CONSTANCE & NANO
ENGINEERING ADVENTURE!

POWER IN MOTION

Society of Women Engineers
Aspire / Advance / Achieve
After Nano makes a daring rescue at a construction site for sustainable buildings, it gets Constance thinking about ways we use energy – and gives her an amazing idea for a project that can help people be more green!

Plus, learn more about SWENext, a way for students to become part of the Society of Women Engineers, the world’s largest advocate and catalyst for change for women in engineering and technology!

Become part of SWE and #BeThatEngineer at swe.org/swenext
THE SOLAR PANELS ARE COOL, BUT I CAN'T WAIT UNTIL THEY INSTALL THE WIND TURBINES ON THE ROOF OF THE SECOND BUILDING. THOSE ARE GOING TO BE AMAZING.

BUT EVEN THE WIND TURBINES Aren'T MY FAVORITE. YOU KNOW MY REAL FAVORITE? THE NEW ELEVATORS!

NOW YOU LIKE THE SOLAR PANELS, HUH? I THOUGHT THE BALCONY GARDENS AND THE RAINWATER CATCHES WERE YOUR FAVORITE.

NO, MOM, THE GARDENS ARE YOUR FAVORITE.

ALTHOUGH THE GARDENS ARE PRETTY COOL!

THE ARCHITECT WAS TELLING ME THEY'RE THESE COOL NEW "GEN 27" ELEVATORS AND THEY CAPTURE ENERGY THAT'S NORMALLY WASTED AND FUNNEL IT BACK INTO THE BUILDING AS CLEAN UsABLE ENERGY, ISN'T THAT COOL?!

IT IS PRETTY COOL... FOR AN ELEVATOR.

IT'S NOT ABOUT ELEVATORS, MOM! IT'S ABOUT SCIENCE AND THE FUTURE AND THE ENVIRONMENT.

ALL RIGHT, ALL RIGHT. I GIVE UP, IT'S COOL!
SCREEEEEEEEEEEEEEE!

WHAT'S THAT?!

IT'S GOING TO FALL!

SCREEEEEEEEEEEEEEE!
LOOK! IT'S NANO!
NANO! THAT WAS INCREDIBLE! THANK GOODNESS YOU WERE HERE!

HEY CONSTANCE, I DIDN'T KNOW YOU WERE VOLUNTEERING FOR THIS PROJECT.

YEAH, I'M REALLY INTO SUSTAINABLE ENGINEERING. IT FEELS LIKE THE FUTURE, Y'KNOW?

I TOTALLY AGREE... IT'S CERTAINLY THE FUTURE IF WE HOPE TO HAVE A LONG ONE.

NO, I HAVEN'T COME UP WITH ANYTHING YET... IT FEELS LIKE ALL THE GOOD GREEN IDEAS ALREADY EXIST!

THERE'S EVEN THIS NEW TECHNOLOGY CALLED AEROPONICS, WHICH ARE VERTICAL GARDENS THAT DON'T USE SOIL, WATER, OR SUNLIGHT! CAN YOU BELIEVE THAT? AMAZING!

I ALSO SORTA HOPED WORKING HERE WOULD GIVE ME SOME IDEAS FOR MY SCIENCE FAIR PROJECT.

THAT'S GREAT! IS IT WORKING?

WELL, DON'T GIVE UP JUST YET. I KNOW YOU'LL COME UP WITH SOMETHING.
WHO BUILDS YOUR SUITS, NANO?

ACTUALLY BUILT THE SUIT MYSELF AND IF YOU LOOK CLOSELY YOU CAN SEE THERE ARE VERY FINE SOLAR SCALES SEWN INTO THE FABRIC.

WHOA.

THE SCALES HARNESSES SOLAR ENERGY AND REDIRECTS IT INTO MY OTHER SUIT FUNCTIONS.

THOUGH IT MOSTLY GOES TO THE ROCKET BOOTS.

THOSE THINGS ARE REAL ENERGY MUGS.

TOTALLY WORTH IT. THEY'RE SO COOL.

BE PRETTY GREAT IF YOU COULD HARNESS THE ENERGY YOU JUST SPENT CATCHING THOSE BEAM... I BET THAT WOULD POWER YOUR BOOTS FOR DAYS!

THAT WOULD BE A GOOD IDEA. MAYBE I'LL LOOK INTO IT!

OH MY GOSH, NANO. I JUST GOT THE IDEA FOR MY PROJECT.
...and footfall traffic traps the kinetic energy and power these street lights.

There hasn't been much development with kinetic energy in private homes thus far. It's all been focused in the public sphere, but it's a great idea, Constance.

Hahaha!
CONSTANCE’S SCHOOL MONTHS LATER.

Science Fair
It’s a prototype for capturing kinetic energy in your home to power small devices, like lamps, radios, and even your phone.

The idea is to capture the energy you naturally expend just living your life so that nothing goes to waste.

And while initially expensive to install, especially if you installed an entire floor, over time it would not only save you money by being free energy, but it’s a perfect green energy source, and is obviously sustainable.

Of course my mom is jumping up and down to power this because we don’t have lots of time... but the idea is that the natural movement you do is the power source.

It’s also perfect for use in case of loss of power or natural disasters. Situations where you might not have access to power for extended periods of time.

This is excellent, how did you come up with this idea, Constance?
Actually, Nano, you gave me the idea. Well, you and elevators.

You remember last summer when I was helping to build sustainable urban housing?

How flattering!

Well, they were implementing a lot of great ideas already with rooftop gardens, and rainwater and grey water catchers, and of course harnessing solar power for the building, and they even had new elevators that recycled clean usable energy.

But I couldn’t stop thinking about all the energy that we were expending to build the house... and how it too should be harnessed instead of wasted.

And when you saved those construction workers on site from a falling beam I thought about how much energy you must expend to do that.

You were already harnessing the sun to power your suit, but it just seemed obvious that you should also be trying to harness your own energy.

That’s very clever!
It’s very clever. In fact, I think I’ll try to implement something like this myself for my new suit I’m working on. I could always use more power.

Really? Would you mind?

Are you kidding? I’d be honored!

Kinetic Energy
Are you a STEM student who loves to be involved in the community? Or maybe you love to learn and need more hands-on experience. A SWENext Influencer is a STEM-involved student leader who shares their knowledge and experience with SWENext programming across SWE/SWENext media platforms.

Learn more @ swe.org/swenext
HAVE YOUR OWN ENGINEERING ADVENTURES!
JUST LIKE CONSTANCE AND NANO ...

If you’re a girl 13 or older, you can be a SWENexter! It’s a fun way to learn how to #BETHATENGINEER and join SWE for free. You can even start your own SWENext Club and make your own engineering adventures!

Are you 12 or under? You can join, too ... you just need a parent to join with you.

Parents and other adults— you’re also welcome to join!

JOIN CONSTANCE AND NANO AND DISCOVER THE EXCITING, REWARDING WORLD OF ENGINEERING.
SIGN UP FOR SWENEXT TODAY AT SWE.ORG/SWENEXT
SWE NEXT is a fun way to become part of the Society of Women Engineers.

- Attend engineering events designed for girls
- Discover SWE scholarships to help pursue your dreams
- Meet women engineers ready to mentor and inspire you
- Do cool engineering projects
- Participate in exciting contests
- Get SWE goodies
- ... and much more.
THANKS FOR POWERING
CONSTANCE & NANO!

THE SOCIETY OF WOMEN ENGINEERS
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