronauts be safe and help scientists learn more about the universe. Try www.galaxyzoo.org or www.solarstormwatch.com.

BACKYARD BIRDS

Birdwatching is a great way to learn more about the natural world going on all around you. But sometimes it can be hard to learn bird identification or see lots of birds if you're in school all day. You can keep an eye on their nests, though, and scientists can use your data to learn more about when birds migrate, where they go and how their habits are changing.

Log into the site, do a brief online training, then find a nest site and monitor it. Visit www.nestwatch.org to get started.

PLANTS IN BLOOM

Plants change with the seasons: flowering in the spring, losing their leaves or dying in the fall. Ever wondered how changes in the climate can affect plants' timing? Help scientists figure it out by participating in Project Budburst.

Log into the site, learn a bit about plant monitoring and submit information about the plants in your area. You can do regular monitoring or a one-time report.

Get going at www.neoninc.org/education/projectbudburst.

YOUR WILDLIFE

Help researchers at N.C. State University and beyond learn about the wildlife around and even *on* you.

Visit www.yourwildlife.org/participate to learn more about their ongoing citizen science projects. Collect and send off ants, track your outdoor cat with a GPS, report invasive crickets or visit an in-person sampling to collect your skin mites.

WANT MORE?

Visit www.scistarter.com to find hundreds of projects for every interest! Analyze deep-sea videos with Digital Fishers, photograph paper to learn more about the sun in the Albedo Project or monitor animals and plants in your area with various Watch projects.

ACKNOWLEDGEMENTS

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» Students, families and staff of the Morehead Afterschool Program and Summer Camp

SCIENCE FESTIVAL

Presented by THE BIOGEN FOUNDATION

April 7–April 23, 2017

The North Carolina Science Festival is made possible by the generous support of its sponsors.

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