

BEHIND THE CODE Solving Problems with Robots

By 3/4-218 & 3-225 at P.S. 197 John B. Russwurm



Behind the Book New York Behind the Book's mission is to develop engaged readers and writers in underserved NYC public schools by designing and delivering programs that are multi-disciplinary, culturally responsive, and promote deeper connections to books and their authors.



Visit us at www.behindthebook.org

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Special Thanks: Thank you to Noah for hosting us at RoboFun



Class 3/4-218 "The Good Thinkers" would like to thank our families and school administrators for devoting their time in supporting us throughout this project. We would like to thank our teachers Mrs. Rambaran, Mrs. Dennis, Ms. Jennings, Mr. Losey, and Mr. Noble, for empowering us to become better students. We are excited about our greatness and would like to thank everyone that believed in us and allowed us to show our intelligent minds at work!

3-225 would like to dedicate this book to our families & friends. Thank you to our teacher Ms. Jones and teachers assistant Ms. Latrice for supporting us throughout this journey and helping us to become better readers and writers. Also, the Behind the Book staff for all the wonderful experiences we shared while learning about coding and building robots, such as receiving *Rox's Secret Code* and meeting the authors. Also thank you for taking us to RoboFun Facilities to build robots. We especially thank you for supporting us in creating this book. Thank you, Principal Spann for bringing this wonderful opportunity to our school. We really appreciate everyone that was involved in this amazing experiment. Thank You, Thank You, Thank You.

About the Program





Robots are taking over Harlem, but don't worry - they're here to help. Classes 3/4-218 and 3-225 explored computer coding and designed their own robots after reading Rox's Secret Code by Mara Lecocq and Nathan Archambault. In the first workshop students quided Denise in making a peanut butter and jelly sandwich - not as easy as it sounds. They quickly learned from the mess they made that the key to coding is providing detailed, sequenced instructions. Using the coding app that came along with the book, students designed bots that could move and pick up objects.

During the author workshop students decided the problem they wanted their robots to solve.

Mara and Nathan then guided them in identifying and sequencing the robot's functions



and creating it's design. The class took a field trip to Robofun, a STEAM learning lab, where they built and programmed Lego robots to spin tops.

Back in the classroom, Behind the Book teaching artist Barbara Coccioletti guided the students in designing 3D robot collages using materials including aluminum foil, bubble wrap, buttons, and pipe cleaners. Next, Behind the Book writing coaches worked with the class to write descriptive essays about the look, function, and coded commands of their problem-solving robots.

Immersed in the world of coding and inspired by *Rox's Secret Code*, the students designed the artificial intelligence of their dreams. We're excited to share their amazing work with you!



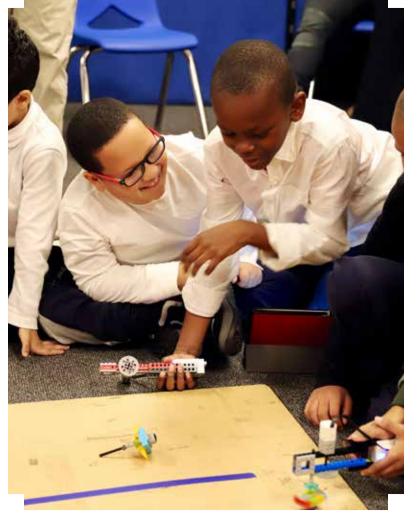






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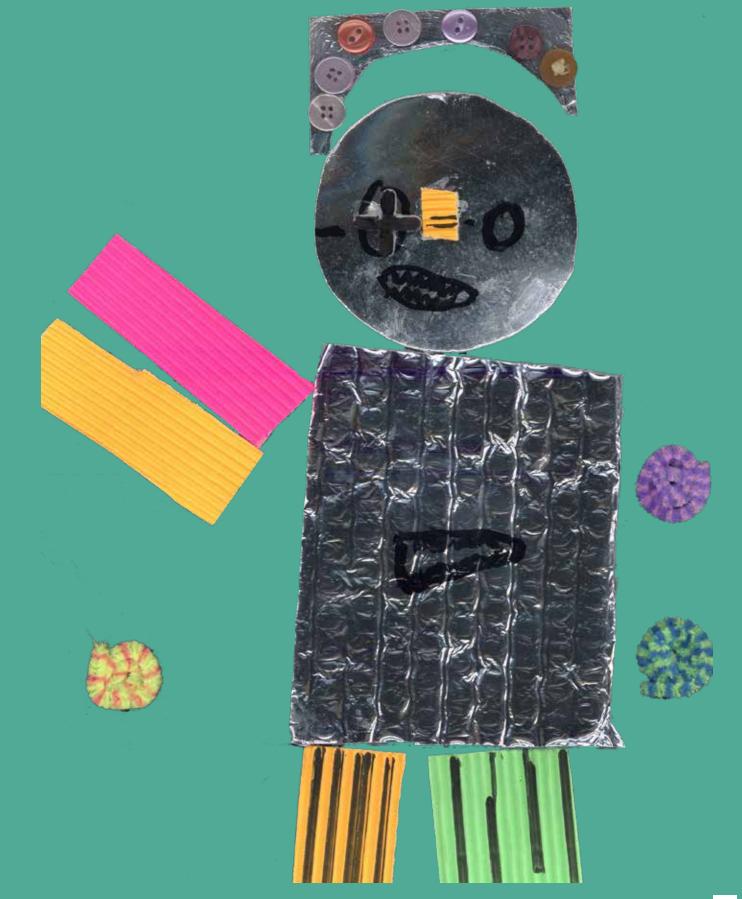
Mr. Cats by Dynisty

	Mr. cats is my robot name.
t	te helps me with my home work. Mr. cats cooks
	for me-
	Mh. cuts can solve subtraction proble 17 am not
	goot at regrouping, how to regroup and get the
	right answer the does not full he sust helps me.
1	an better at regrouping thanks to ms, cats my
/	non purch in the code to help me with my
k	pomeoork and Mr, cats does what ever I need Mr. cats
1	to do I to MY mon Punch in the code for it, Mr. cats
	runs with me when I want to Play, My cats is a
	good friend to have he cooks and help me with
	my homework. Mr. cats helps out my mon eind
1	neamy mon loss not have to work me to
1	much be cause. Mr. eats helps me al I ot.

