

George's Energy Adventure Outreach Guide

About the book

North American Young Generation in Nuclear organized and wrote an elementary school-aged children's book to focus on the importance of creating a diverse energy portfolio to achieve success. The characters in the book are named after important scientists in nuclear science history: George Alcorn, Marie Curie and Thomas Edison. The story describes George's adventure at Edison's Inventors Camp. George is challenged to power a city and dreams of a solution involving a diverse energy supply. He realizes to accomplish his goal he must use teamwork.

During George's dream, he meets Sunny, Windy, Gassy, Coal and Nuke. Each character represents the diverse energy sources used across the world to provide electricity. George learns about the importance of each energy source and how working together can empower one another. The book also contains a glossary of terms, historical figures, and a bit more detail on the diverse forms of energy used around the world.

About this guide

This guide is intended for NAYGN members to familiarize themselves with the book and the resources available to share the book with children in their communities. The target recipients for the free sample books are local schools, libraries, community centers, and the like. If you would like to purchase a hardcover book for yourself/family, check out Amazon (https://www.amazon.com/dp/057821847X?ref=myi_title_dp). An e-book will also be available (free!) on itunes.

OUTREACH

#GeorgeAdoresEnergy



Classroom visits

NAYGN is encouraging all members to read the book to students during **Nuclear Science Week (October 14-18, 2019)**. Use the following tips to arrange classroom visits:

- Talk to a friend or family member who is a teacher or knows an educator
- Work with your company's communications team
- Find the district curriculum director on your school district's website

Social media

- Take photos of your outreach efforts and share them using the hashtag **#GeorgeAdoresEnergy**
- Tag @NA_YGN on [Twitter](#), [Facebook](#) and [Instagram](#)
- Don't forget to share with your company as well

Photos

Please remember that taking up-close photos of children without parental consent could get you in trouble. Instead, try:

- Taking photos from a distance so faces aren't easily recognizable
- Sending release forms ahead of time to the teacher so the form can be sent home to parents
- Taking photos that only show faces of adults, who can sign a form on the spot
- Having someone else take the photo and post it on social media then share their tweet or post

Other outreach ideas

- Donate a book to a local library
- Work with a library to do a book reading
- Read the book at a children's camp or community center
- Invite a scout troop to a book reading
- Work with corporate communications to host a media event featuring the book

HANDS-ON ACTIVITIES



In addition to reading the book, try doing an activity to help bring the story to life. Choose one that fits the grade you're reading to and the amount of time you have. Consider leaving these activities with the teacher when you leave the classroom.

"Power Your Town!"

Target age: 1st or 2nd grade

Prep time: 20 minutes

Activity time: 20 minutes

Materials needed:

1. Printout of electrical grid, the 5 power plants, and a city for each child
2. Suggested: foam board or stiff paper for the city lights template
3. 1/4" copper foil tape
4. Small LED Lights, recommend pre-wired DC 12 Volt 5mm
5. Two AA Battery holder with switch and wire leads
6. Two AA Batteries
7. Scotch tape

Takeaway: This activity is to demonstrate how diverse forms of electricity is transported from different sources to power our cities.

Before the Activity:

1. Print one copy of the electrical grid document.
2. Print one copy of the five power plants document.
3. Print enough cities for everyone in the group.
4. Print one copy of the city lights template (if using the foam board for the city).
 1. Cut holes in the foam board that align with the template.
 2. Insert the LED light into the holes.

"Nuclear Dance"

Students "dance" out different parts of the generation process from splitting atoms to using electricity .

Target age: 1st or 2nd grade

Prep time: 10 minutes

Activity time: 20 minutes

Instructions and suggested materials: <https://goo.gl/U7PpYQ>

Takeaway: Splitting atoms create heat, which create steam, which turns a turbine, which turns a generator, and creates electricity which flows through power lines to power towns.

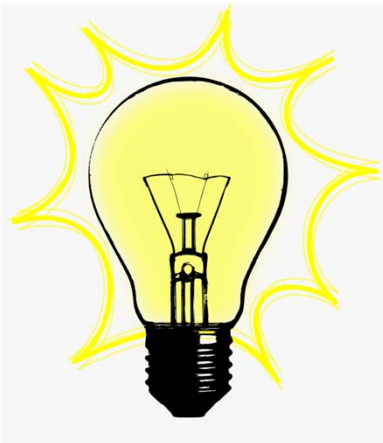
Use same questions from "Power Your Town!" For 2nd graders, talk about how nuclear is carbon free, while other energy sources (coal, gas) are not.

