GoPro Hedgehog 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 Janet Foutty, executive chair of the board at Deloitte.

This toolkit will provide you with all the resources you need to:
1. Read through the comic or watch Janet’s story time video on YouTube (~10-15 minutes)
2. Engage in a discussion around problem solving (~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. **Plunder**: To steal from a place using force
2. **Substance**: What something is made out of
3. **Mentor**: An experienced and trusted advisor. Someone who helps you and shows you how to do things.
4. **Agonize**: To be very worried about something
5. **Synthetic**: Something combined or made using a chemical process
6. **Analytics**: Analysis of numbers and data
7. **Fragile**: Easily broken or damaged
8. **Discontinued**: Something which is no longer available
9. **Hyperbole**: Exaggerated statements or claims which you don’t mean for people to believe
10. **Landlocked**: A place surrounded by land, where there is no nearby water
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!

Ms. Bindle: Ella’s kind-hearted teacher is devoted to the betterment of her students and takes special care to ensure that she connects each child with methods of learning that best suit their particular needs and abilities – even if that means strapping a camera to a hedgehog!

Guinevere The Hedgehog: A connoisseur of fine fruits and vegetables and budding cinematic auteur. Don’t interrupt her lunch!

#Plunder: The motto of this mustachioed malcontent might as well be “Steal Everything!” His greed knows no bounds, particularly where technology is concerned. From the latest device to vintage hardware, #Plunder’s goal is to take it all!

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!

Janet Foutty: Janet is the chair and CEO of Deloitte Consulting. She is a frequent author, popular public speaker, and regularly communicates about technology disruption, and advocates for women in technology, and science, technology, engineering and mathematics (STEM) education.

In collaboration with Deloitte.
I-I GET WHY #PLUNDER TOOK ALL OF OUR STUDENT’S COMPUTERS, B-BUT DID HE HAVE TO TAKE GUINEVERE?

WHAT ARE THEY GOING TO DO WITH A SWEET LITTLE HEDGEHOG?

I THINK HE WAS PROBABLY AFTER THE CAMERA GWEN WAS WEARING.

IT’S GOING TO BE ALRIGHT, MS. BINDLE. I’LL FIND GWEN AND THE COMPUTERS.

THANK YOU, ELLA!
But how will you do that?

You may be my best student and our resident tech expert, but even the police don’t have any leads.

Well, they’re looking for a super villain, and I’m looking for a hedgehog!

The police said it was an ordinary size 10 work boot. Very common, not a helpful clue.

Did they notice that it’s not exactly the same dirt as the flower beds outside?

It’s not?

There’s an orange substance mixed in.

You’re right!

#Plunder was standing on something orange before coming here.
Cheetos? Crayons? Orange peels?

Someone with a terrible fake tan?

Hey! What about the camera? Can't we turn it on and see where Gwen is?

That's a great idea!

We could see real-time photos from my phone, but...

...we'll only receive images if Gwen is near wifi.

We'll get a pic and find her so quickly!

I hope that wherever she is, Gwen is safe!
MEANWHILE, AT
#PLUNDER’S SECRET
HIDEOUT:

SEARCHING
FOR SIGNAL...
SIGH
STILL SEARCHING.
UNLESS GWEN FINDS HER WAY TO A WIFI HOTSPOT WE’VE GOT NOTHING.

I THOUGHT I COULD SOLVE THIS EASILY!
DON’T GET DISCOURAGED.
REAL WORLD PROBLEMS ARE ALWAYS MESSIER THAN HOMEWORK.
TRUE!

WHAT ABOUT THOSE ORANGE FLECKS YOU FOUND IN THE FOOTPRINT?

OKAY, DO YOU HAPPEN TO HAVE A GAS CHROMATOGRAPH MASS SPECTROMETER?

HA HA HA HA HA HA!

WHAT’S SO FUNNY?

I JUST WANT TO ANALYZE THE CHEMICAL MAKE-UP OF THE MATERIAL?

WE HAVE TO HOLD BAKE SALES JUST TO AFFORD BASIC LAPTOP REPAIRS.

THAT KIND OF GEAR COSTS MORE THAN A HOUSE!

ELLA, THIS IS A PUBLIC SCHOOL!

SO?
But if you really think it will help, I can call in a favor with my mentor Janet Foutty at Deloitte.

