

# Kids



# Robots

2008 Contest  
Real Cool Robot Design Finalists

By MOE 365  
**KIDS ROBOTS**

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When we meet and talk to kids at schools and libraries and community events, they think of robots as cartoon characters or machines of immense power and danger. And they always want to give us ideas about how to build our robots!

We decided to show them that robots are real. Robots are cool tools and great helpers. We made a folded book about a few of them - Spirit and Opportunity, the Mars rovers, Asimo, the walking robot, and others. We decided to ask the kids to think of a real problem and design a robot to solve it. We made it a contest.

These are the 2008 finalists from MOE 365's 2<sup>nd</sup> annual Real Cool Robots contest. We received robot designs from kids everywhere.

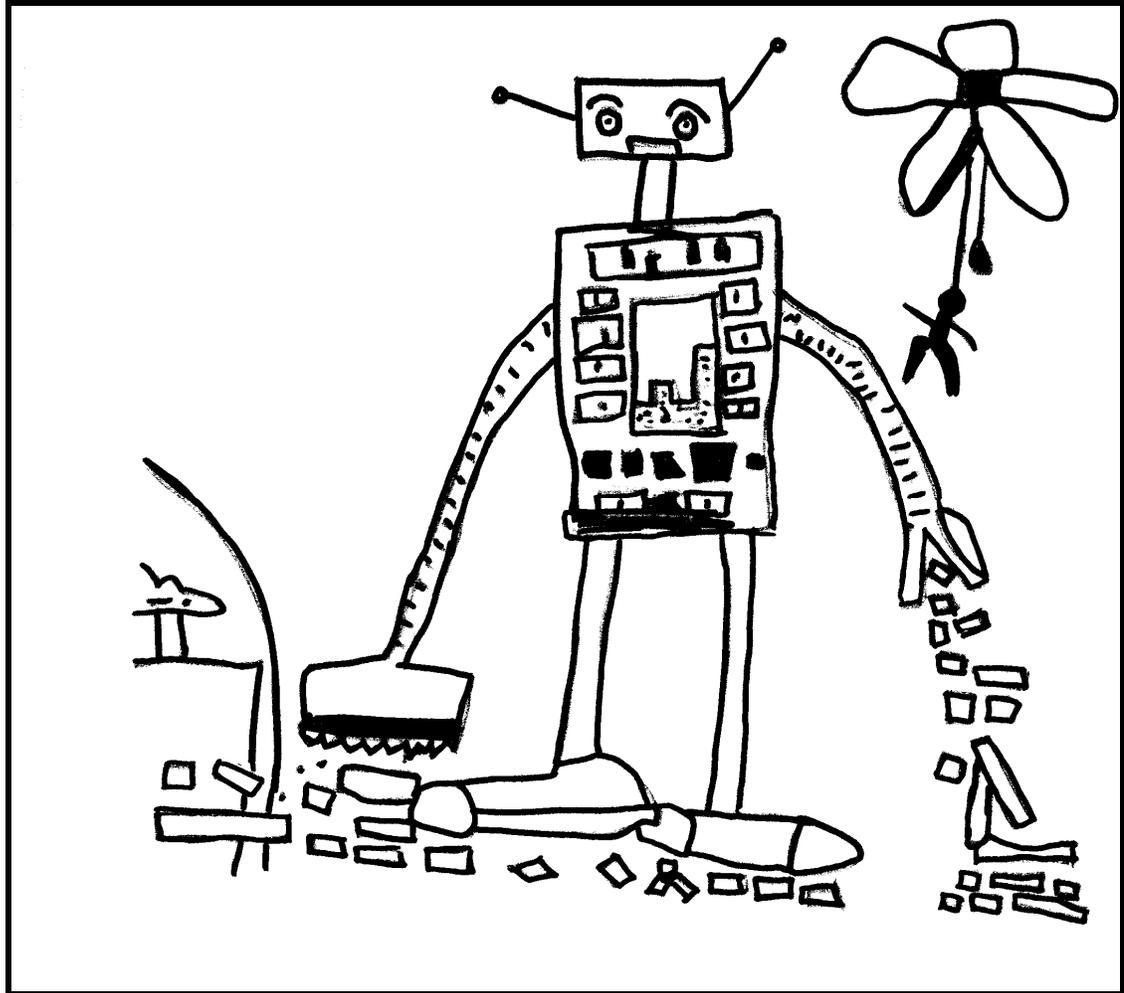
At the end of this coloring book, there are pages to design a robot or two of your own. Then, if you want to learn more, you can find out about FIRST teams in your area - teams like ours! We're MOE 365 - the Miracle Workerz - and we build robots!

[www.usfirst.org](http://www.usfirst.org) - For Inspiration and Recognition of Science and Technology - national and international programs for kids of all ages to design, build, and compete with robots.

- Junior LEGO League for grades K-3<sup>rd</sup>
- LEGO League for grades 4<sup>th</sup>-8<sup>th</sup>
- FIRST Tech Challenge and FIRST Robotics Competition for high school grades

[www.moe365.org](http://www.moe365.org) - Miracles of Engineering - Students from high schools in three states (based in Wilmington, DE) who compete in the FIRST Robotics Challenge.

