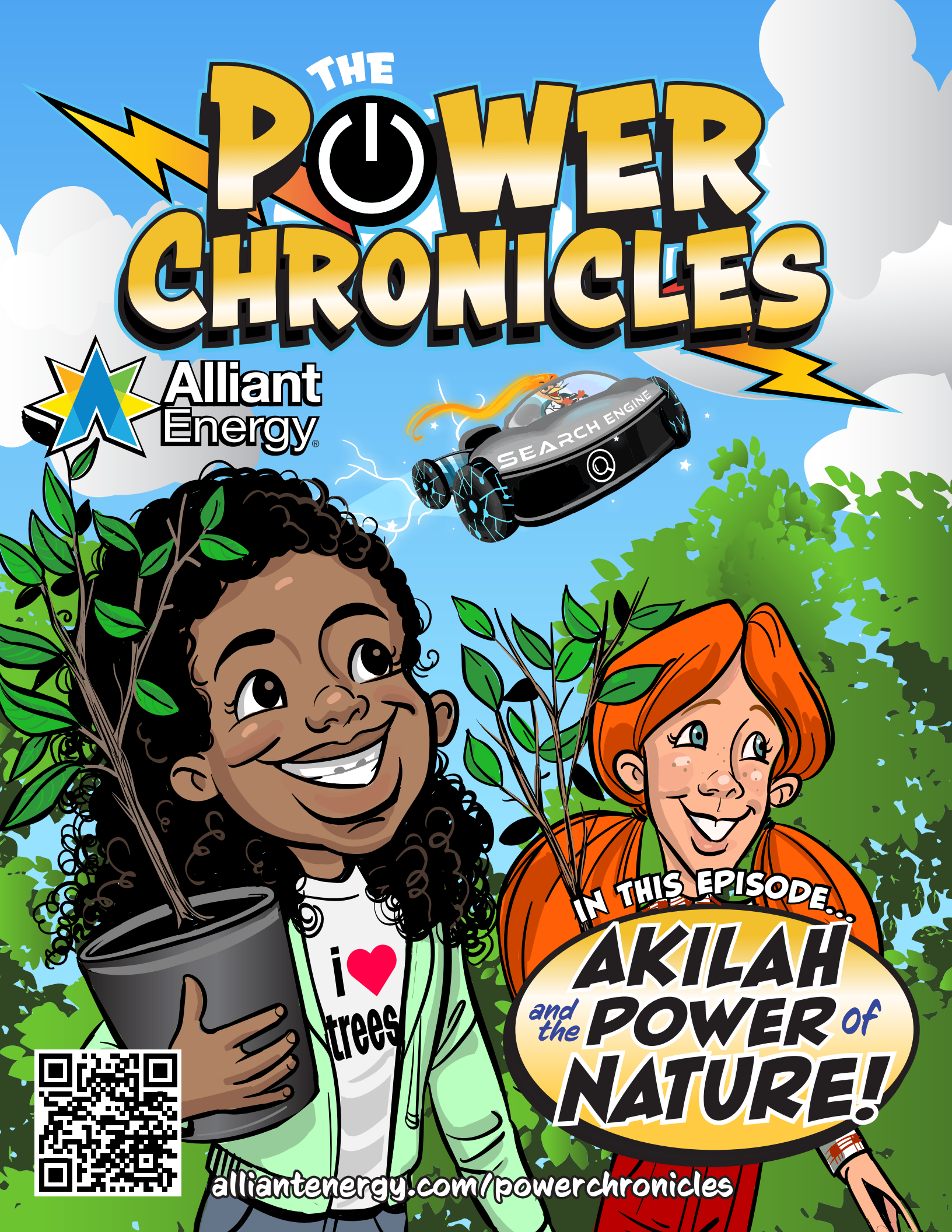
THE POWER CHRONICLES
Alliant Energy
SEARCH ENGINE
i ♥ trees
IN THIS EPISODE...
AKILAH and the POWER of NATURE!
alliantenergy.com/powerchronicles

