Lucy's Engineering Adventure



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Written by
Danielle Passaglia

Illustrated by
Gabriella Vagnoli



They got to Dad's building and put on their gear.
Dad always says, "Safety's first around here."

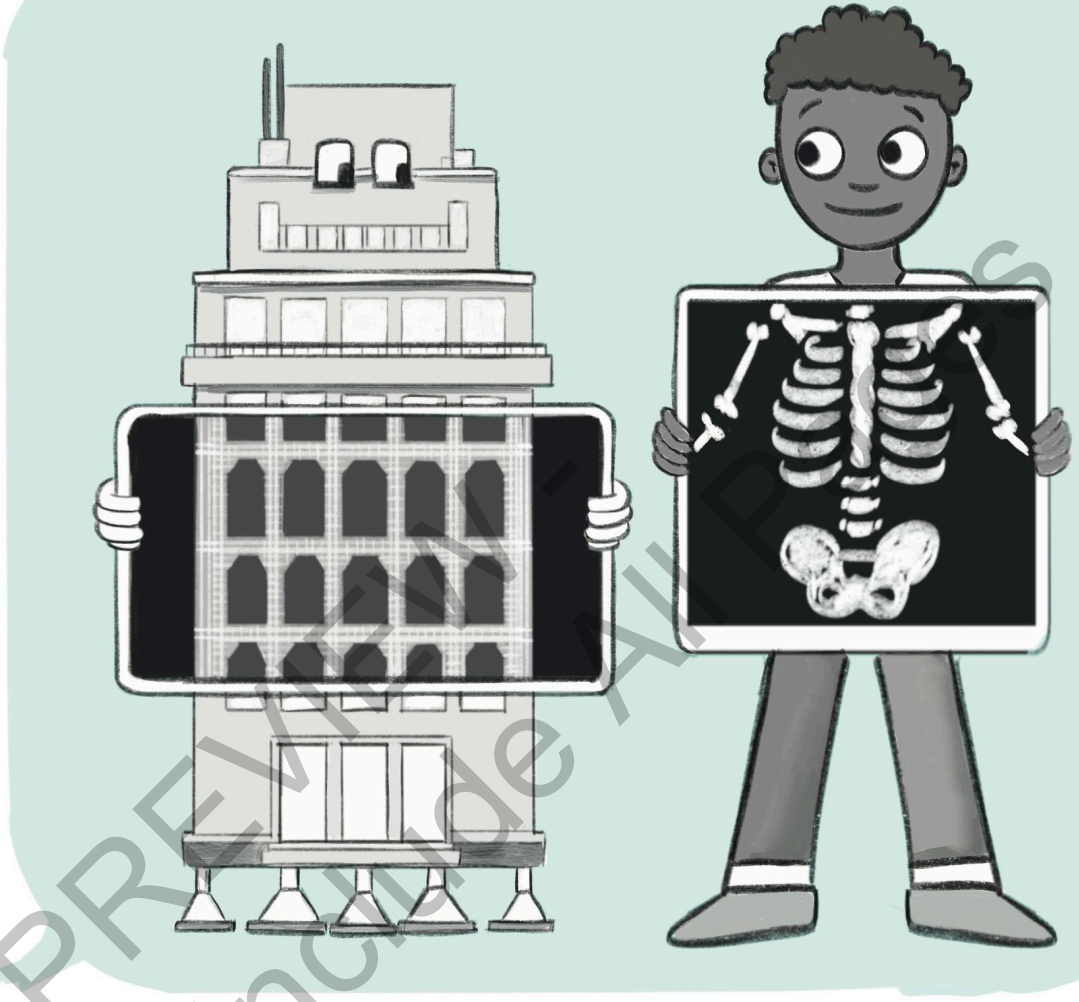
With wide-open eyes, Lucy peeked through the door.
There were pipes and machines and strange things galore!
"What's that thing?" asked Lucy, "And that over there?
Where are the walls? And what about chairs?"

Her dad took her aside, all the better to see.
"A building is kind of like you and like me."