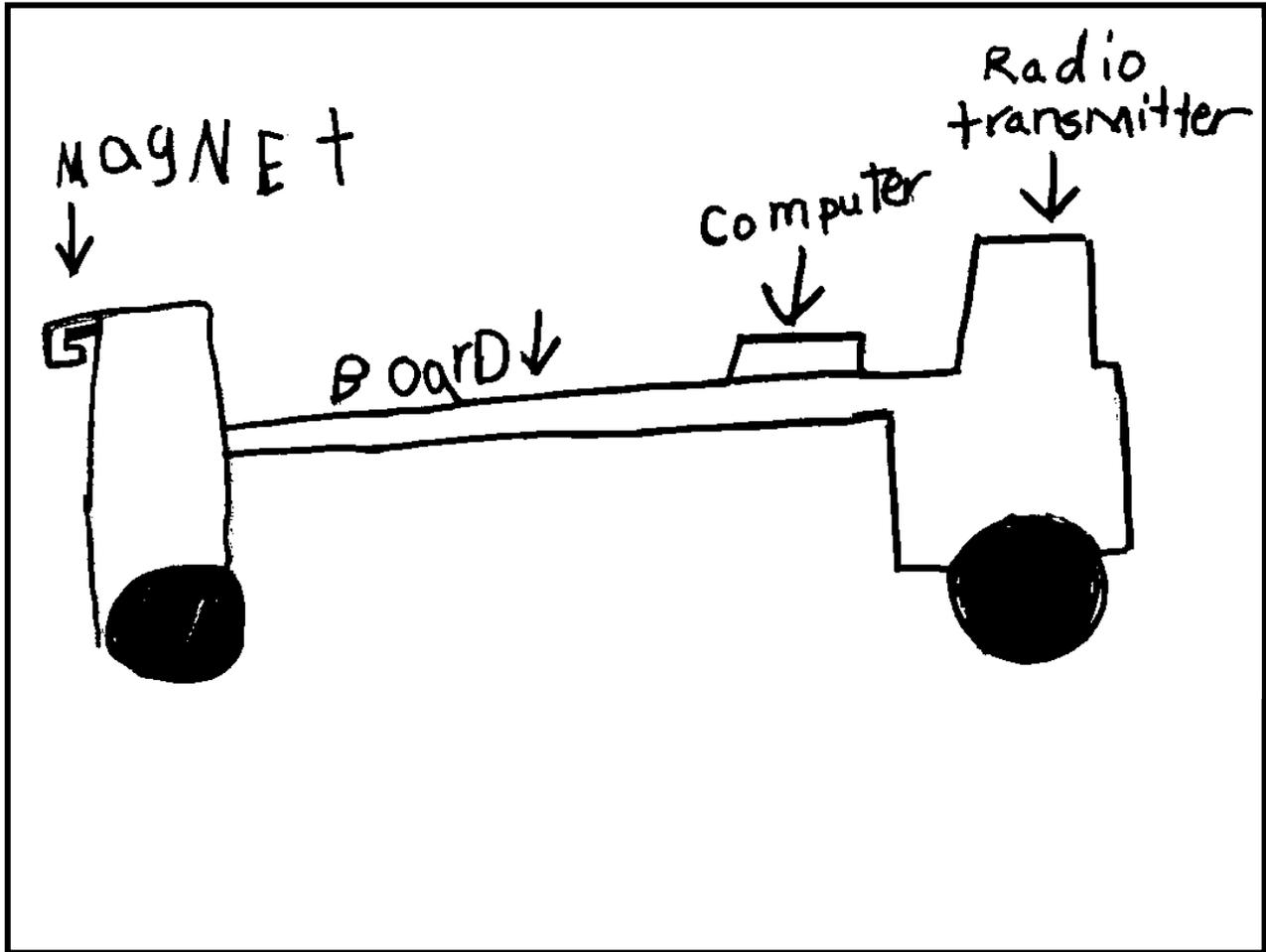
[www.fsrobotics.org](http://www.fsrobotics.org) – links for information on the FIRST LEGO League and FIRST Tech Challenge competitions



LEGObot is my cool robot. It can suck up LEGOs in my room and sort them by color. It uses suction hoses to pick up my LEGOs and put them into bins. By Jack - Kindergarten

MOE says

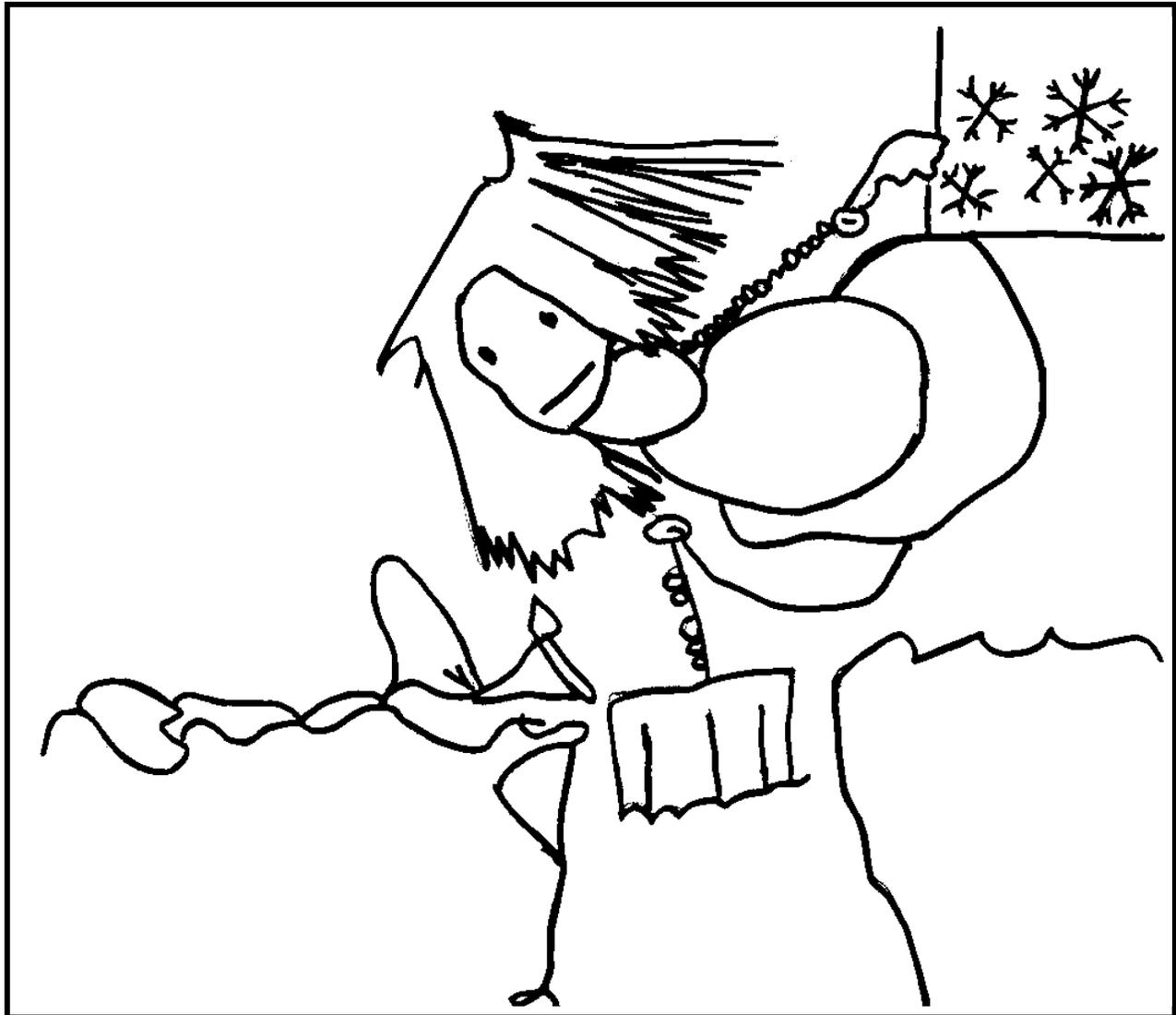
Jack! Where was LEGObot when we were in kindergarten? We really needed his help back then. Is that an army guy hanging from your ceiling fan? If you love LEGOs as much as we do, check out the Delaware Jr. FIRST LEGO League at [www.fsrobotics.org](http://www.fsrobotics.org). It's a lot of fun.