Robot Helper

by Jaylen

Robot Helper is a problem Solver. do not like to do home work, but Robot Helper does. Robot Helper helps me to do my Homeworker, I coded my Robot Helper to help With my homework and write with a pencil My Robot will walk over to the table With my book and start doing my homework, Robot HelPer can Write 30 all of my writing picces he does. I Know I am suppose to do, but he does because he is a botter writer then me. Robot helper is silver and blue, He is Churty and when he walks he sounds like a hor trotting and he is 3 feet tall. Robot helper is the best bucause I finish my home work much faster and he is good at what he does I Punck the codes in and away he goes, Now I have time to play my games,



My Robot

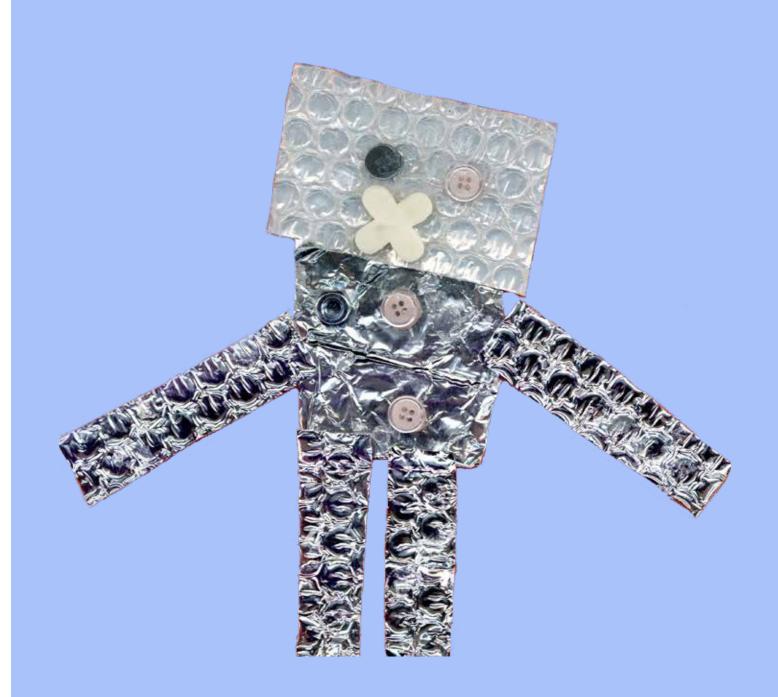
by Jerome

My robot's name is Rob Sonica My ROBOT'S (0100 18 6148) The problem my Robot Will help me SOLVE'S doing My home Work When I Come home from school. I want to Relax beldyse I'm sleepy. The function of My RObotis a home WOLK master and a cooking plo. My Robot Will fix my problem by collecting my bookbag ematylag it and by getting MON'S 18 i pe's. The fyn(tion's Uf My Robot Will be hapacking by bojckback

do my home work, (lean My laundry,
play gamers, and wake me up in The

norning for school, The sound's and
shape's of my Robot is square and
he speakers lond and rumbling.

The cose to my Robot's 15 L273, 1pry. The cose to My ROBOT'S 15 L273,1p14. I love my Robot!





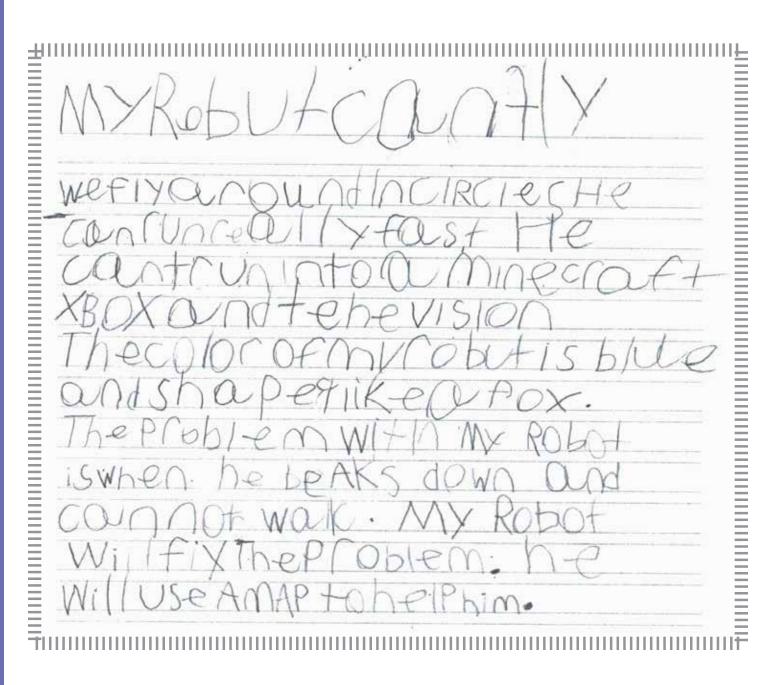
Mr. Cats by Joshua

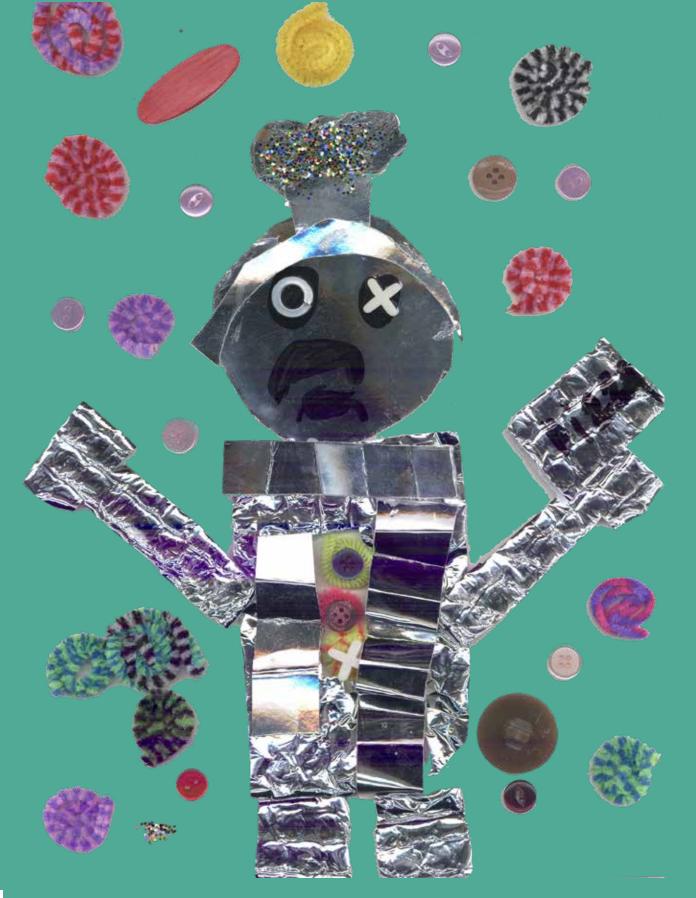
Poss um han The problem my hobot Willsolve is to remind me to make tous With pipe cleaners. My robot will fix my problem by gotting all the materials and help he make toys The functions of my. hobotisto make and clean 49 after I finish making the toys. My hobot is gray and Silveha Itsounds like a bam bam bam When We aheat WOAK.