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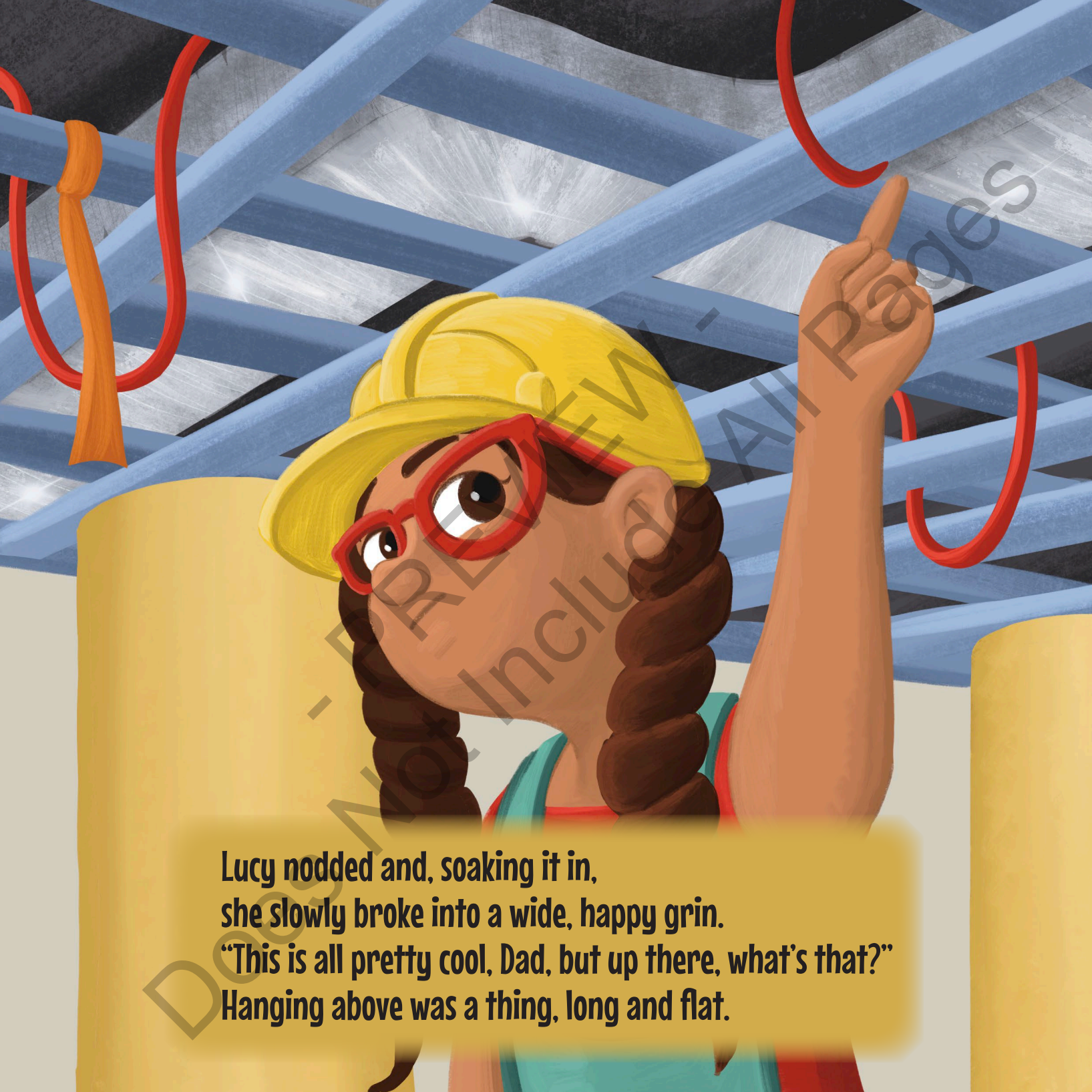
"These beams and columns act just like our bones.

They give us strength so we can stand on our own."



"We need to make sure they are built true and strong,
so people stay safe, and nothing goes wrong."

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Lucy nodded and, soaking it in,
she slowly broke into a wide, happy grin.
"This is all pretty cool, Dad, but up there, what's that?"
Hanging above was a thing, long and flat.

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This publication was prepared under the auspices of ASHRAE's Student Activities Committee.

Danielle Passaglia, EIT, LEED® Green Associate, Associate Member ASHRAE, is a Mechanical Engineer at Arup in Chicago, IL. She has nearly a decade of experience volunteering with STEM outreach in the K-12 arena via Engineering Ambassadors, TechGirlz, and ASHRAE's Student Activities Committee.

Gabriella Vagnoli has illustrated multiple books, including three books in the Cayuga Island Kids chapter book series by Judy Bradbury (City of Light Publishing). She is Italian and Brazilian, was born and raised in Italy, and currently resides in Illinois with her American husband, two wonderful multicultural kids, and four crazy cats.

Janice K. Means, PE, LEED® AP, FESD, Fellow ASHRAE, Life Member ASHRAE, Professor Emerita at Lawrence Technological University, provided educational oversight for this book. She holds a BA in Secondary Education (Social Science, Physics Minor), a BS in Engineering, and an MS in Mechanical Engineering.