Magnet Head is my cool robot. It can pick up metal trash. It uses a magnet to pick up metal. By Zach - 1<sup>st</sup> grade

MOE says

Zach! This is very cool. Magnet head could get into some interesting places that might be too dangerous for people, like caves or deep tunnels. Did you think of putting a camera arm on him? He could send pictures back to you while he's working.

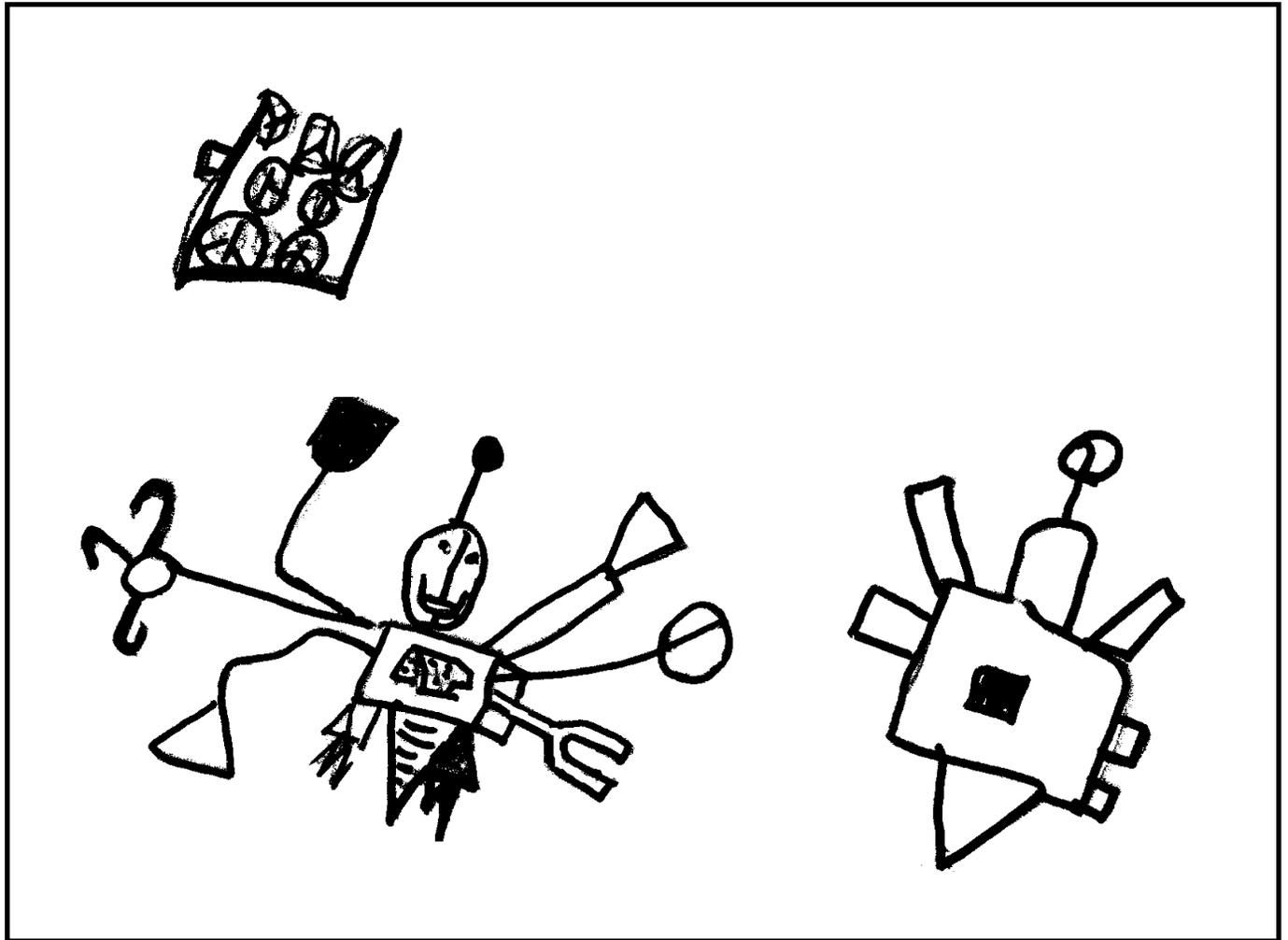


Peach is my cool robot. It can shovel snow and melt ice. It uses electricity to shovel snow and melt ice.

By Isis - Pre- Kindergarten

MOE says

Peach is pretty helpful. It helps to keep our roads and sidewalks safe for people in the winter. It is safer for plants, rivers, and wild animals too because it doesn't use salt or chemicals to melt the ice. If Phoenix, the new Mars explorer, finds ice on Mars, can NASA borrow your robot?