My Robot

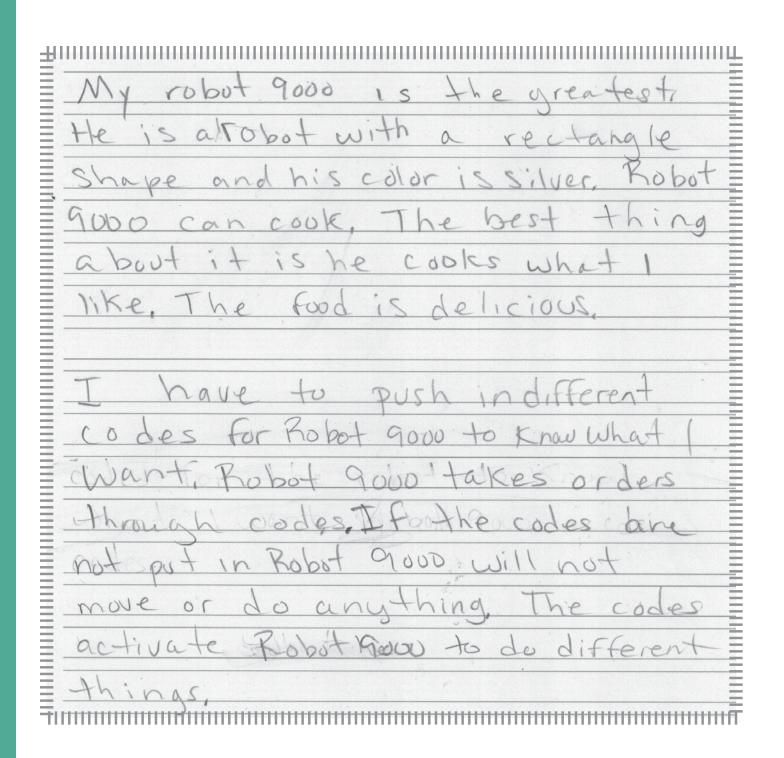
by Kingston





Robot 9000

by Malachi



..... pizza with the special sauce. It is delicious, Once the pizza is ready Blobst 9000 says hello. Thats When I know the Pizza is ready Hello From Robot 9000 is music to my ears because I am always ready to eat some good pizza, My robot is designed just for me. Pizza is one of my Favorte foods Robot 9000 prepares the food just for me, I feel Special because 1 have my robot cook me the best pizza ever. I don't have to order it in a store it is made in my house. 1 love My Robot and the delicious pizza with the Special Sauce





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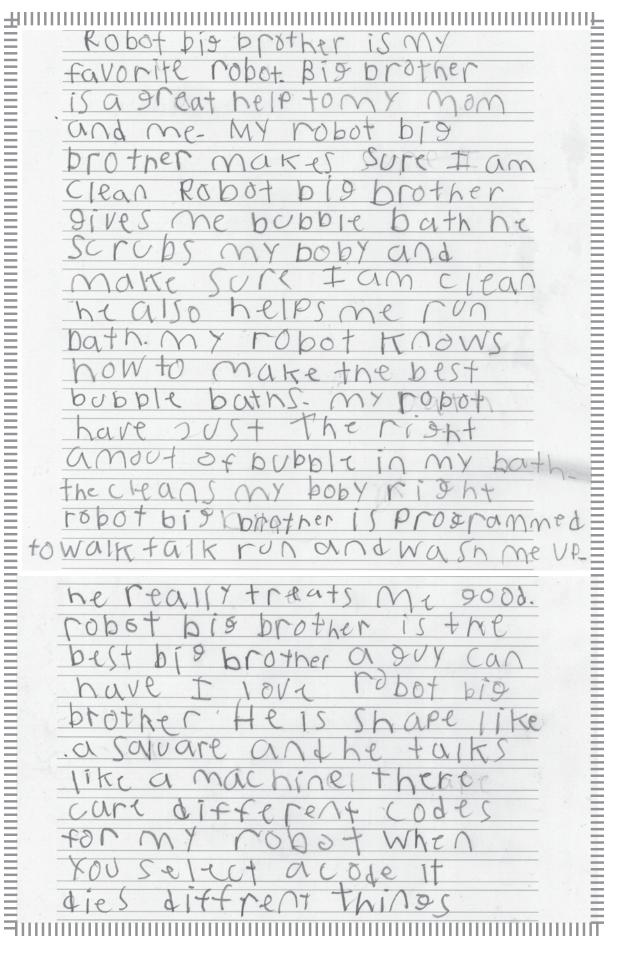
My Robot by Maylin

my robot will help me with reading and writing nomework. my robot will fix my problem by reading my home work and writing my home work work for me. My robot will get my book, find the page and read the directions and story to me. my robot will fix my problem by checking, how well I am reading. ∃......π



Robot Big Brother by Nicholas





Steve the Robot

by Aden

MRI'm young to tell you about steve, by robot, I created steve to complete my home work steve the robot has a newn gold body and makes sounds like a transformer. His body is square but when he transforms he looks like a humane When I'm struggling with my home work I code 366 and Steve comes to My rescue. He says, "How can I help you Aden?" I insert my homework sheet in his stomach Then magic happens, Lights begin to flash then beepin noises and suddenly my home work comes back corrected and complete.

∃......



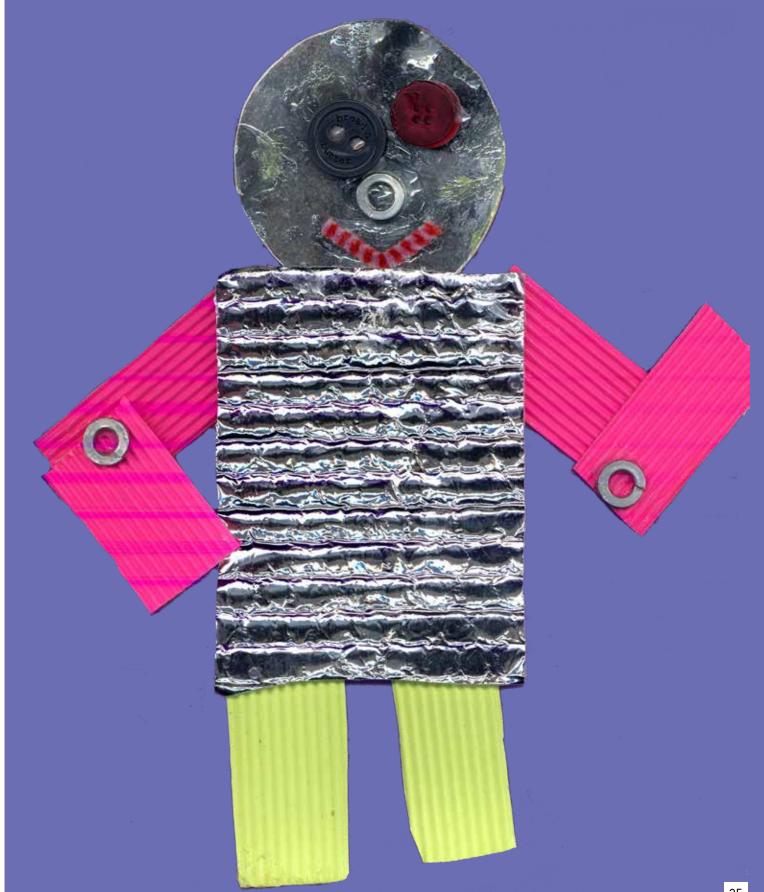


The Best Robot Cooker by Adrian

#11111111111111111111111111111111111111	HI I m Adrian, I'm in third stade and I always have a problem with cooking. Canyou cook? I hate
	To solve this I created marshmello, my
	cooking robot. Itis body is silver, his arms are
	he has white x's for his eyes. Marshmello cooks forme
	Now my mom can come home from work and not worry
	about cooking. Marshmello scanned many cook books,
	now he knows how to make everything I like.
TH	

The Helpful Robot by Aicha

Hey dre you too lazy to do your homework? Well I'm Lazy too, that's why I made a robot. His name is koy Bob. He helps people who stryggle with their Homework. He Helps kids With their Mothywriting and More, NOW NOVODY has to stry 991e with homework. After school I took out My homework, completed the First Page but the next pages were really confusing SO OF COURSE I asked KOY IF HE can help but then I Forgot the dishes. I didn't want to get in trouble by my mom so I seprogrammed him. NOW He does My homework and dishes. All I do is key in code of and he knows I need help with My homework, when I need help with the dishes I key code 08 and koy Bob comes to my rescue Love My Robot.