HANDS-ON ACTIVITIES



During the Activity:

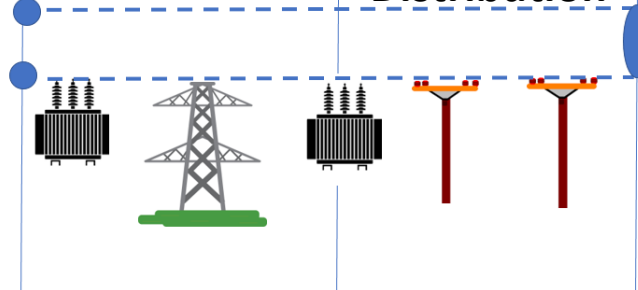
1. Have the children color a power plant and their cities. Cut out the circles in the city for the lights.
2. Discuss the different types of power plants with the children.
3. Explain how electrical wires transport electricity from the power plant to our cities.
4. Place the $\frac{1}{4}$ copper foil tape along the power lines on the electrical grid document. Be careful to not tear the tape.
5. Using scotch tape, tape each battery holder wire leads to each end of the copper foil tape at the power plant side.
6. Using scotch tape, tape each LED wire lead to each end of the copper foil tape at the city side.
7. Turn the battery holder on. If the light does not illuminate
 1. Try switching the light leads.
 2. Press down on the scotch tape to make a better connection.
 3. Look for tears in the copper foil tape.
8. Turn off the battery holder.
9. Have a child talk about their power plant and place their power plant next to the battery holder.
10. Have the child place their city on the city lights template.
11. Turn on the battery holder and watch their city light up.