THE POWER CHRONICLES
alliantenergy.com/powerchronicles
HI! MY NAME'S AKILAH. THIS IS A STORY ABOUT HOW I MADE A NEW FRIEND, AND HOW DR. NIX HELPED US LEARN ALL ABOUT WHY TREES ARE SO IMPORTANT TO OUR ENVIRONMENT!
I LOVE SCIENCE AND MATH AND THE DIFFERENCES THEY MAKE IN OUR WORLD. I HOPE YOU DO TOO!
HERE ARE SOME AMAZING TREE FACTS I LEARNED!!
• One large tree can provide a day's supply of oxygen for up to four people.
• Trees lower surface and air temperatures by providing shade.
• When planting trees near electric power lines, consider how tall your tree will grow. Be sure to select a tree that will not grow into the electric line.
• In one year, an acre of mature trees absorbs the amount of CO2 produced by a car driven 26,000 miles.
• Carefully positioned trees can reduce a household's energy consumption for heating and cooling by up to 25%.
i ♥ trees
CHAPTER 2
"AKILAH and the POWER of NATURE!"
Story & Art by:
Barbara Lee Art & Design
Presented by:
Alliant Energy
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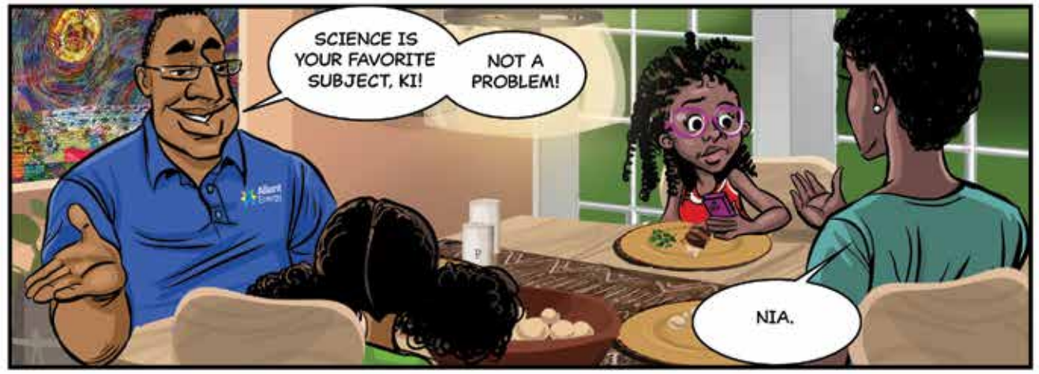
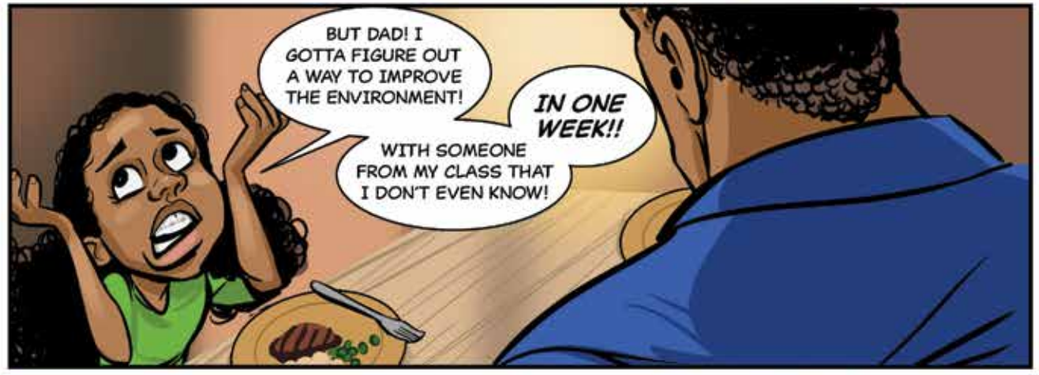
SO HOW WAS THE FIRST DAY OF SCHOOL?

AWESOME.
NIA, PHONE DOWN AT DINNER.

I DIDN'T KNOW ANYONE IN MY CLASSES.
THAT'S OKAY! IT'S ONLY THE FIRST DAY OF MIDDLE SCHOOL!
YOU WILL MAKE FRIENDS.

AND IN OUR ENVIRONMENTAL SCIENCE CLASS WE ALREADY GOT A HUGE ASSIGNMENT!
DUE IN A WEEK!!!

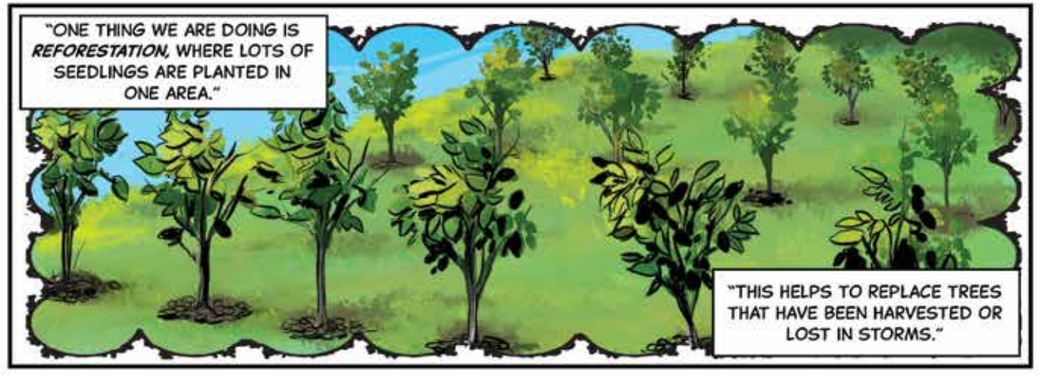

SCIENCE IS YOUR FAVORITE SUBJECT, KI!
NOT A PROBLEM!
NIA.


BUT DAD! I GOTTA FIGURE OUT A WAY TO IMPROVE THE ENVIRONMENT!
WITH SOMEONE FROM MY CLASS THAT I DON'T EVEN KNOW!
IN ONE WEEK!!