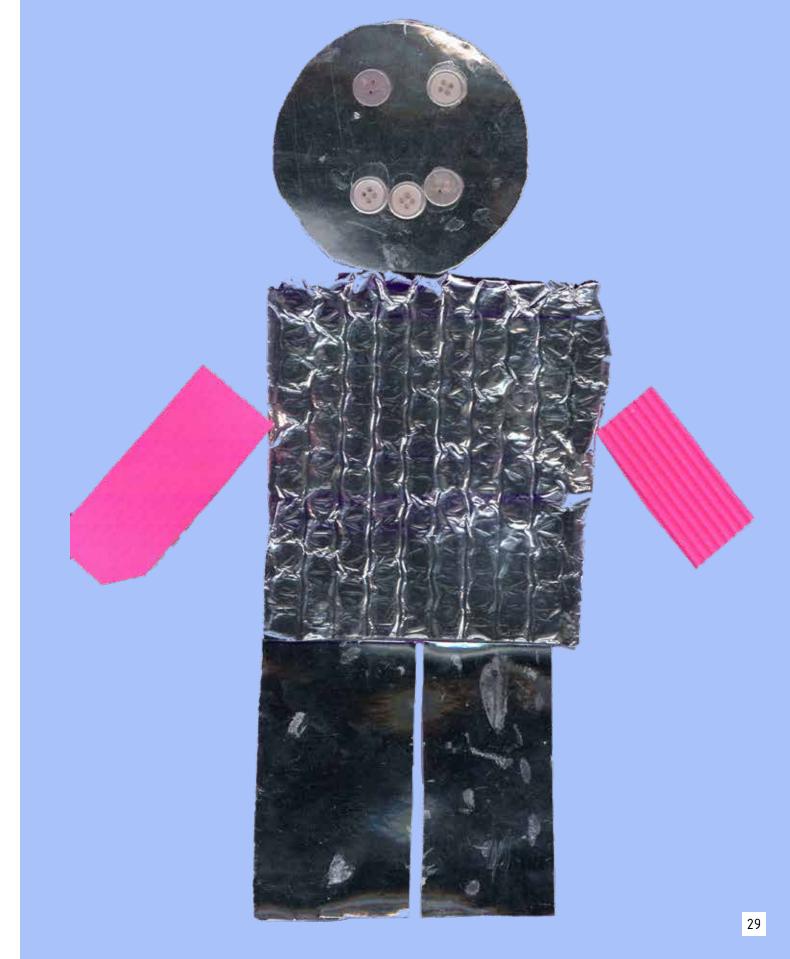
The Robot

by Andrikson

```
Hey my hame is Andrik
hove a robot named Richy
machine. When I key
Spit out money, He woult
.......
```

Bunny by Asma

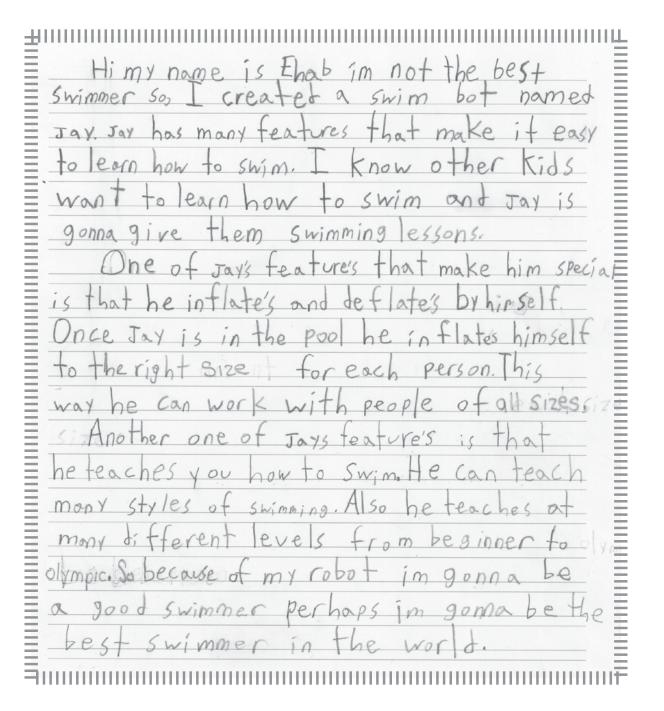
Hi, I'M ASMA and I have a beautiful Robot named Bunny, Bunny is a very helpful Robot and friendly too. For example, if I make Sime and it his a abad batch, Bunny comes in and She is going to get the bad batch of stime into her stomach and an improved batch comes out of her mouth. Bunny also helps me with my howework. If I can not figure out a Math problem Bunny will solve the problem before I can count to five. When he go to the park Bunny always makes friends. My Robot Bunny has a roundhead and pink eyes. Bunny has ruffles ashands and she has silver legs and that is it