Treasure Hunter Robot is my cool robot. It can go under water or to outer space and find and collect treasure. It uses rockets to propel it in space or under water, a metal detector to find treasure, a magnet and grabber to collect treasure, a drill to drill into the ground, a vacuum if the grabber breaks, a shovel and scooper to collect treasure and an antenna to get signals from the controller. It has a separate water protector for under water hunting.

By Aaron - Kindergarten

MOE says

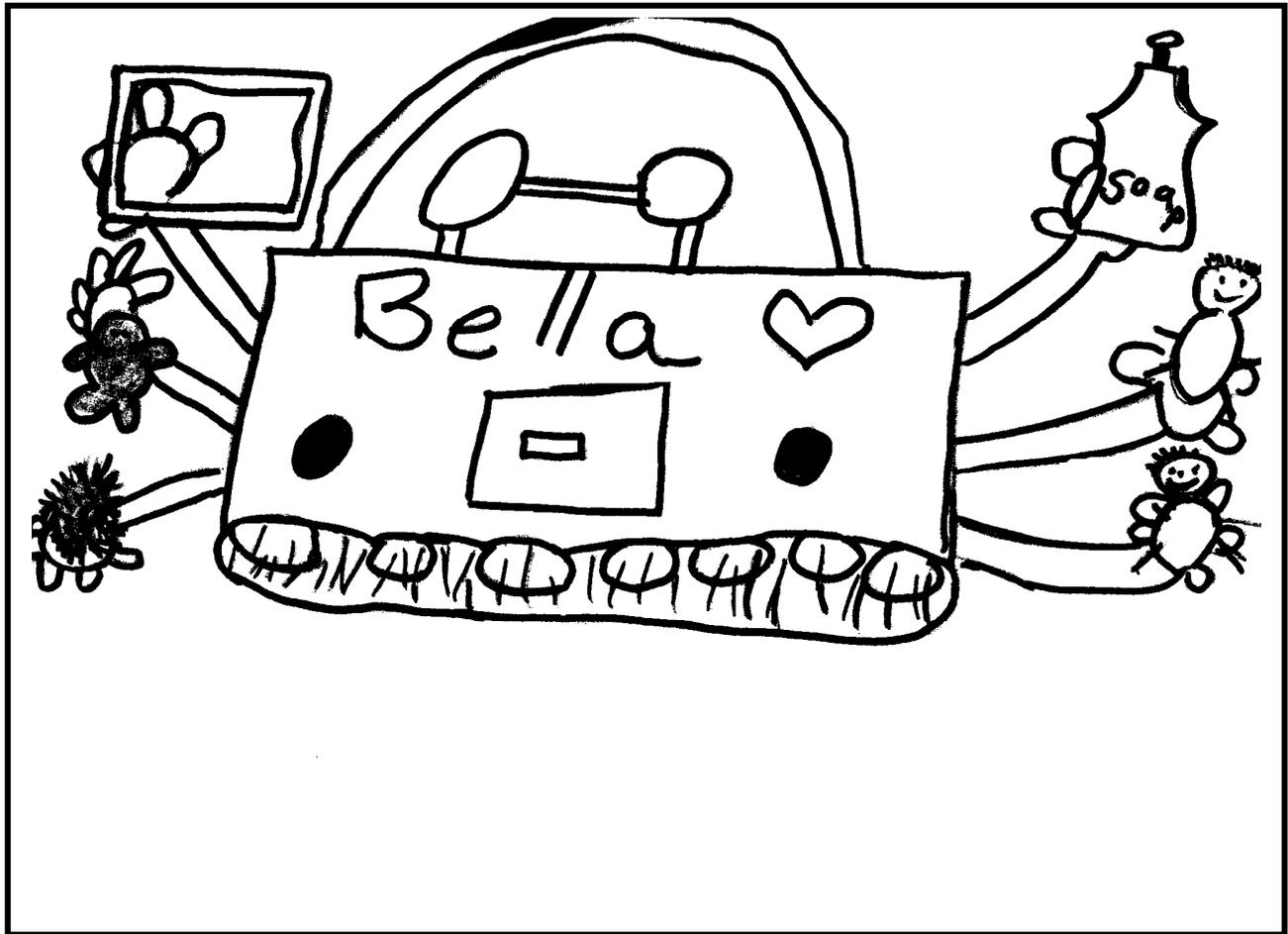
Wow! Aaron, you really thought about this robot. Thinking is a very important part of what our mentors help us do. We don't start building until we plan out our robot design. Then we try to imagine problems with our plan. We draw and test ideas with computer programs. It helps save time and materials. It helps us agree on a plan and work together to make it happen.



Rosco is my cool robot. It can cook your food and it can organize chores. It uses a battery powered by electricity. By Zachary - 4<sup>th</sup> grade

MOE says

Every kid is going to want this robot, but if Rosco does all your chores, does he get your allowance, too? We need to plan how to convince our parents this is a good idea. What do you think, Zachary?