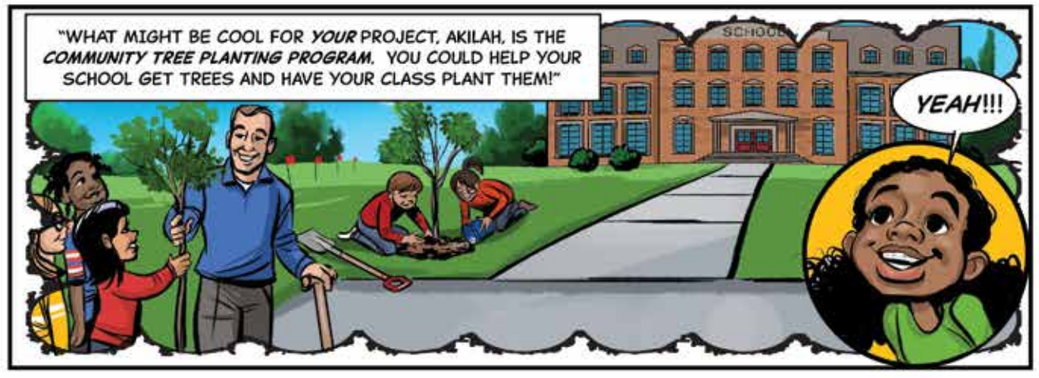
DON'T GET WORKED UP ABOUT THE 'FRIENDS' AND 'TIME' THINGS, KI!
IT'S STILL A SCIENCE PROBLEM! YOU GOT THIS!

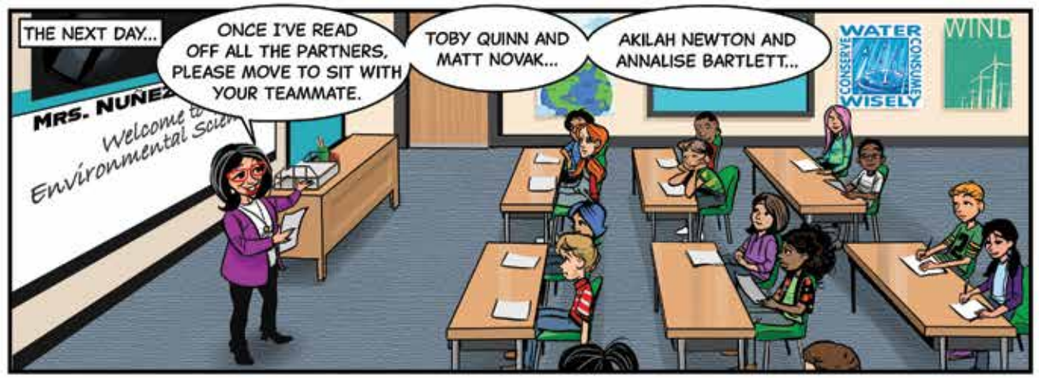
AND I MAY HAVE AN IDEA FOR YOU!
I'VE TOLD YOU ABOUT OUR ONE MILLION TREES INITIATIVE, RIGHT?
ALL. THE. TIME. DAD.

YEAH! BECAUSE IT'S A GREAT INITIATIVE!
ALLIANT ENERGY IS WORKING WITH GROUPS LIKE THE *DNR TO PLANT TREES ACROSS OUR SERVICE AREA!
*DNR: DEPARTMENT OF NATURAL RESOURCES


"ONE THING WE ARE DOING IS REFORESTATION, WHERE LOTS OF SEEDLINGS ARE PLANTED IN ONE AREA."
"THIS HELPS TO REPLACE TREES THAT HAVE BEEN HARVESTED OR LOST IN STORMS."

"WE'RE ALSO MAKING AFFORDABLE TREES AVAILABLE TO FAMILIES WHO WANT TO DO THEIR PART TO GROW TREES IN THEIR NEIGHBORHOODS."

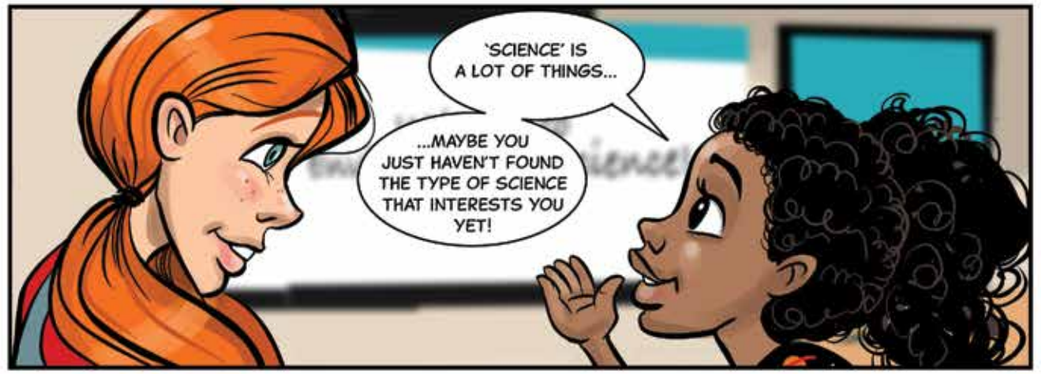

"WHAT MIGHT BE COOL FOR YOUR PROJECT, AKILAH, IS THE COMMUNITY TREE PLANTING PROGRAM. YOU COULD HELP YOUR SCHOOL GET TREES AND HAVE YOUR CLASS PLANT THEM!"
SCHOOL
YEAH!!!