Power Plant



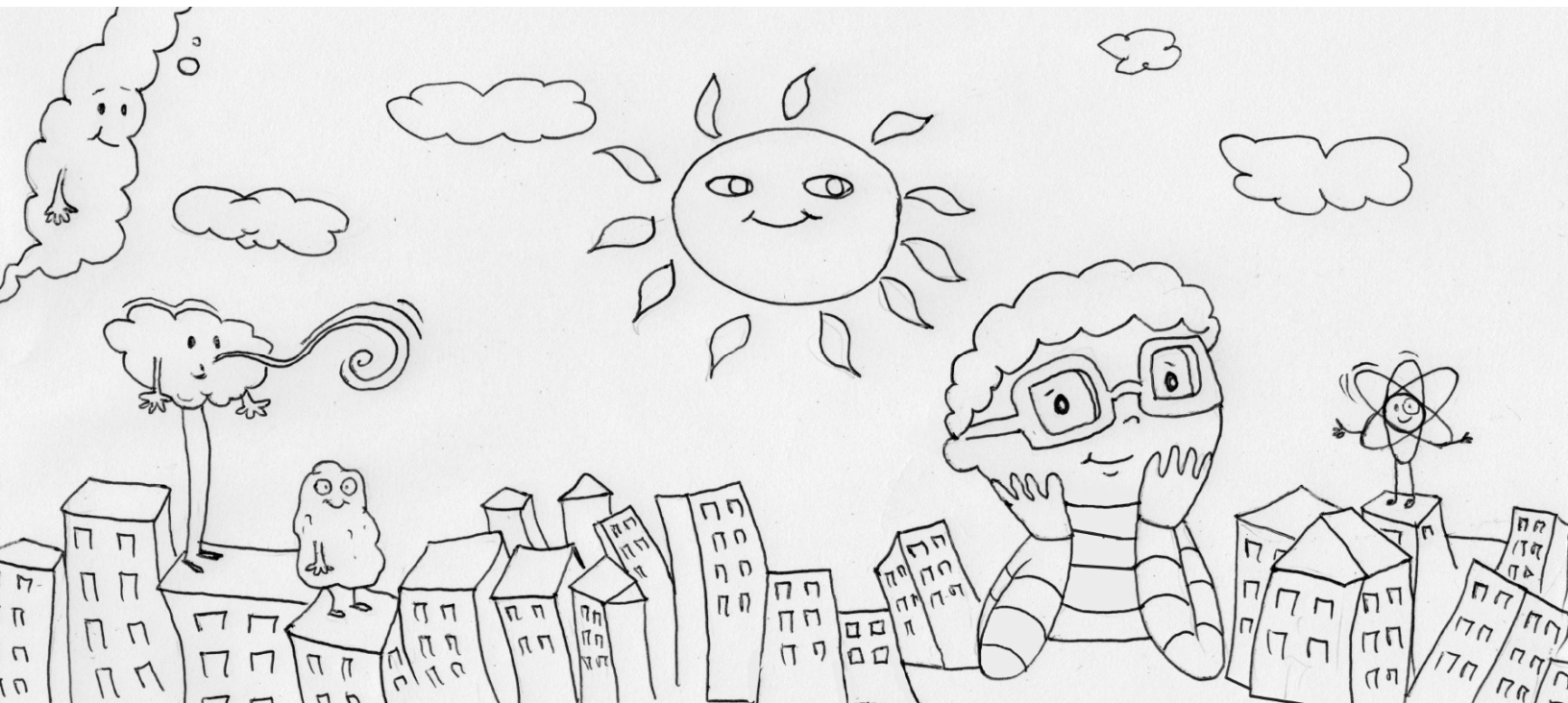
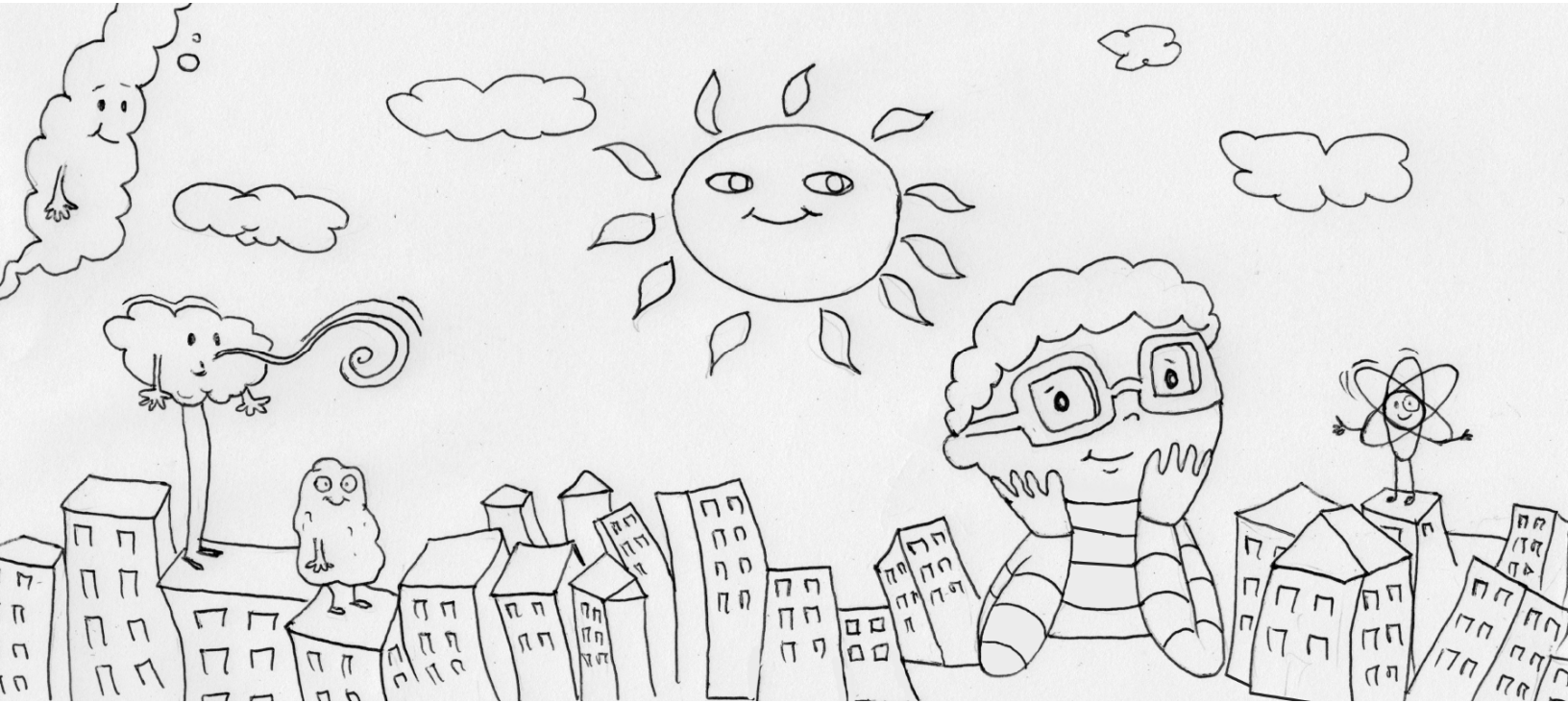
Transmission Distribution



