Glitchtown At-Home Toolkit

Deloitte, in collaboration with The Ella Project (an initiative that was created to ensure that young children have a hero with a background and passion for STEM and entrepreneurship to identify with), is excited to provide you with an exciting resource to engage children at-home. This resource features a comic starring Ella the Engineer, the hero of the story, who has a passion for knowledge and learning. The comic in this interactive toolkit features Catherine Bannister, development and performance leader at Deloitte Services LP.

This toolkit will provide you with all the resources you need to:
1. Read through the comic or watch Catherine’s story time video on YouTube (~15-20 minutes)
2. Engage in a discussion around mentorship (~5-8 minutes)
3. Complete the activities from Ella’s Innovation Lab (~10-15 minutes)

We hope you enjoy this fun and educational resource. Please take pictures and share them with us using #LearningwithElla!
Vocabulary

1. **Meltdown**: A mental breakdown or tantrum
2. **Dependency**: A subordinate thing (something which relies on something else)
3. **Sewage**: Waste water
4. **Uniformity**: When things are all the same
5. **Mischievous**: Causing trouble in a playful way
6. **Demoralizing**: Causing someone to lose hope
7. **Disruptive**: Causing a disturbance or problem
8. **Glaze**: To become unfocused through boredom
9. **Impenetrable**: Impossible to pass or enter
10. **Discourage**: Cause someone to lose confidence or enthusiasm
Welcome to the world of ELLA THE ENGINEER!

Getting kids to understand the importance of science, technology, mathematics, coding, engineering, and entrepreneurship is a vital and worthwhile goal. It helps them feel empowered, creative, and confident in addition to building essential problem-solving skills that they can use throughout their lives. This series of comic books, produced through a collaboration between Ella Adventures and Deloitte, promotes female leadership and encourages young women to explore the wonderful world of STEM – and have fun along the way!

We hope you enjoy reading it as much as we enjoyed making it!

THE CAST

Ella The Engineer: The irrepressible hero of the story, Ella has a passion for knowledge and learning. Relentlessly curious, technologically adept, and a dedicated problem-solver, Ella is always willing to help her friends and colleagues solve whatever problems come their way – with confidence and style!

Bethany: Bethany is a dedicated civil servant with a deep understanding of technology. When bureaucracy is befuddled by bugs (or perhaps just her bumbling boss) Bethany calls in the city’s “Junior Tech Liason” - Ella the Engineer!

Mayor Denkle: Kind-hearted, good-natured, and (unfortunately) prone to panic-attacks when things don’t go according to plan, Mayor Denkle relies on the skills and abilities of experts - like his logistical wizard Bethany - to help keep the town running smoothly.

Glitch: This digital mischief-maker delights in algorithmic anarchy and computerized chaos! His tireless antics often create problems for people that live in the “real” world. Thankfully Ella and her friends are there to bring order to chaos and debug his technological tomfoolery!

Catherine Bannister: Catherine is a managing director in Deloitte Services LP. She currently leads performance and development for Deloitte’s professionals. Catherine is also the architect of Deloitte’s Tech Fluency program which originated in Deloitte Consulting’s Technology practice to develop and cultivate breadth and depth of technical capabilities; as well as Deloitte’s Tech Savvy program which enables Deloitte professionals to be conversant in disruptive technologies. Being Tech Savvy at Deloitte extends to an awareness of and approach to what it means to advise, implement and operate “ethical tech.”

In collaboration with Deloitte.
CRASH!

Huh?

I'm not lying, it escaped!

The new smartvacuum just ran away? Really?!

Deja de tostadora!*

*Stop, toaster!

Bonk!

Ouch!
Apologies, Ella! My toaster seems to have a mind of its own today.

Do you want me to take a look at it, Ms. Blanca?

I can fix almost anything.

Thank you dear. Maybe on your way home? I wouldn't want to keep you from enjoying this beautiful day.

Ok, sure!

Thanks, Ms. Blanca!

Oh no!
MAYBE IT’S NOT SUCH A NICE DAY AFTER ALL.

WRITER: MISS LASKO-GROSS  ARTIST: BOBBY TIMONY  COLORIST: NAYOUNG KIM  PRODUCER: RON PERAZZA  SPECIAL THANKS TO: ANTHONY ONESTO, LAUREN HUGHES, CATHERINE BANNISTER AND JANET FOULTY
PING!