THE NEXT DAY...
MRS. NUÑEZ
Welcome to Environmental Scien
ONCE I'VE READ OFF ALL THE PARTNERS, PLEASE MOVE TO SIT WITH YOUR TEAMMATE.
TOBY QUINN AND MATT NOVAK...
AKILAH NEWTON AND ANNALISE BARTLETT...
CONSERVE WATER
CONSUME WISELY
WIND

...EMMA JANSEN AND MACKENNA CRENSHAW...

IT'S NICE TO MEET YOU! I'M AKILAH!
YOU TOO! I'M ANNALISE!
I'M SORRY, BUT I DON'T REALLY HAVE ANY IDEAS FOR THE PROJECT...

...SCIENCE ISN'T REALLY MY THING.


'SCIENCE' IS A LOT OF THINGS...
...MAYBE YOU JUST HAVEN'T FOUND THE TYPE OF SCIENCE THAT INTERESTS YOU YET!

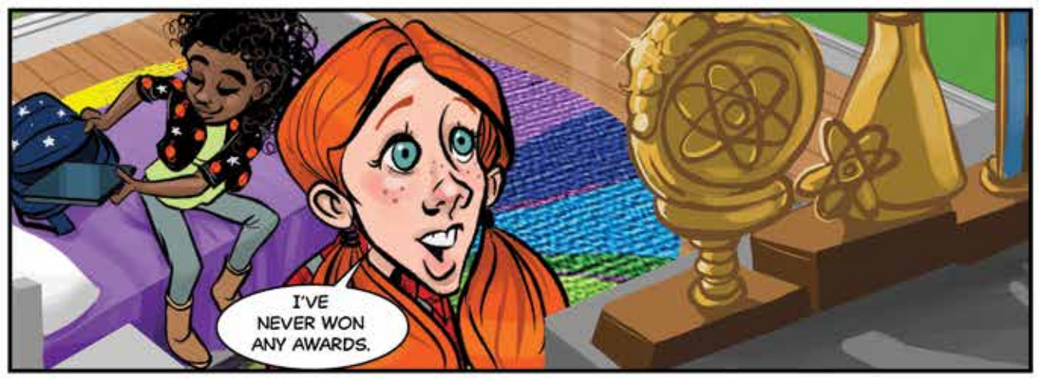
I HAVE AN IDEA FOR THE REPORT...
...THE IMPORTANCE OF *TREES* TO THE ENVIRONMENT.

TREES?! I - I *LOVE* TREES AND PLANTS AND FLOWERS!
CAN WE DO AN ENVIRONMENTAL SCIENCE PROJECT ON *THAT*??

OF COURSE WE CAN! THE STUDY OF PLANTS *IS* SCIENCE, ANNALISE!
TREES ARE *VERY* IMPORTANT TO THE ENVIRONMENT!
I'M REALLY EXCITED TO WORK ON THIS NOW!

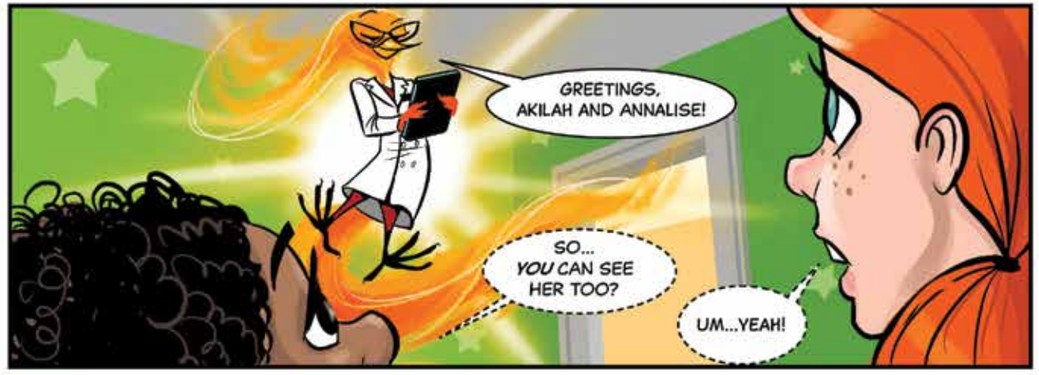
AFTER SCHOOL...
I'M SURE GLAD WE COULD GET STARTED ON OUR PROJECT TODAY!

COOL ROOM! I LOVE YOUR POSTERS!
TODAY MATTER
AND YOU HAVE *SO MANY* AWARDS!


I'VE NEVER WON ANY AWARDS.

YOU CAN WIN SOME TOO!
WHEN I'M REALLY INTO SOMETHING I WORK THAT MUCH HARDER ON IT.

WHOOOSH!!