Founded in 1894, ASHRAE is a global professional society committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration and their allied fields. With world headquarters in metro Atlanta, GA, the Society provides essential resources to improve building systems, energy efficiency, indoor air quality, refrigeration and resilience.

ASHRAE's Student Activities Committee develops a comprehensive program for the educational community for the purpose of promoting and encouraging engineering and HVAC&R careers. It administers and promotes student activities at all levels in the educational system. ASHRAE's K-12/STEM Subcommittee works to advance the awareness, understanding, and appreciation of science, technology, engineering, and math (STEM) in the K-12 student population.

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Lucy Goes Green



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Lucy's mom thought about how to explain,
and then she said, "I know—let's talk about rain.
Instead of the hose to water our flowers,
to be more efficient, we could wait for rain showers."

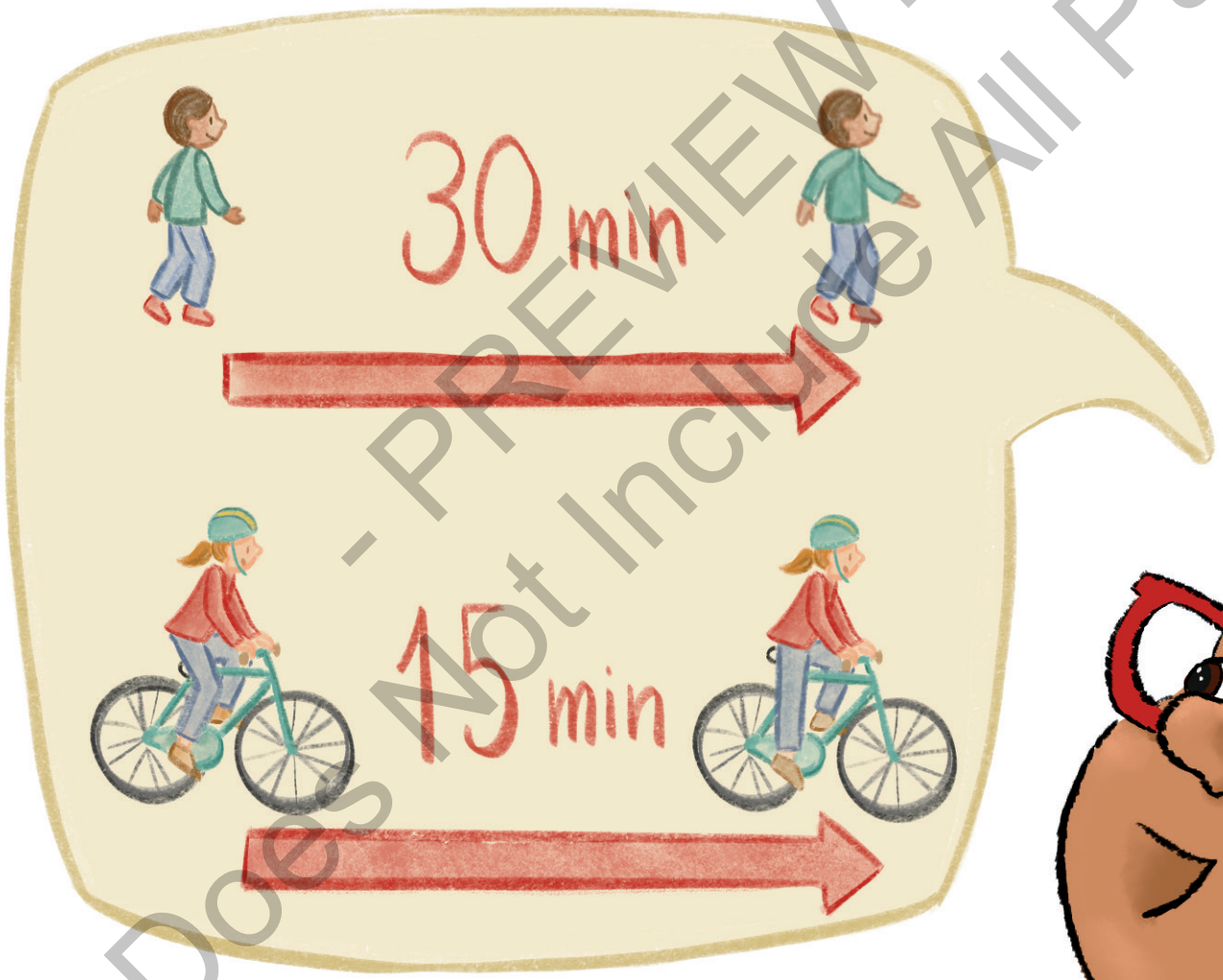


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"To be green and efficient, all you do is ask,
can we find a simpler way to do this task?"