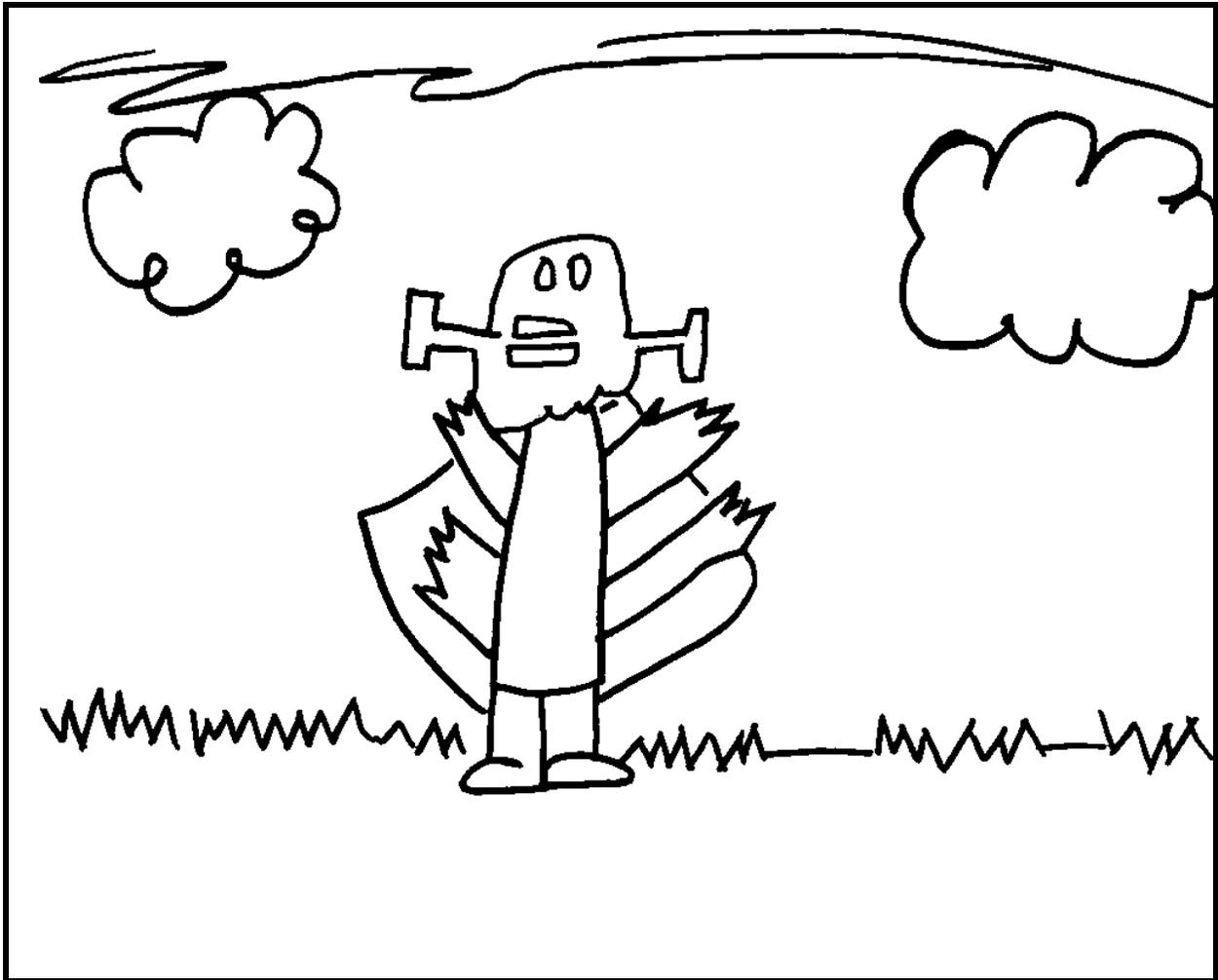


Bella ♥ is my cool robot. It can clean up guinea pig cages and clean bunny cages. It uses lots of hands and a soap arm to clean a guinea pig's cage plus a rabbit's.

By Piper - 3<sup>rd</sup> grade

MOE says

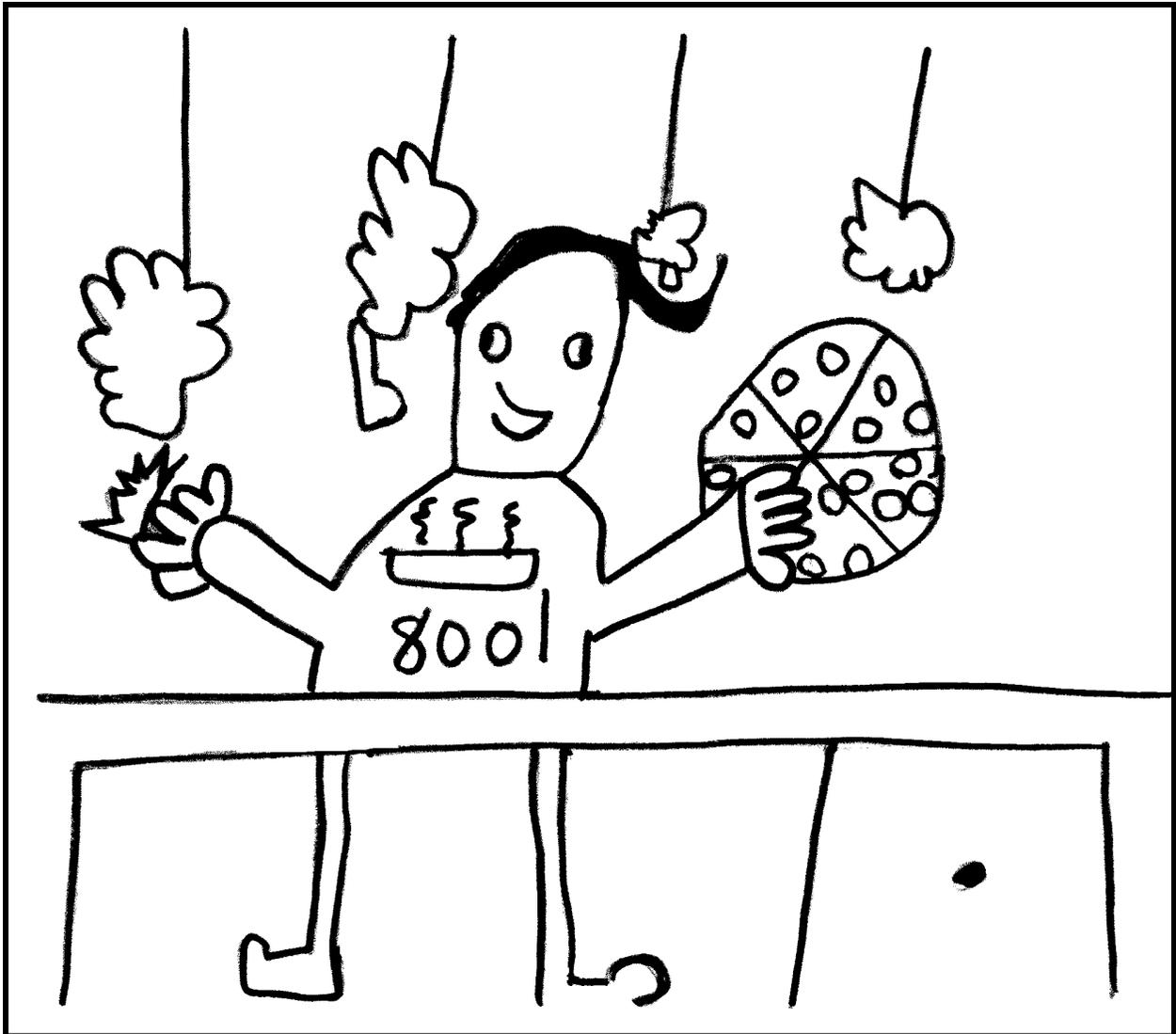
Bella ♥ is very busy! It looks like she's rolling around on treads instead of wheels. Treads may help to keep her steady as she puts those happy critters back into their shiny clean cages.