GREETINGS, AKILAH AND ANNALISE!
SO... *YOU* CAN SEE HER TOO?
UM...YEAH!

I AM DR. PHOEBE NIX!
OF COURSE SHE CAN SEE ME, AKILAH!
ANNALISE IS QUITE THE *BOTANIST*!*
DR. NIX
**BOTANIST*: AN EXPERT IN OR STUDENT OF THE SCIENTIFIC STUDY OF PLANTS.

I - I... AM?
WHY, YES! PLANTING AND TAKING CARE OF TREES MAKES YOU JUST THAT!

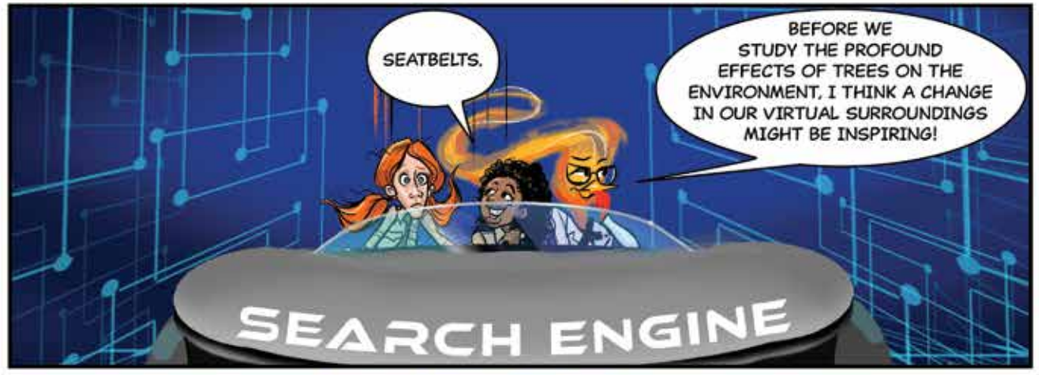
WOW! IT SOUNDS LIKE I'M LUCKY TO GET YOU AS MY PARTNER FOR THE PROJECT!

I GUESS I DON'T UNDERSTAND HOW LIKING TO PLANT STUFF REALLY HAS ANYTHING TO DO WITH THIS ENVIRONMENT PROJECT.

WHY DON'T I SEE IF I CAN HELP WITH THAT?
DR. NIX

FIRST, SOME PROPER ATTIRE.

TODAY
LET'S COMMENCE OUR JOURNEY!
GOTTA WARN YOU, THIS PART IS WEEEIIIRRRD!!!


SEATBELTS.
BEFORE WE STUDY THE PROFOUND EFFECTS OF TREES ON THE ENVIRONMENT, I THINK A CHANGE IN OUR VIRTUAL SURROUNDINGS MIGHT BE INSPIRING!
SEARCH ENGINE

MUCH BETTER!
TING!
TING!

FIRST STOP — HOO'S WOODS!
WHOSE?
EXACTLY!

OH...
HOO'S!
HOO'S WOODS RAPTOR CENTER

HELLO, DIANNE!
HI THERE, DR. NIX!

HOO'S WOODS RAPTOR CENTER
AKILAH AND ANNALISE, MAY I INTRODUCE YOU TO *DIANNE MOLLER!*
SHE'S THE FOUNDER AND DIRECTOR OF *HOO'S WOODS!*
I'M VERY GLAD TO MEET YOU, GIRLS!

THIS IS MY FRIEND, *HUSH* THE BARN OWL.
WE WONDERED IF YOU WOULD SHARE ABOUT THE IMPORTANT ENVIRONMENTAL ROLE THAT TREES PLAY IN YOUR WORK.

OH YES! TREES ARE PART OF MANY ECOSYSTEMS, ESPECIALLY HERE IN THE MIDWEST.

"TREES PROVIDE NESTING HABITAT FOR HUNDREDS OF SPECIES."
"EVEN DOWNED TREES CAN PROVIDE HOMES!"

"OF COURSE, TREES ARE A NECESSARY FOOD SOURCE FOR *HERBIVORES*...
...ANIMALS THAT EAT ONLY PLANTS."

THE CANOPY PROVIDES SHADE IN THE HOTTEST MONTHS...
...TO HELP WITH TEMPERATURE REGULATION.
THIS DOESN'T JUST KEEP WILDLIFE COOLER, BUT EVERYONE ELSE TOO! THANKS TO THE SHADE THAT TREES PROVIDE, WE DON'T HAVE TO USE AIR CONDITIONING AS OFTEN!

EXCELLENT!
DIANNE, THE SHIPMENT OF TREES IS HERE.

AS A MATTER OF FACT, WE ARE GOING TO BE REFORESTING AN AREA WITH YOUNG TREES *TODAY!*

THAT'S WHAT WE'RE WANTING TO DO AT OUR SCHOOL!
THINK OF ALL THE ANIMALS THAT CAN LIVE IN THE TREES WE PLANT!

HUSH APPROVES!
WINK

GOODBYE, HUSH!
THANK YOU, MS. MOLLER! GOODBYE!