Swimming Difficulty

by Ehab

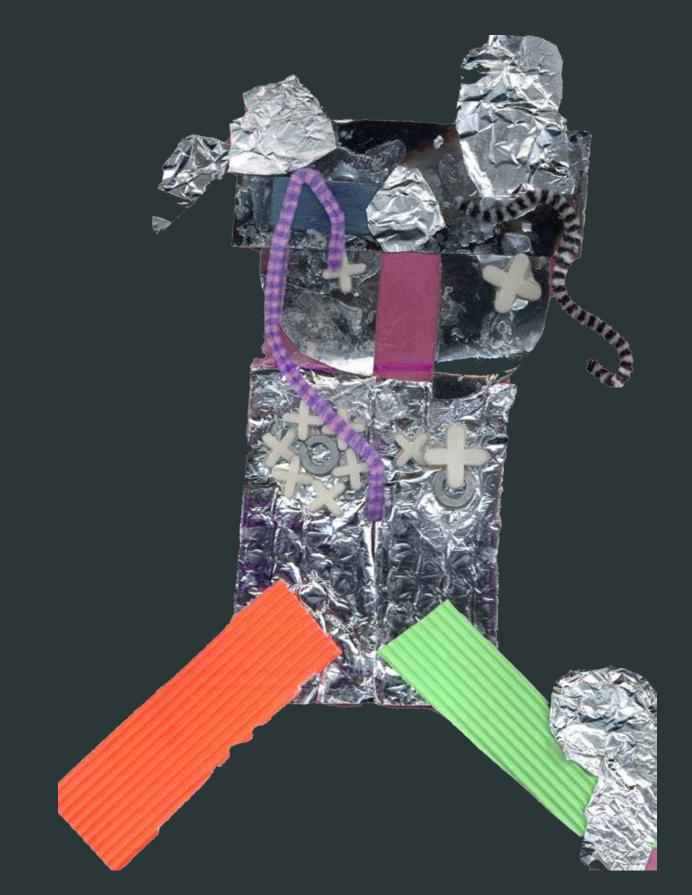


Lil Choppa the Robot Vet

by Elijah

Hes have you ever had a sick per and could'nt take it to the vet? Well sodid I. That's why I invented a robot called Lilchoppa. Lilchoppa is a robot vet that rescues hurt of sick animals. Lil chappa has a computer chip inside of him that help's him locate sick or hurt animals neon by. When I key in code 3891 Lil choppa will Show on his built in screen the location of the hurt or Sick an imal. If it's too darderous Lilchoppa's exs will turn hed amsay DANGER DO NOT GO! SOIWIII Stay home and key cost 3692 to turp his head camera sot can monitor him. when I ker in cost 36931: 1 chopped. Will scall the animal to see if he need's the hospital or Lilich opporcan hell him on the spot. When the animal is safe I will Key code 3694 for Lil Choppa to come home.

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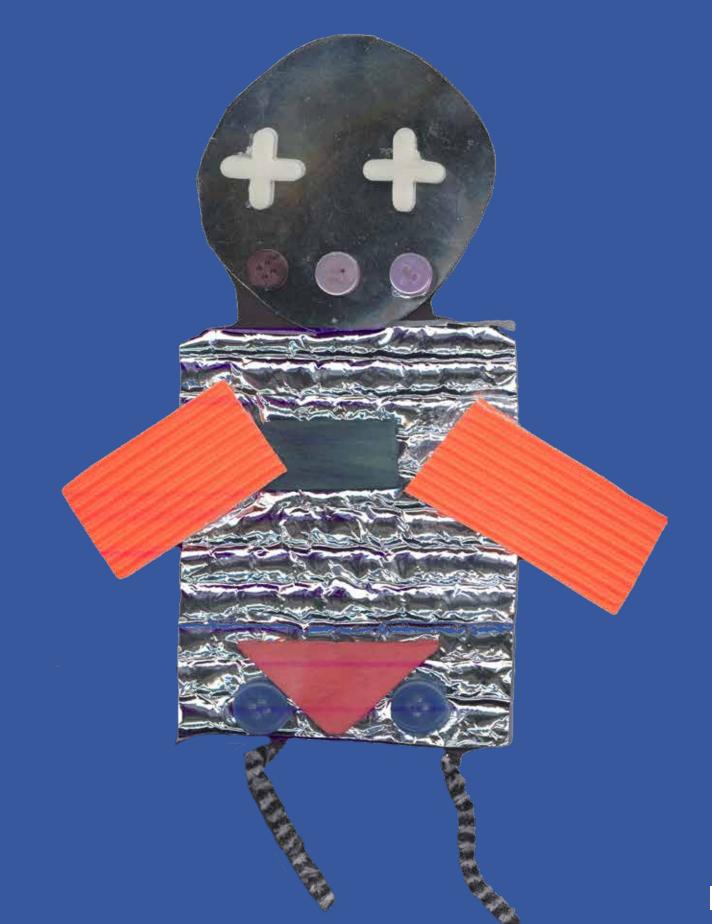
Benjaman the Chef by Evan

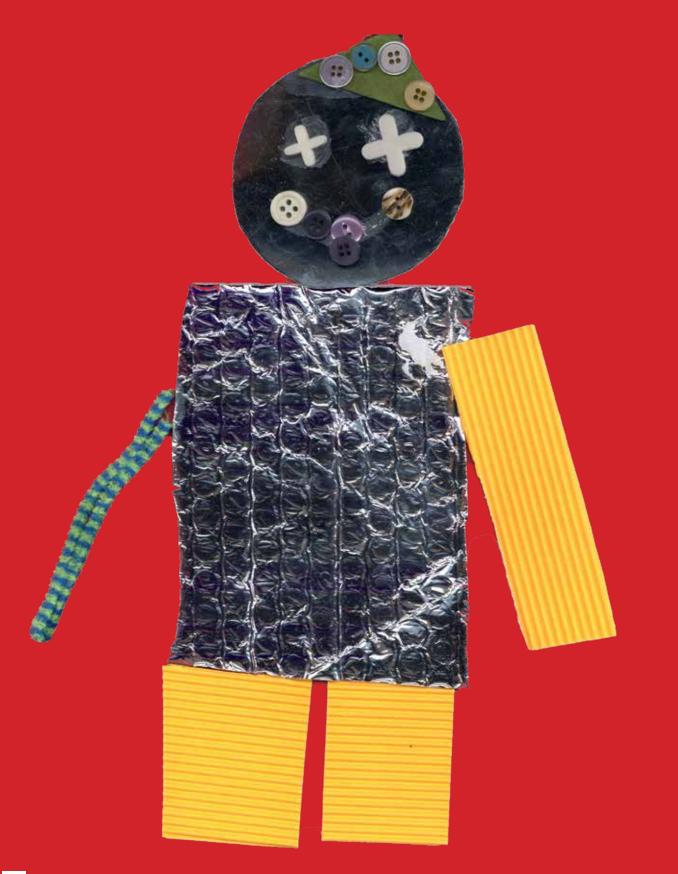
Hi my name & Evan and I want to be a chef when I grow up and Tam going to tell you the programing of my robat Benjaman. The Problem my robot is going to solve is if noy restaurant was about to close and I had too many orders to con I would not have enough time to cook all of the orders so my robot Benjaman cooks really fast and When he is not busy becan help me cook, The reason why I get a lot of ingredients as that my robot has a mini farin inside his body. The color or The color of my robot is silver, green, Pink and blue, the base shape of my robot is a cylinder and he has two arms but one thing I need to say is that if he gets mad he gets rabies and goeswild. In conclusion he is ahelpful robot unless you get him mad. The code to program him is onlitobot detects orders. ouz institut e paresand make ingriedents, 003 robot cooks ingriedentsourobot decorates and serve.