Roboto is my cool robot. It can play hide and seek and play board games. It uses battery power to speak. By Blane - 1<sup>st</sup> grade

MOE says

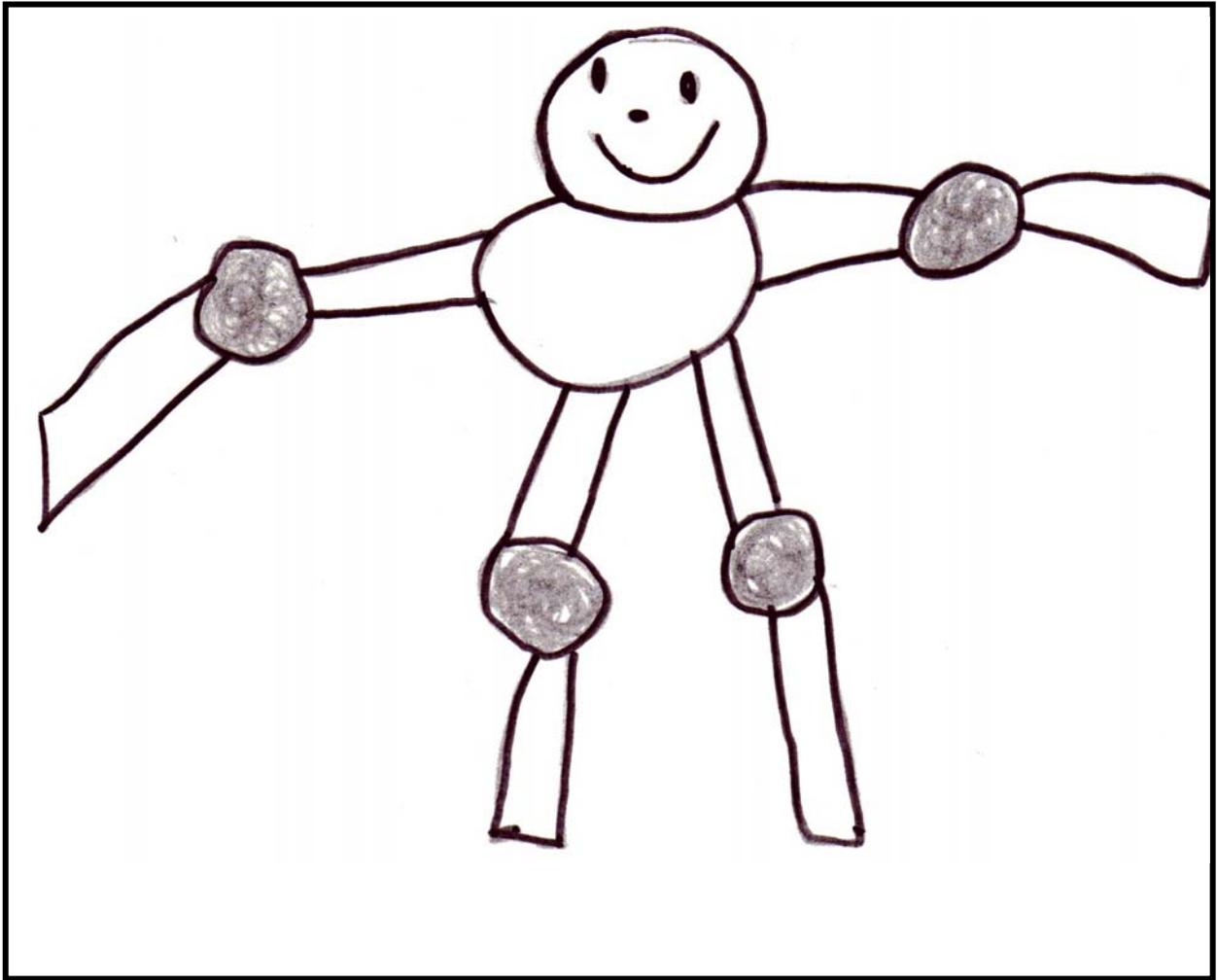
Lots of real robots are designed to do boring or dull work, but Roboto is built for fun. Some scientists in Japan have built robots that dance together as partners. Maybe when they aren't busy dancing, Roboto could teach them to play hide and seek!



Pizzabot is my cool robot. It can make pizza with toppings and pizza cutters. It cooks in his tummy to make pizza. By Joseph - 2<sup>nd</sup> grade

MOE says

Did you know that Phoenix, the new Mars explorer bakes dirt in its stomach? Then it tests and measures the cooking vapors to see what is in the Martian soil. Pizzabot could measure the smells that come from his tummy to see if the pizza is ready or not. Our team eats so much pizza, Joseph, we would be happy to help test out your robot. Yum!