POP!
AH GOOD! A RAIN SHOWER.
NOW WE GET TO ACTUALLY SEE *HOW* TREES CLEAN AIR AND WATER!
SEARCH ENGINE

HOW...?

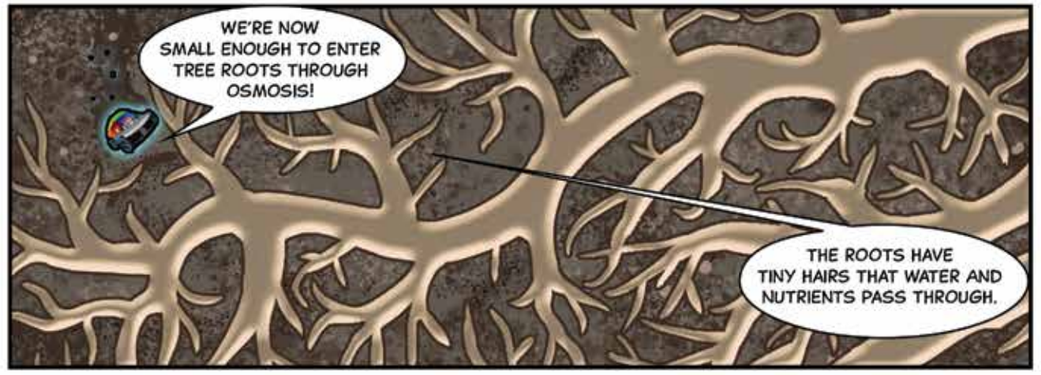
SSHHHWOOOP!

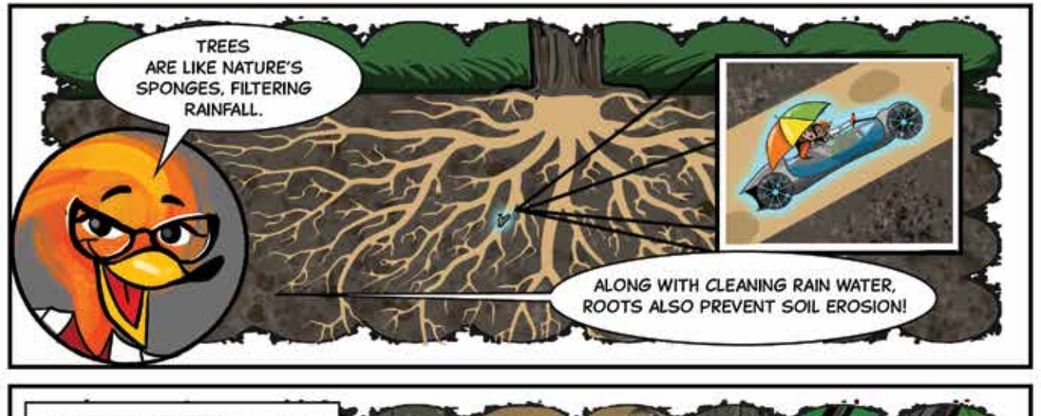
NOW TO JUST SQUEEZE INTO ONE OF THESE RAINDROPS!

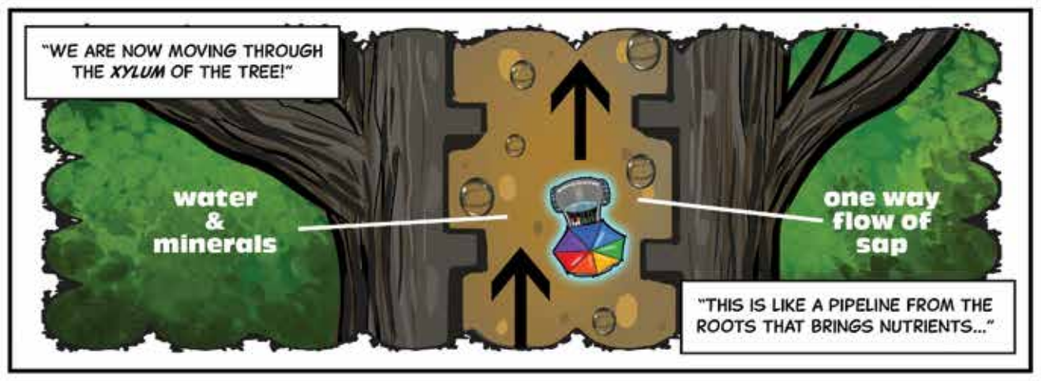
BLOOP!
VERY GOOD!

DOWN WE FALL!
WHOOOAA!!

SPLASH!!


WE'RE NOW SMALL ENOUGH TO ENTER TREE ROOTS THROUGH OSMOSIS!
THE ROOTS HAVE TINY HAIRS THAT WATER AND NUTRIENTS PASS THROUGH.


TREES ARE LIKE NATURE'S SPONGES, FILTERING RAINFALL.
ALONG WITH CLEANING RAIN WATER, ROOTS ALSO PREVENT SOIL EROSION!


"WE ARE NOW MOVING THROUGH THE *XYLUM* OF THE TREE!"
water & minerals
one way flow of sap
"THIS IS LIKE A PIPELINE FROM THE ROOTS THAT BRINGS NUTRIENTS..."