The Adventure of Chef Bob and Homey

by lan

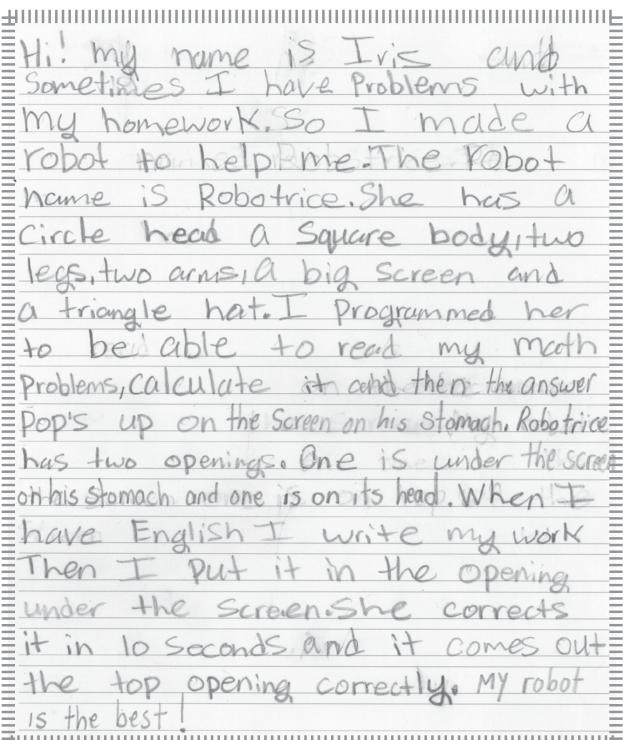
Are you too lary to do homework or cook? Well I have a robot named Homey and he do my nomework and have a robot named chef Bob and he will do my cooking One day in my house I wanted to cook but I needed help SOI Keyed in code (I for chef Bob, He came to cook my favorite meal. Code c2 tells chef Bob to prepare Pancakes, eggs, oxits, and bacon, yummy, yummy. While chef Bob was cooking I had to finish my nomework but I needed help so I keyed code HI to get homework help from Homey. He helps me by telling me what I need to do. Since Ive created 2 robots life has been easier for me.





Robotrice

by Iris



Jack

by Kahlil

Hey I'm Kahlil. IS your family low on money? Well me tog that's why I made a robot ma Med Jack, he Will despense money forme. It Will solve all my money problems. His colors are red, blue and graymy code for him is open tumny and despense money. Then He will despense 1 200 dollars bills Next I will dig in his turning and I bring out \$100 From his tummy. Now I can give the \$100 to my Grand mother.





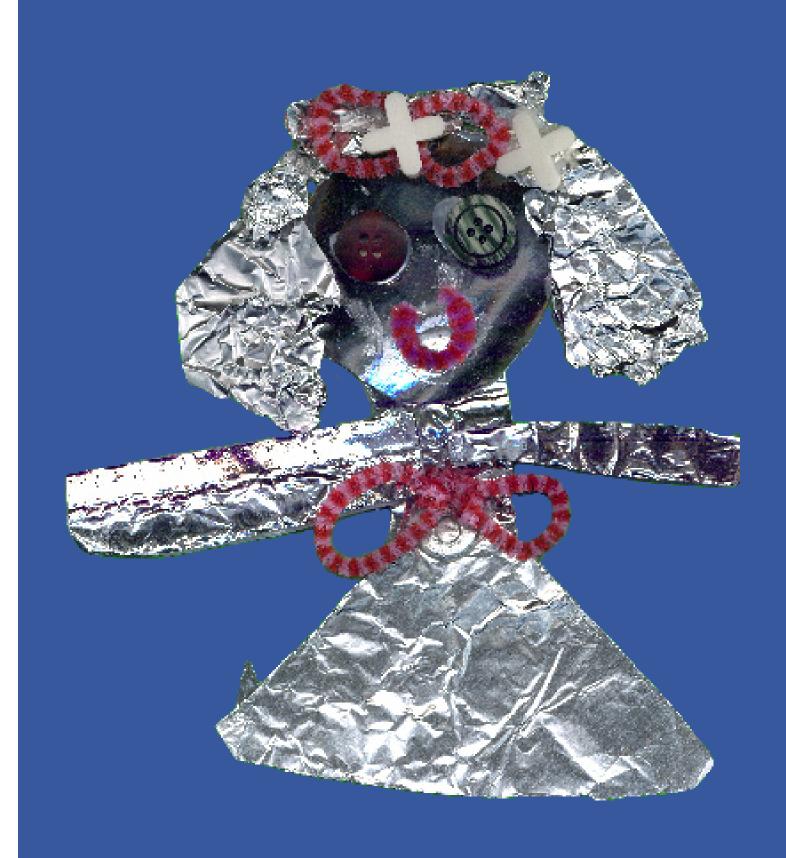
My Robot Caterlena by Kali

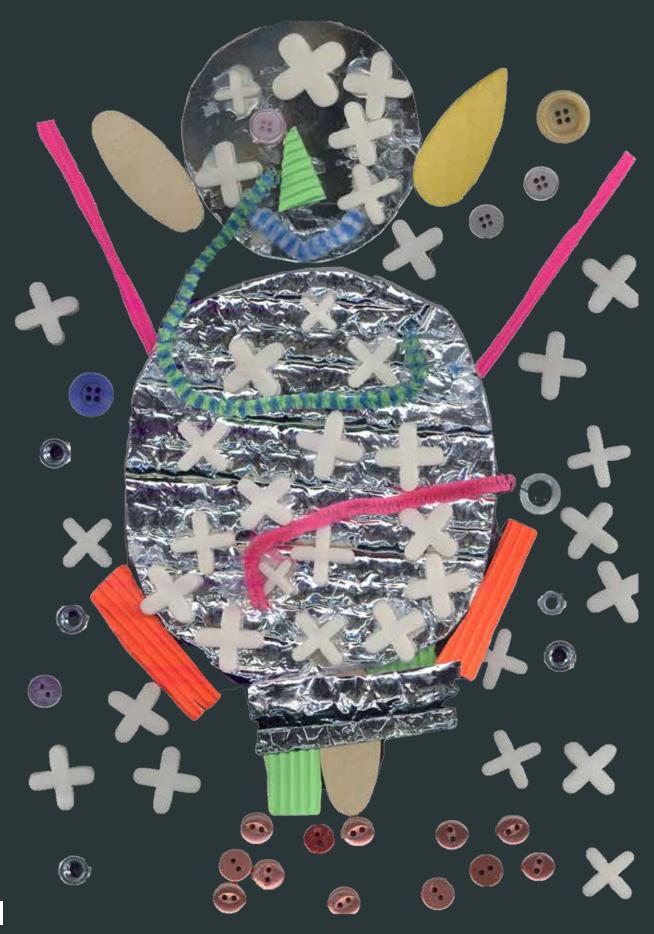
Hi! My Name is kali and my Mom is always at a over right Job. In used to it but I Still get warried when she stays at someones creepy house. It alsonhaven. The worse chores out of my sisters. What is it you ask? Well it's Cat duty and theis the worse JoB ever But My sisters get the Best JOBS! I have to ... take the threes cats a walk in the carier, scoop the cat Litter, and After that I do my homeworks. I NEED HELP SO I Made a 15 Bot and Sha Looks like a cat. She has pointy ears, a little pink Mose and wiskers. But Her Body is a long rectangle. Small legs and Eircle feet. Her Name is Caterlena She can do all My chores so that I can play with my sisters Ipap. When I key in code 357 Caterlena knows to feed the cats. When I key in Code 355 Caterlana Knows to change the cat of Her. 10ode 354 tells ush both to brush the cats har. I Love caturlena she Let & me do my Homework and Have Funds The cho