Bethany@mayorsoffice

City in chaos (obviously) we need your help (also obvious.)

On my way

PING!

Please hurry! Mayor in epic meltdown, hiding under his desk

THE DMV SENT MY TWO YEAR OLD A DRIVER'S LICENSE!

WELL, MY CAR PARKED ITSELF-

AWESOME!

-IN THE SWIMMING POOL.
WHERE ARE YOU GOING, LITTLE GIRL?
DON'T MIND HIM, ELLA. YOU CAN GO THROUGH.
DUDE, THAT'S ELLA THE ENGINEER!
THAT "LITTLE GIRL" IS THE JR. TECH LIAISON, AND OUR BEST HOPE OF GETTING BACK TO NORMAL!

HI, BETHANY! SORRY IT TOOK SO LONG, THE CITY BUSSIES KEPT GETTING RE-ROUTED IN CIRCLES!
I'M JUST SO GLAD YOU'RE HERE! I CAN'T FIGURE THIS OUT AND THE MAYOR...
WHERE'S THE MAYOR?
THERE'S A... UM, "RUBBER DUCKIE SITUATION"...

Your package is delivered!
Your package is delivered!
Your package is delivered!

OH NO!
"...I just ordered one!

What do you think is happening?

Might be a computer bug. Can you find it and "patch us" back to normal?

I don't know. This seems more complex than fixing a simple error or dependency.

Is your logistical tech still working?

Yes, fortunately.

There isn't just one type of thing going wrong.

Where are all the complaints coming from? Maybe we can find the origin of the chaos.

Good thought, but no obvious pattern.

Your package is delivered!
WHERE ARE THE WORST INJURIES?

A SCHOOL PRINCIPAL TRIPPED ON A RUBBER CHICKEN AND BRUISED HER ELBOWS. SIGNIFICANT ENOUGH?

SIGNIFICANT NO... BUT A LITTLE FUNNY.

DEFINITELY NOT HOW SHE SAW HER DAY GOING.

OKAY THEN, WHAT TYPE OF BUSINESSES ARE BEING TARGETED?

PULLING UP DETAILS, NONE SPECIFICALLY, THE NORTH STREET LAUNDROMAT IS "CLEANING" CLOTHES WITH RAW SEWAGE-

SMASH!

MAYBE THIS ISN'T BEING DONE INTENTIONALLY?

THAT'S ALWAYS A POSSIBILITY-

HMMN... DID YOU GET ANY NON-RUBBER DUCKIE DELIVERIES TODAY?

YES, OFFICE SUPPLIES AND MAIL WERE COMPLETELY NORMAL.
This isn't random. If there was uniformity to the problems (like all deliveries being endless) maybe, but they seem designed for mischievous humor.

Is everyone being issued driver's licenses? Or-

No. Just babies... oh, and one poodle.

AAAAA! There's a robot assassin trying to kill me!

No sir. It's just a malfunctioning vacuum, you're fine.

The Glitch, a digital mischief maker.

I've defeated him before but his methods seem to have evolved.

I'm not sure I know what to do.

The Glitch!

What glitch?
Two hours later...

I must be missing something!

He’s accessing all these different smart devices one by one... they’re not broken or irreversibly hacked... just played with and discarded.

Knock Knock

It’s a cake delivery for you.

What an excessively wordy and demoralizing cake.

He’s right, though. I’m not sure how to solve so many unique problems on varied devices.

Still, you’ll never stop me! You’re too slow, not smart enough! I’m everywhere! I’ve got all new tricks; you’re not up to the challenge. Quit before you embarrass yourself.

My tech fluency mentor from Deloitte, Catherine Bannister!

She’s helping our entire department become more tech savvy. My staff used to glaze over at the mere mention of incorporating disruptive technologies.

Wait! I know exactly who you should talk to! Let me text her a heads up and details of our situation.

Who?
AND NOW? SHE’S HELPED ME
GUIDE THEM FROM
LOOKING AT ANYTHING
MORE CURRENT THAN
A FLIP PHONE AS
IMFENETRABLE
TECH...

...TO
APPROVING THE
EXPERIMENTAL
5G NETWORK
WHICH WE
TURNED ON
THIS MORNING.