Thanks, Ms. Bindle!

I'm sending you the address of the lab.

Keep an eye on your phone, I'll text you any screen shots I get from Guinevere.

Tap tap tap

Good luck!

I hope Plunder remembers to feed Gwen!

Otherwise he'll have one super cranky hedgehog to deal with!

Subject Guinevere snack time

Thank you!
Hi Ella! Ms. Bindle told me you've found a clue to solve the computer heist.

It's lucky I was here today. I was meeting with the head of technology.

Nice to meet you, Janet!

This place is so amazing!

I hope I don't waste your time. I must just seem like some dumb kid.

Hardly! It's great to meet you. No need to apologize or put yourself down.

I was hoping for a simple solution but the camera didn't work and this orange material might not even be significant.

Remember that there are multiple paths to an answer, so try not to agonize over the one perfect solution.
Listen for the threads of the problem, take your time.

It's Ms. Bindle!

There's motion blur and...

Is that a fruit salad?

Thanks, I was just feeling a little overwhelmed and intimidated by all of this.

We got a pic from Gwen, but it doesn't really make sense!

Come back with my lunch!

Click! Click!

Click!
WE GOT ANOTHER TWO IMAGES BEFORE THE BATTERY DIED!

AND WE HAD THE LAB TEST THE SYNTHETIC ORANGE SUBSTANCE AND THEN APPLIED ANALYTICS TO THE DATA TO FURTHER NARROW IN ON WHAT IT MIGHT BE.

WE DETERMINED IT’S A STYROFOAM MOST OFTEN USED IN PACKING PEANUTS.

HMMMM, PACKING PEANUTS!??

WELL, BETWEEN THAT AND THE NEW PICS, I THINK I CAN FIND GUINEVERE AND THE STOLEN COMPUTERS!

THANK YOU, JANET!
WOW! IT LOOKS LIKE THE VISIT TO DELLOITTE HAS INSPIRED YOU.

TOTALY! WE CAN USE ANALYTICS TO NARROW OUR SEARCH.

WE FOUND OUT THAT THE ORANGE STUFF WAS FROM UNUSUALLY FRAGILE PACKING PEANUTS.

THEY USED TO BE THE TRADEMARK OF SHIPPY CO. BUT WERE DISCONTINUED IN 2010 BECAUSE EVERYONE HATED THEM!

CHECK IT OUT!

OMG these are literally the worst thing in human history! *Becky B.

Hyperbole, middle city.

SHIPPY IS A LOCAL COMPANY THAT HAS TEN LOCATIONS. WE CAN'T SEARCH THEM ALL, BUT WE CAN COMPARE DATA TO ELIMINATE ANY ESTABLISHED AFTER 2010.

...BECAUSE THEY WOULD NEVER HAVE HAD THOSE PEANUTS!
We can cross off the ones without useful geographical clues...

...because they won't help us figure out the location.

So we'll find plunder at the remaining shippy address that is both next to a parking lot and the river.
# 6 Main Street?

Near the river, but... oh, no parking lot.

#199 South Lee Circle?

Nope, landlocked.

#3 Mill River Way?

That’s it! Next to the river and a parking lot!

Should we call the police?

Not yet, we need to check our work.
THAT’S THE DOOR FROM GWEN’S PHOTO!

HELLO, POLICE?

I HOPE GUINEVERE IS STILL OKAY!

DON’T WORRY, MS. BINDLE! SHE’S TOUGHER THAN SHE LOOKS.

WHERE ARE YOU, RAT!?
GOT YA!

YOU'RE UNDER ARREST FOR THEFT AND ENDANGERMENT OF AN ADORABLE ANIMAL!

FREEZE, POLICE!

YOU MESSED WITH THE WRONG HEDGEHOG, BUSTER!

THE END!
Discussion on problem solving

1. Begin an exchange around problem solving by discussing the following questions:
   • What did Ella do when she didn’t think she could solve the problem?
   • How did analytics help Ella solve her problem?
   • What did Ella do before calling the police?

2. Use the activities from *Ella’s Innovation Lab* to reinforce the concept of problem solving. If you are unable to print out the templates, have your child use them as inspiration.
Complete the following activities with your child:

1. Complete the **vocab crossword** and **word search**

2. Create a **1 box comic** showing how you solve really hard problems. Write a caption for your comic using 2 of the vocabulary words!