Roxanne the Robot

by Leah

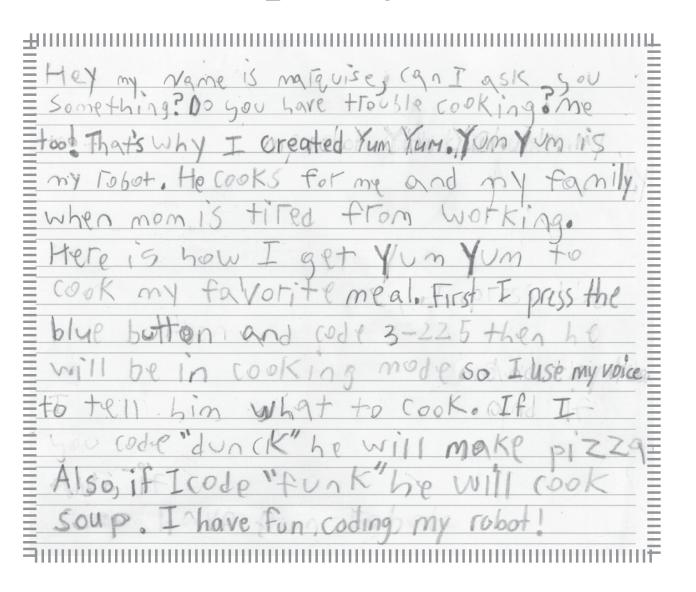
Do You have a dog but Your in lack. I have a robot and her nome is Roxanne she walks all types of dogs no matter if there big or Small you might be wondering how 2085 Roxanne known When a 209 needs to be walked? Well would pull out my Phone and look at my Web site When someone needs help they can call 888-924-3388. once someone calls Roxanne my robot Will be faster that you can say the alphabet. Once We're at the house I will push a butten a then a leash will pop out Roxanne's left hand and she Will Strap the leash on the Jog's collar. MY 10 box can walk to a more dogs . Let me tell you the functions of my lobot. first press Put leash on dog, 2-Walk dog, 3.9: Ve dog to onwer. 4-get paid by owner.





YumYum

by Marquise

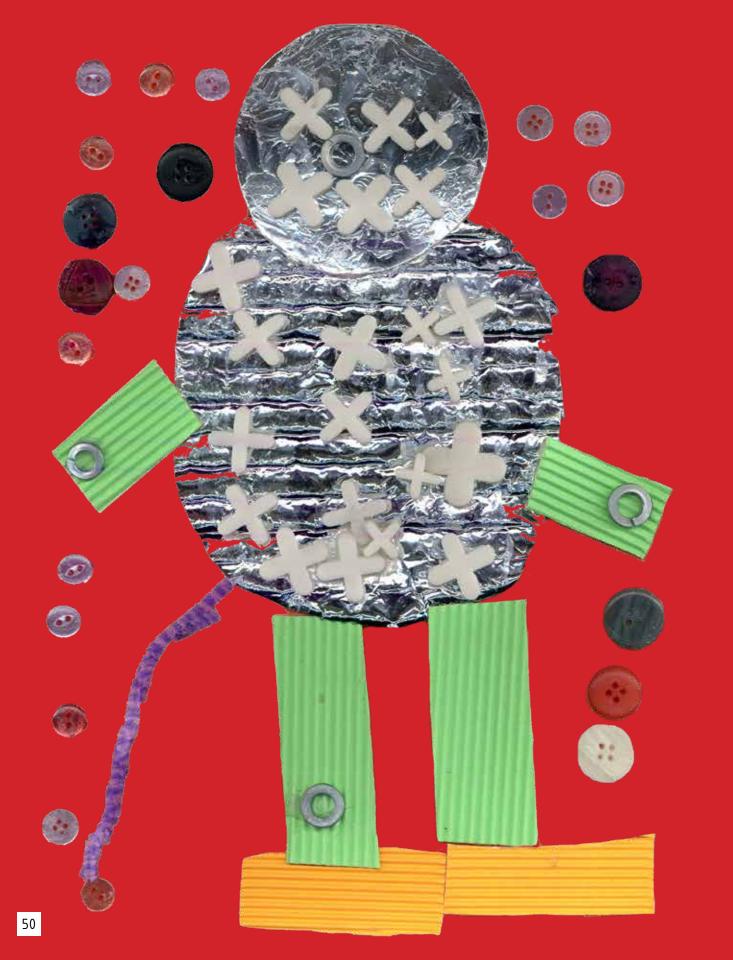


Chef Choppa

by Matik

to cook so I invented carobot that's named other Choppasto teach one no how to cook. He also gives me good recipes then tit is time for lunch I call chef Chappa to help. So When I want to cook Jinner For my family I will ask my robot to hop me. Chef Choppasiface will turn into a screen that shows threcipe. He has a refrigerator built into his stomach, so when I press the green button and open the door all the Food I need to prepare dinner, will be right there, Chef Choppa will read all the Steps I need to take to make the meal. IF I mix the wrong ingrediants. Chef Choppa Will let me know by moving and his Face will say E Mergency wrong ingresiant. so I will neven mess up a meal. He also has built in blades to drop food.





My Robot Ruby

by Nathan



Mistah Cleaner

by Nazrul

Very busy schedule and never. have time to clean my room or helpot needed help. I needed someone to clean up the trash in my room and the mess in the rest of the house so that I can have + me to play sports and video games. That's when I created a robot ramed Garbage Desposii He can turn into a human named Alex. He looks like a rainbow to has five arms that he extends so that he can crean messes all at once. He Eleans up garbage and Other Messes One time there was a lange mess in the livingroom. I needed help that when I called my robot. When I code 3 Atyto my robot turns one Then I code 11 and Garbage Despozil Walks to the mess. Next I code Zimy robot takes garboage and puts in his mouth e Last I code 3 and he surshes the trash around then spits it in the garage.





My Special Robot

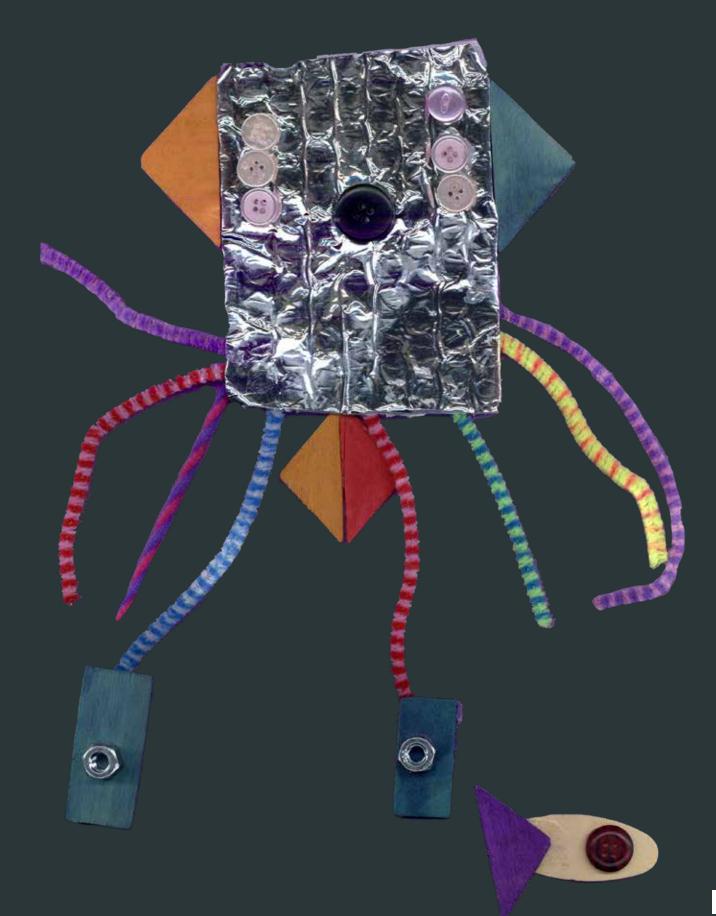
by Nickoy

My name is Nickoy. I have a problem. The problem is that when my mom tells me to pick up the trash in the house I get lazy and don't want to do it. So I created a robot called Djotte is programed to recycle trash. So I called him a recycle bot. He cleans my room and does the laundry. His special feature is when he sees trash he begins to beep then rushes to pick up the trash of and takes it to the trash can then put it in the trash can offis godes are Iwalking, I turn left or right, Ipick up the trash the trash the trash in the trash can.