WOW 5G!
“THE INTERNET OF
THINGS!”

CHECK THIS OUT!

GOOD MORNING
BETHANY, AND THIS
MUST BE ELLA?

NICE TO
MEET YOU!
UNFORTUNATELY
YOU’RE JUST IN
TIME TO WATCH
ME FAIL.

DON’T BE
SO HARD ON
YOURSELF!

FAILURE IS
OFTEN AN
EARLY STAGE OF
PROBLEM
SOLVING.

HAVE YOU
HEARD IF THE
CHAOS IS
SPREADING
TO OTHER
TOWNS?

IT’S NOT.
SO ASK
YOURSELVES
WHAT’S DIFFERENT
ABOUT THE SMART
DEVICES HERE?

Bee-doop!
WAIT, INTERNET OF THINGS!

WHERE ARE THE SERVERS FOR THE EXPERIMENTAL 5G OPERATING FROM?

IT'S A CUTTING EDGE FACILITY WE CALL THE BOX.

ACTUALLY, THAT WAS THE FIRST COMPLAINT OUR OFFICE RECEIVED, SAM! ALL EMPLOYEES LOCKED OUT.

BUT THAT'S NOT FUNNY!

WHAT?

LOCKING PEOPLE OUT OF AN OFFICE BUILDING ISN'T FUNNY!

THE GLITCH WOULDN'T HAVE DONE THAT UNLESS HE NEEDED THOSE SYSTEMS TO ACCESS EVERYONE'S SMART OBJECTS.

BETHANY, I'M GUESSING THAT INSIDE THE BOX THERE'S A "BACKDOOR" SYSTEM FOR LAW ENFORCEMENT TO ACCESS PEOPLE'S DEVICES IN AN EMERGENCY?

YES!

THAT'S HOW THE GLITCH IS CONTROLLING THEM! I NEED TO GET INTO THE BUILDING TO STOP HIM!
THE TECHNICIANS WHO WORK THERE HAVE BEEN TRYING TO GET BACK IN FOR HOURS.

COULD WE CUT THE ELECTRICITY?

EVERY TIME THEY DIGITALLY UNLOCK A DOOR, IT RESEALS ITSELF AND CHANGES THE PASS CODES.

NOPE, SOLAR POWERED WITH A BACK UP GENERATOR. TOO ADVANCED FOR IT'S OWN GOOD.

AHHHHHH! HE'S THOUGHT OF EVERYTHING. IT'S TOO COMPLEX!

ELLA, BREAK IT DOWN INTO SMALLER TASKS. JUST FOCUS ON GETTING IN.

DOES THAT HAVE THE SAME SECURITY AS THE OTHER ENTRANCES?

SIMILAR, BUT THE WEATHER SENSITIVE LOCK WILL YIELD BRIEFLY FOR PACKAGES IF THE TEMPERATURE DROPS AND THE KEYPAD FREEZES.

WE CAN HANG OUT A FEW MONTHS WAITING FOR SEVERE WINTER WEATHER.

I COULD TRY TO REPROGRAM THE KEYPAD TO "THINK" IT WAS FROZEN.

I'VE GOT IT! THANK YOU CATHERINE! THANK YOU BETHANY!

DON'T FORGET THE GLITCH IS PUTTING ALL OF HIS ENERGY INTO FIGHTING THE KIND OF DIGITAL SOLUTION HE EXPECTS YOU TO FIND.

GOOD LUCK ELLA!
AH! LITTLE ELLA HAS FINALLY ARRIVED.

YOU'RE GOING TO FAIL AND EVERYONE WILL KNOW YOU'RE NOT AS SMART AS YOU THINK YOU ARE.

HELLO, GLITCH!

NOTHING YOU'VE TRIED SO FAR HAS WORKED.

YOU WOULDN'T SAY SUCH MEAN THINGS IF YOU WEREN'T THREATENED BY ME!

SO WHAT? THAT'S PART OF SOLVING PROBLEMS.
NO! WHAT ARE YOU DOING?!

Chemically melting the ice with salt, allowing the water molecules to pick up energy...

CLICK!

...which in turn, drops the temperature within this enclosed space.

SEE YOU SOON!

NO!

WHUMP!
Hope you’re not scared of the dark!

Nope!

But you’re clearly scared of what I’ll accomplish, if you can’t discourage me.