3. Complete the practice **math problems**
GoPro Hedgehog crossword puzzle clues

Down
2. Analysis of numbers and data
3. To steal from a place using force
4. An experienced and trusted advisor. Someone who helps you and shows you how to do things.
5. Easily broken or damaged
6. Exaggerated statements or claims which you don’t mean for people to believe

Across
1. What something is made out of
7. Something combined or made using a chemical process
8. Something which is no longer available
9. To be very worried about something
10. A place surrounded by land, where there is no water
GoPro Hedgehog crossword puzzle
GoPro Hedgehog math problems

Solve the following problems. Be sure to show your work and put units on your answers!

1. Ella’s school is 15 minutes from Plunder’s secret hideout. If Ms. Bindle stops for 6 minutes to get gas, how many minutes will it take for them to arrive?

2. There are 10 total Shippy locations. Any location built after 2010 can be eliminated from the search. If 6 were built after 2010, how many should Ella and Ms. Bindle pinpoint on the map?

3. Gwen eats 3 strawberries per meal and she eats 4 times per day. How many strawberries does Gwen eat in 1 day?

   • **Bonus:** How many strawberries does Gwen eat in 7 days?

4. Ms. Bindle received 65 photos from Gwen’s camera. Unfortunately, 9 of them were blurry and had to be deleted. How many photos were usable?
Answer key: GoPro Hedgehog crossword puzzle

Down
2. Analysis of numbers and data (analytics)
3. To steal from a place using force (plunder)
4. An experienced and trusted advisor. Someone who helps you and shows you how to do things. (mentor)
5. Easily broken or damaged (fragile)
6. Exaggerated statements or claims which you don’t mean for people to believe (hyperbole)

Across
1. What something is made out of (substance)
7. Something combined or made using a chemical process (synthetic)
8. Something which is no longer available (discontinued)
9. To be very worried about something (agonize)
10. A place surrounded by land, where there is no water (landlocked)
1. Ella’s school is 15 minutes from Plunder’s secret hideout. If Ms. Bindle stops for 6 minutes to get gas, how many minutes will it take for them to arrive? **(21 minutes)**

2. There are 10 total Shippy locations. Any location built after 2010 can be eliminated from the search. If 6 were built after 2010, how many should Ella and Ms. Bindle pinpoint on the map? **(4 locations)**

3. Gwen eats 3 strawberries per meal and she eats 4 times per day. How many strawberries does Gwen eat in 1 day? **(12 strawberries)**
   
   • *Bonus:* How many strawberries does Gwen eat in 7 days? **(84 strawberries)**

4. Ms. Bindle received 65 photos from Gwen’s camera. Unfortunately, 9 of them were blurry and had to be deleted. How many photos were usable? **(56 photos)**
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

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Girl Power

SCIENCE
TECHNOLOGY
MATHEMATICS
ENGINEERING
CODING
COMPUTERS
ROBOTICS
ENTREPRENEURSHIP
MEDICINE
ART
ECONOMICS
LAW
INFORMATICS
MEDIA
PROGRAMMING
LEADERSHIP
MECHANICS
ELECTRONICS
ANALYTICS
BIOLOGY
PHYSICS
CHEMISTRY
ASTRONOMY
STATISTICS
AERODYNAMICS
RESEARCH
GEOLOGY
EXPLORATION
DISCOVERY
FUN

Ella’s Adventures continue at
THEELLAPROJECT.COM

In collaboration with
Deloitte.
Resources for children

In the comic, GoPro Hedgehog, there is reference to Ella and Ms. Bindle wanting to call and involve the police to help them. Given the recent events in the US involving the police in 2020, we understand that what children are seeing on TV or reading on social media and the news can be quite complex and confusing. Therefore, we are providing optional and additional resources for your child to help them better understand systemic racism and social injustice.

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Resources for adults

In the comic, GoPro Hedgehog, there is reference to Ella and Ms. Bindle wanting to call and involve the police to help them. Given the recent events in the US involving the police in 2020, we understand that what children are seeing on TV or reading on social media and the news can be quite complex and confusing. Therefore, we are providing optional and additional resources for you to support conversations with your child in order to help them better understand systemic racism and social injustice.

Books

Articles

Movies

Other Media