"...ALL THE WAY TO THE LEAVES!"

"THE LAST PART OF OUR JOURNEY IS THROUGH A LEAF! LEAVES HAVE PORES CALLED *STOMATA*."

stomata

"*STOMATA* TAKE IN *CARBON DIOXIDE* FROM THE ATMOSPHERE, ALONG WITH RAIN WATER THE TREE HAS ABSORBED THROUGH THE ROOTS AND LEAVES."

sunlight

carbon dioxide

oxygen

sugar

water

WHEN EXPOSED TO SUNLIGHT, WATER AND CARBON DIOXIDE BECOME FOOD FOR THE TREE IN THE FORM OF SUGARS. THIS PROCESS IS CALLED *PHOTOSYNTHESIS*.

PHOTOSYNTHESIS ALSO PRODUCES *OXYGEN*, WHICH IS RELEASED THROUGH THE *STOMATA* IN THE LEAVES ALONG WITH WATER VAPOR.

THIS IS HOW TREES REDUCE GREENHOUSE GAS EFFECTS...

...PROVIDING ALL LIVING THINGS WITH CLEAN AIR TO BREATHE!

WHOOOAAH!

CH ENGINE

BACK TO OUR MULTICELLULAR SIZES!

TREES REALLY *ARE* IMPORTANT TO THE ENVIRONMENT!

SEARCH ENGINE

INDEED THEY ARE!

TREES ALSO BENEFIT OUR WELL-BEING!

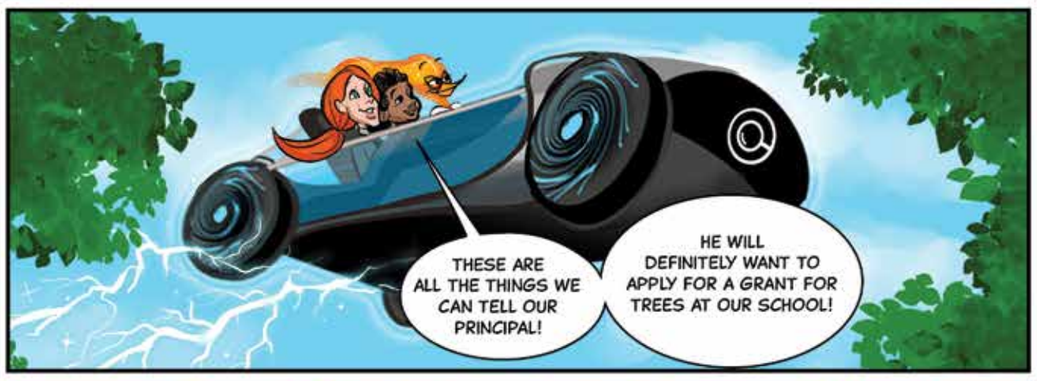
BEING AMONG TREES ACTUALLY REDUCES STRESS AND CAN IMPROVE MOOD.

TREES ALSO BOOST OUR IMMUNE SYSTEMS!

PLANTING TREES AROUND HOMES AND BUSINESSES CAN HELP WITH ENERGY SAVINGS!

"PLANTING THE RIGHT KINDS OF TREES AROUND BUILDINGS...
SOUTH
NORTH
"...CAN PROVIDE SHADE IN THE SUMMER..."
"...AND WINDBREAKS IN THE WINTER!"

SO YOU WOULDN'T HAVE TO USE AS MUCH AIR CONDITIONING OR HEAT!
MY PARENTS WOULD SURE LIKE THAT!


THESE ARE ALL THE THINGS WE CAN TELL OUR PRINCIPAL!
HE WILL DEFINITELY WANT TO APPLY FOR A GRANT FOR TREES AT OUR SCHOOL!

WE ARE GOING TO HAVE THE *BEST* ENVIRONMENTAL SCIENCE PROJECT *EVER*!!

THIS IS GOING TO BE GREAT!!
WE HAVE SO MUCH INFORMATION TO SHARE WITH EVERYONE!

THANK YOU, DR. NIX!!

OH NO! WHERE IS SHE?!

OH NO WORRIES, ANNALISE!

SHE DOES THAT FROM TIME TO TIME.

BUT SHE ALWAYS COMES BACK!

100%

Dr. Nix

If you put your enthusiasm about what you've learned into your report, the class will be as excited as you are!

I'll see you soon!
-Dr. Nix

LATER, AT DINNER TIME...

SO, HOW'S THE PROJECT COMING ALONG?

TREES PREVENT EROSION! AND HELP PEOPLE FEEL BETTER!

TREES ARE *SO* IMPORTANT!! THEY CLEAN THE AIR!

AND THEY HELP *SAVE ENERGY!*

WOW! I THINK I'VE FOUND THE ULTIMATE AMBASSADORS FOR THE *ONE MILLION TREES* INITIATIVE!

AND, OF COURSE, I WILL HELP YOU TWO GET THE GRANT PROCESS STARTED!

THE NEXT DAY...