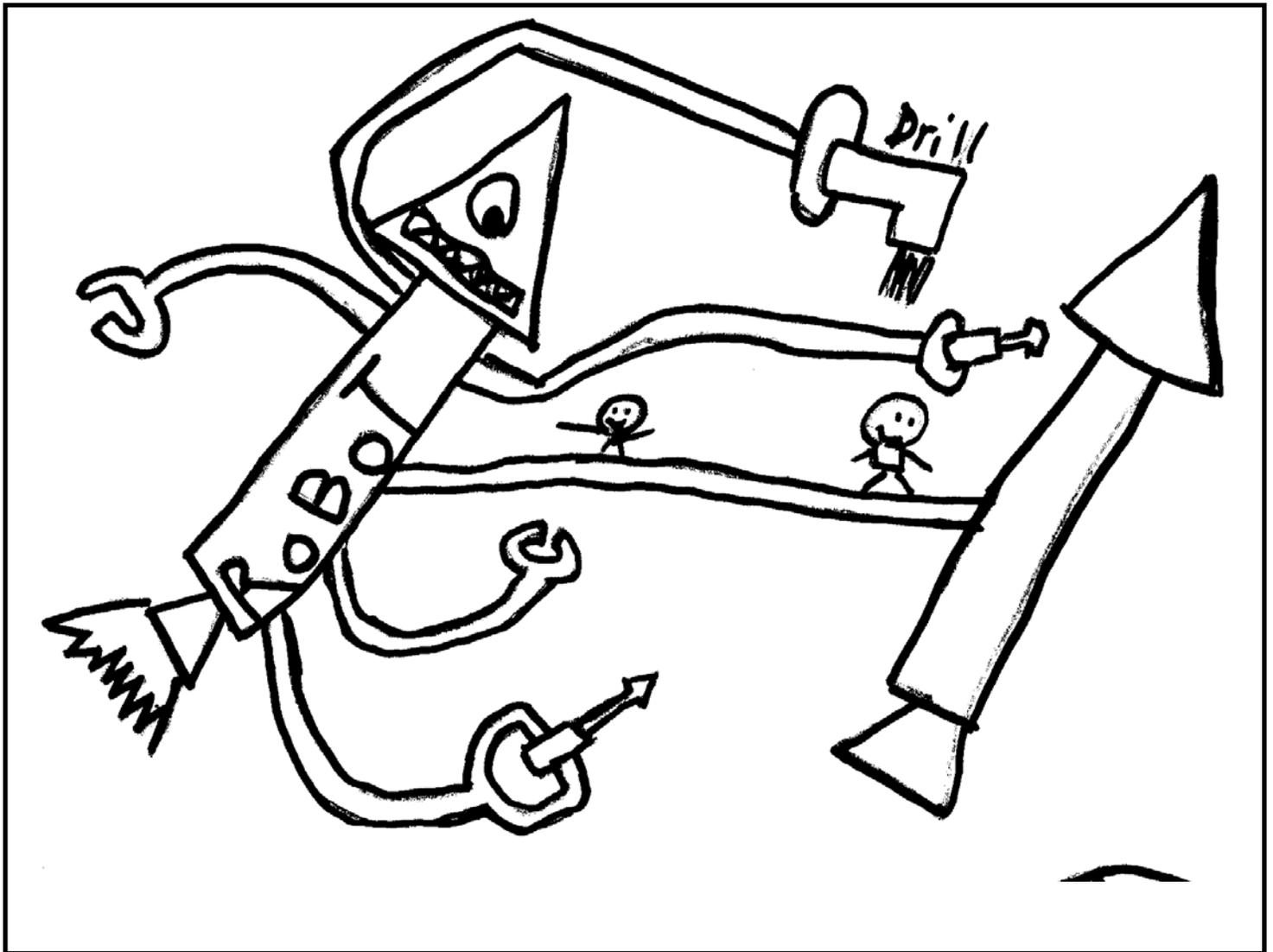


Robot Isabel is my cool robot. It can do everything a person can do and it can open doors. It uses its arms to pick up things like toys.

By Isabel - Kindergarten

MOE says

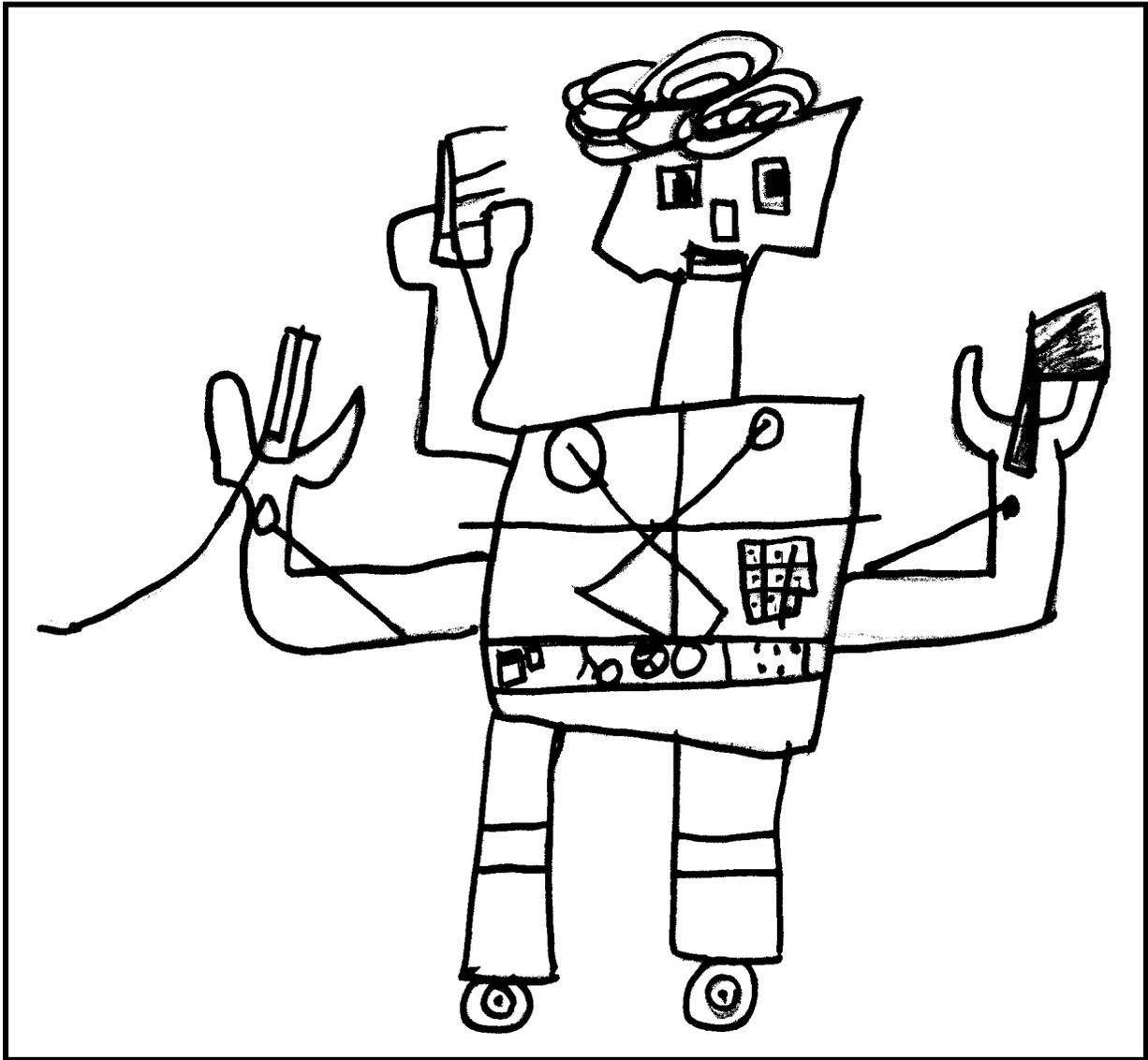
All around the world, engineers work hard to make robots better and better. Their dream is to build good helpers for people. They haven't been able to build a robot that can do everything that a person can do, but they are getting closer. When you get older, you can show them how Robot Isabel works.