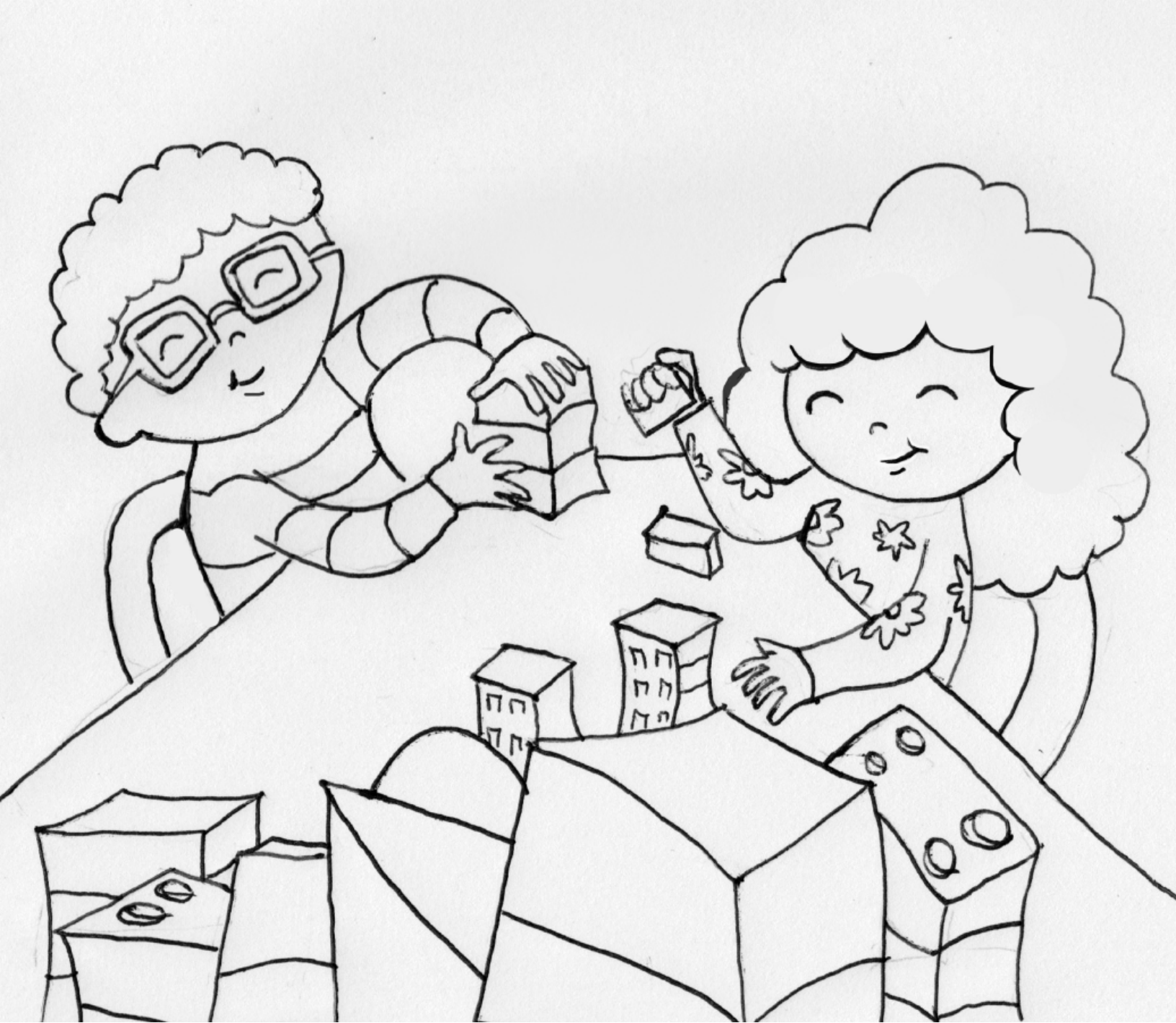
Your City!



Coloring Pages



Coloring Pages



ADDITIONAL RESOURCES



For more information

- Visit the NAYGN website for more information!
- If you have questions about the book, please email adventure@naygn.org.

Reading tips

- Look at the cover and brainstorm – “**what do you think this story is about?**”
- Flip through the pages and brainstorm to get the kids excited and hypothesizing.
- Go **slowly** and announce the words. Reading the book should take 10-15 minutes.
- Exaggerate your facial expressions/body language to get the students involved and **grab their attention**
- After page 24, you can see all of George's friends are tired and exhausted but Nukey is still dancing around having a great time. He represents Nuclear Energy (where I work) and it is both clean (not messy) and doesn't get tired.
- **Review at the end** – “Who knows what Diversity is? Its about celebrating what makes us different than one another so we accomplish better things.”

Suggestions for connecting with your audience All ages: Character connection – Can the students relate themselves to the characters and story? Feeling frustrated, sharing, working together as a team

Reading Comprehension Strategies

Follow these tips to provide students the opportunity to practice comprehension strategies when they are listening and responding to George's Energy Adventure.

Here's how it works:

First show the children the cover and read the title. Ask them what they think the story will be about, based only on what they see.

Then slowly flip through the book, page by page (or by picking several key pages in advance) without reading a single word. Ask them questions about each picture they see.

“**What** is going on here?” “**Who** is this?” “**Why** does the character look so excited?”

“**When** is this story taking place?” “**How** do you think the story is going to end?”

Ask plenty of questions that will engage the kids' imaginations and encourage their active participation. Remember when you ask questions your responses should be vague so that you don't give away your knowledge of the story line.