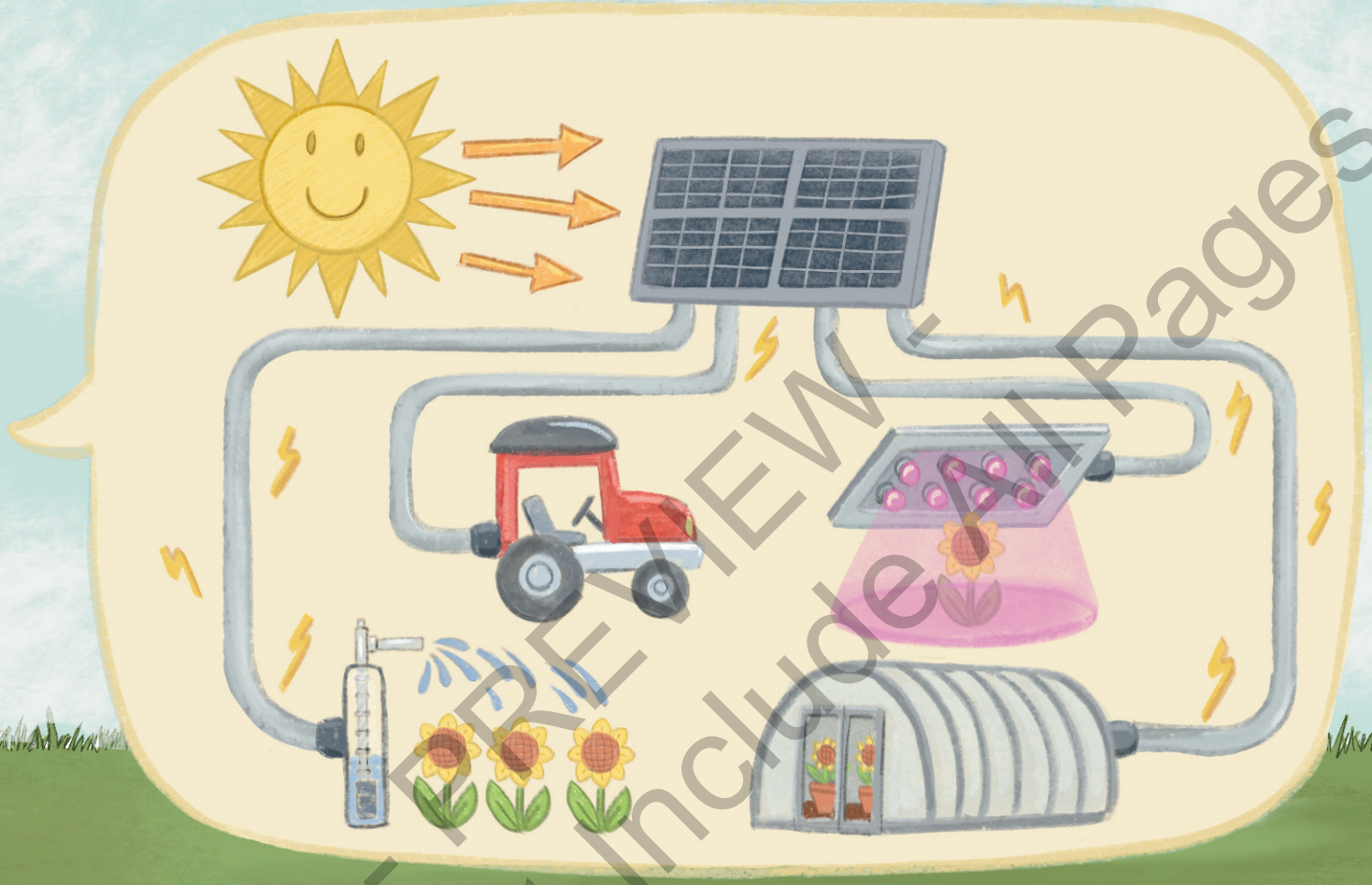
"Like riding my bike home instead of just walking?"
Mom nodded and said, "That's right, girl, now you're talking!"





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Then Teacher smiled and said, "What great teamwork!
You just found a solar panel network!
The biggest source of energy is our sun.
Farmers use that energy to make the farm run.
The panels change light to electrical power—
four of these can run the entire farm for hours!"

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"It uses the wind like a kite in the sky,
turning big blades, making power inside.
That power is stored in a big battery
so the farmers can use it whenever they need."

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