BE KIND

MR. JHA
PRINCIPAL

YOU

HERE ARE THE FORMS TO FILL OUT FOR THE TREE GRANTS, MR. JHA.

THE GRANT MONEY WILL COVER A LOT OF THE COST OF THE TREES!

MY DAD SAYS IT ONLY TAKES A FEW MONTHS FOR THE GRANT TO BE REVIEWED - AND HOPEFULLY APPROVED!

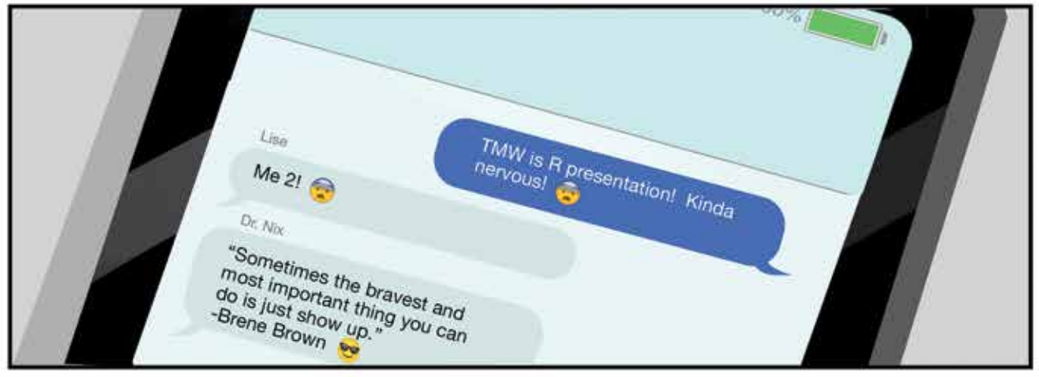
PEOPLE FROM ALLIANT ENERGY MIGHT EVEN HELP WITH THE PLANTING!

AND WE THOUGHT IT WOULD BE GREAT FOR STUDENTS AND TEACHERS TO HELP TOO!

WHAT A AMAZING IDEA!

WE LOST A LOT OF TREES IN THE SUMMER STORM.
NOW WE CAN ALL WORK *TOGETHER* TO BRING TREES BACK!

OH YEAH... *WHERE* TREES ARE PLANTED REALLY MAKES A DIFFERENCE IN SAVING ENERGY!
I'LL MAKE THE OWL ON OUR POSTER LOOK LIKE *HUSH!*
TREES!


Lisa
TMW is R presentation! Kinda nervous!
Me 2!
Dr. Nix
"Sometimes the bravest and most important thing you can do is just show up."
-Brene Brown

THE NEXT DAY AT SCHOOL...
...THAT IS WHY TREES ARE ONE OF THE MOST IMPORTANT LIVING THINGS IN OUR ENVIRONMENT!
TREES!

SOON WE WILL BE RECEIVING THE TREES TO PLANT HERE AT OUR SCHOOL.
TREES!

WHEN THEY ARE FULLY GROWN, ONE MILLION TREES CAN *SEQUESTER UP TO *ONE MILLION TONS OF CO² IN OUR ATMOSPHERE!
AND YOU ALL CAN BE PART OF THIS DIFFERENCE BY SIGNING UP FOR OUR TREE PLANTING TEAMS!
ONE MILLION
TREES
Alliant Energy
*SEQUESTER- TO SEPARATE FROM THE BREATHABLE AIR

DNR

WISCONSIN DEPT. OF NATURAL RESOURCES

The Department of Natural Resources (DNR) is dedicated to preserving our beautiful outdoor spaces through efforts that range from the conservation of state parks to the careful management of our wildlife populations and the health of our waterways. **Alliant Energy** shares this concern for the forests, wildlife and the environment, and so has partnered with the DNR in Iowa and Wisconsin on reforestation efforts. **Learn more about the DNR's work in Iowa at https://www.iowadnr.gov/ and in Wisconsin at https://dnr.wisconsin.gov/.**

Hoo's Woods Raptor Center
Raptor Education & Rehabilitation Since 1998

You might not ride raindrops with your own Dr. Nix in real life, but you can still visit a scene from the *Power Chronicles*. At **Hoo's Woods Raptor Center** in Milton, Wisconsin, you can talk with one of the graphic novel's characters and meet eagles, hawks, owls, falcons and vultures. Dianne Moller created the center in 1998 to rescue and rehabilitate injured raptors, and to educate the public about wildlife and habitat. **Learn more about Hoo's Woods Raptor Center at hooswoods.org.**

TREES FOREVER
Planting a better tomorrow™

Have you been inspired to plant trees in your community? **Trees Forever** plants for a better tomorrow and invites the community to join in. **Alliant Energy** and Trees Forever work together on the **One Million Trees Community Tree Planting program** – the same program that gives Akilah her grant – to fund and implement tree-planting projects in various communities throughout Iowa and Wisconsin. Trees Forever is based in Marion, Iowa, and creates cutting-edge programs and innovative practices to plant and care for trees and the environment. **Learn more about its work and find ways to get involved at treesforever.org.**

Alliantenergy.com/powerchronicles

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