Squid Bot

by Noah

Himy name is nowh. I cheated a cool Robot. his name is squid bot. hechas a square head 8 tentacles one eye, and his mouth is on his bottoma squad bot is my favorite tobot. He is a helpful robot. He helps me When I can't reach stuff in the house. He also does super things like save the animals. I Programmed him to jump up with his tentacles and get a cost out of the tree. He also cleans up my room, but I help him too because I don't want to be lazz.





Unicornbunny the star

by Peyton

Hi! Have you ever felt lonely or been
So board You wanted to scream? well
that happens to me. So I built
a rabot named unicorn Bunny to spend
time with me when I get lonley or
board. For example IF I want to go to
the Park I key in code 44 and unicom
Bunny takes me to the Park. When I'm on
the Swing and I need a Push I key in
code 45 and she gives me a Push. When Im
tired of swinging I ker in code 46 50
Unicorn Bunny can stop the Swin 9. When I get
off the swing unicorn Bunny takes me home. When
I go home I key in code 47 and unicorn Bunny
makes slime with me. Having Unicorn Bunny I am
not lonley anymore.
$\overline{\Lambda}_{11111111111111111111111111111111111$

Big Max Help Me and My Family

by Roxas

the house. Is I made a lobor that will nelp them. Oh my boots name is Big Maxour Big Max Cleans up the house while my parents take Care of me and my blothersaling Max is waterpoots and his really can hold more than a poso things at one time. All I dotist key a cole and he does it o for example, I will code 0354 and he knows its cleanup time. His tive hands on Each arm Will appear. The hands can grab the dirty things and put them in his stornach and then everything will come out dean when I code 0355 Big Mox knows to Sucep and Vacuum. Suddenly his legs belome a vacuum cleaner-Big Max helps my family Speni more time together





My Robot

by Trey

IS School boring? Well I have a Solution. My name is Trey and I've made a robot to destroy schools. I know it sounds crazy but let me explain. My robots name is Lil Slatt I made him in a lab to destroy all school's that are boring and rebuild them to make them Exciting. My robot has a sledgehammer for hands and flame thower for arms. first he uses his sledge Hammer to break Bown the school then he uses the Flancthrower to Burn it down and turn it in to ash so his helper Co can clean it up to make it Fancy and change the subjects. The subjects they use are gly, technology, writing and art. It makes kids want to come to school. Please keep this between by Oh the code to my robotis (3xT2Yr).

About the Authors

Nathan Archambault:

Despite being born and raised in the smallest state in the country, Nathan developed big aspirations to combine creativity and business from an early age. After an active childhood that included publishing poetry accompanied by watercolor paintings, completing art projects that changed the curriculum at his high school, and starting a pet care business that was featured in the newspaper, Nathan attended Syracuse University where he studied Advertising and English. Dueling degrees fresh in hand, Nathan took his show on the road to Washington, DC, and Chicago before settling in New York City and kicking off a career of building brands by making human connections. After making pit stops at world-renowned advertising agencies including Droga5, Anomaly, R/GA, Leo Burnett, Grey, and TBWA/Chiat/Day, Nathan is currently a Freelance Creative Director and Copywriter, working both for ad agencies and directly for brands and start-ups. In 2010, Nathan discovered a passion for technology while working at digital advertising agency AKQA. One of his favorite projects tackled the issue that so many of the important jobs that shape our future are male dominated. When that project didn't go far enough to change the world, he set out to level the playing field the best way he knew how: by writing a picture book that inspires girls to get into coding. When not writing copy for ads or books for kids, you can find Nathan playing soccer with his English Bulldog or inspiring his two young daughters to grow up to be anything but stereotypical.

Mara Lecoco:

Half French, half Filipino, from a family of multiple cultures on different continents, Mara was taught to keep an open mind and to question the status quo. Before she was 5, her parents introduced her to computers and oil painting, and brought her up with feminist values. Going from the



Philippines to Paris, and then Toronto, today, she works in New York at Fishbowl, a new social network for transparent career conversations where professionals can ask advice about career challenges semi-anonymously. Previously, Mara was a digital advertising creative director, and is invited to judge industry award shows, speak at events, and appears in industry press. Mara also founded Where Are The Boss Ladies, the largest database of senior women leaders in advertising. Mara embraces anything fun and scary that comes her way. She is passionate about helping young women build confidence to succeed in the workplace, by making them see what they can be—whether it be through empowering children's books or giving women access to role models they can work for. Because she was brought up by encouraging parents who inspired her to be curious and fearless, she wishes for all girls to have that opportunity.

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About the Student Authors

Class 3/4-218 is a class of 8 unique, energetic, delightful 3rd and 4th graders. We are attentive, diligent and proud students. We display positivity and excellence. We work hard to be tolerant, respectful, and abhor bullying. We are trying our best to be good readers and writers of the future. Finally, we are encouraged and supported by our dedicated teachers Mrs. Rambaran, Mrs. Dennis, Ms. Jennings, Mr. Losey, and Mr. Noble.

3-225 is a class of talented, charismatic, and creative students that are always eager to learn. We strive to be our very best. We are dedicated to always finishing what we started. We work hard every day to show the world that we are capable of succeeding and accomplishing the goals we set. We are growing working as a team because we know that we are better together.



About Behind the Book

Behind the Book brings authors and their books into classrooms to build literacy skills and create a community of lifelong readers and writers. Working with classes from Pre-K through 12th grade, our series of workshops is designed to bring books to life and inspire students to reach their full potential. Behind the Book is embedded in the class curriculum, nurtures critical thinking, creativity, and self-confidence in New York City public school students. All programs meet the Common Core Learning Standards.





Common Core Learning Standards

CCSS.MATH.CONTENT.4.0A.C.5

Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.

CCSS.ELA-LITERACY.RL.3.3

Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

CCSS.ELA-LITERACY.RF.3.4.A

Read grade-level text with purpose and understanding.

CCSS.ELA-LITERACY.W.3.3

Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

CCSS.ELA-LITERACY.W.4.4

Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

CCSS.ELA-LITERACY.W.4.5

With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.



www.behindthebook.org