Expel Unauthorized User

Bye, Glitch!
Actually, Mr. Mayor, I really don't.

But I ask for help when I need it and never give up.

That's how I learn the answer.

I'll be back!

And I'll be ready!
Discussion on mentorship

1. Engage in a discussion around mentorship using the definitions on the next page. Explain what mentorship is, who your mentors are, who you have mentored, etc.
   • Ask your child who is a mentor to them at school, through extracurricular activities, etc.
   • Ask your child who they mentor or could mentor

2. Use the activities from Ella’s Innovation Lab to reinforce the concept of mentorship. If you are unable to print out the templates, have your child use them as inspiration.
Definitions

**Mentor (n):** An experienced and trusted advisor. Someone who helps you and shows you how to do things.

**Mentor (v):** To advise, help, or train someone
Complete the following activities with your child:

1. Write and deliver a thank you note to your mentor

2. Brainstorm with your child and have each of you write down 3 ways you could mentor someone. Hang your mentorship commitments on the fridge to hold you both accountable.

3. Complete the vocab crossword and word search
Dear ______________________, 

__________________________

__________________________

__________________________

__________________________

__________________________

__________________________

__________________________

__________________________

__________________________

Sincerely,

__________________________
Names: _________________________

Mentorship commitments

1. ______________________________
   ________________________________
   ________________________________

2. ______________________________
   ________________________________
   ________________________________

3. ______________________________
   ________________________________
   ________________________________
Glitchtown crossword puzzle clues

**Down**
1. When things are all the same
2. A company which solves difficult business problems
3. A mental breakdown or tantrum
5. To become unfocused through boredom
7. Causing a disturbance or problem
11. The protagonist in the story

**Across**
3. Causing trouble in a playful way
4. To cause someone to lose confidence or enthusiasm
6. An experienced and trusted advisor. Someone who helps you and shows you how to do things.
8. Mentor from Deloitte
9. A subordinate thing (something which relies on something else)
10. Causing someone to lose hope
12. Impossible to pass
13. Waste water
Glitchtown word search

Impenetrable  Mischievous  Dependency  Demoralizing
Disruptive  Discourage  Uniformity  Meltdown
Glaze  Sewage
Answer key: *Glitchtown* crossword puzzle

**Down**
1. When things are all the same *(uniformity)*
2. A company which solves difficult business problems *(Deloitte)*
3. A mental breakdown or tantrum *(meltdown)*
5. To become unfocused through boredom *(glaze)*
7. Causing a disturbance or problem *(disruptive)*
11. The protagonist in the story *(Ella)*

**Across**
3. Causing trouble in a playful way *(mischievous)*
4. To cause someone to lose confidence or enthusiasm *(discourage)*
6. An experienced and trusted advisor. Someone who helps you and shows you how to do things. *(mentor)*
8. Mentor from Deloitte *(Catherine)*
9. A subordinate thing (something which relies on something else) *(dependency)*
10. Causing someone to lose hope *(demoralizing)*
12. Impossible to pass *(impenetrable)*
13. Waste water *(sewage)*
Answer key: Glitchtown word search
ABOUT THE ELLA PROJECT

The Ella Project was created to ensure that girls passionate about science, technology, math, engineering, computers, entrepreneurship, and other similar interests have a hero with whom they can identify. In addition to publications like Ella The Engineer, The Ella Project aims to bring together remarkable women in one place, share their inspiration, provide a glimpse into how they’ve achieved success, and offer advice to future leaders.

LEARN MORE ABOUT THE ELLA PROJECT AT WWW.THEELLAPROJECT.COM

ABOUT DELOITTE

Deloitte provides industry-leading audit, consulting, tax and advisory services to many of the world’s most admired brands, including nearly 90 percent of the Fortune 500 and more than 5,000 private and middle market companies. Our people work across the industry sectors that drive and shape today’s marketplace — delivering measurable and lasting results that help reinforce public trust in our capital markets, inspire clients to see challenges as opportunities to transform and thrive, and help lead the way toward a stronger economy and a healthy society. Deloitte is proud to be part of the largest global professional services network serving our clients in the markets that are most important to them. Our network of member firms spans more than 150 countries and territories. Learn how Deloitte’s more than 312,000 people worldwide make an impact that matters at www.deloitte.com.