S.P.A.S.Y. is my cool robot. It can repair spaceships in outer space and rescue stranded ships in outer space. It uses tools to rescue people and spaceships! By Jack - 3<sup>rd</sup> grade

MOE says

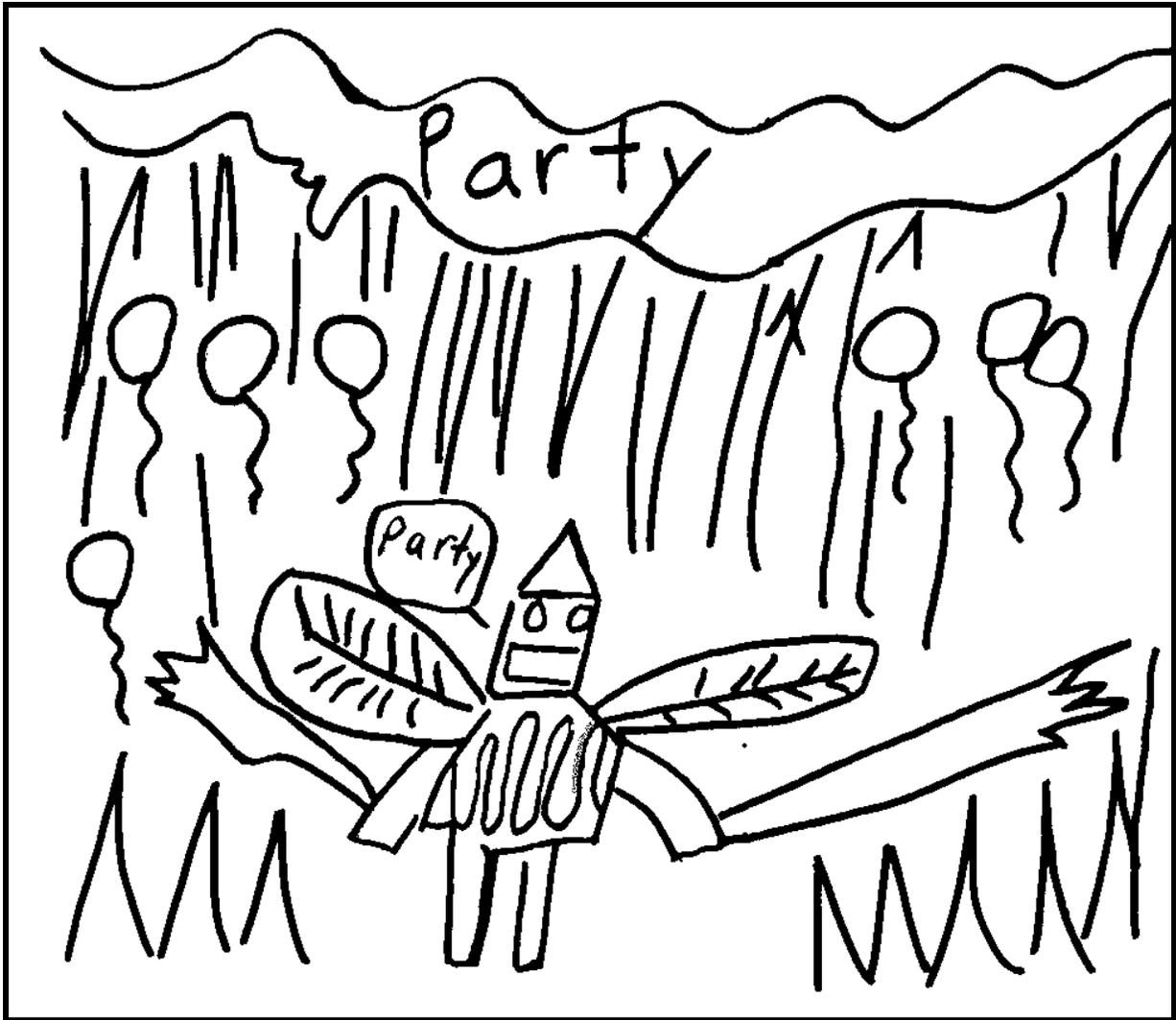
You know, NASA needs good ideas and good engineers to help with the space program. They just sent a Canadian robot named Dextre to help on the International Space Station. Someday you and S.P.A.S.Y. could work with NASA, too. Pretty cool, Jack!



The Hair Stylist 5600 is my cool robot. It can style and brush hair and straighten my hair. It uses a flat iron to do my hair. By Naomi - 1<sup>st</sup> grade

MOE says

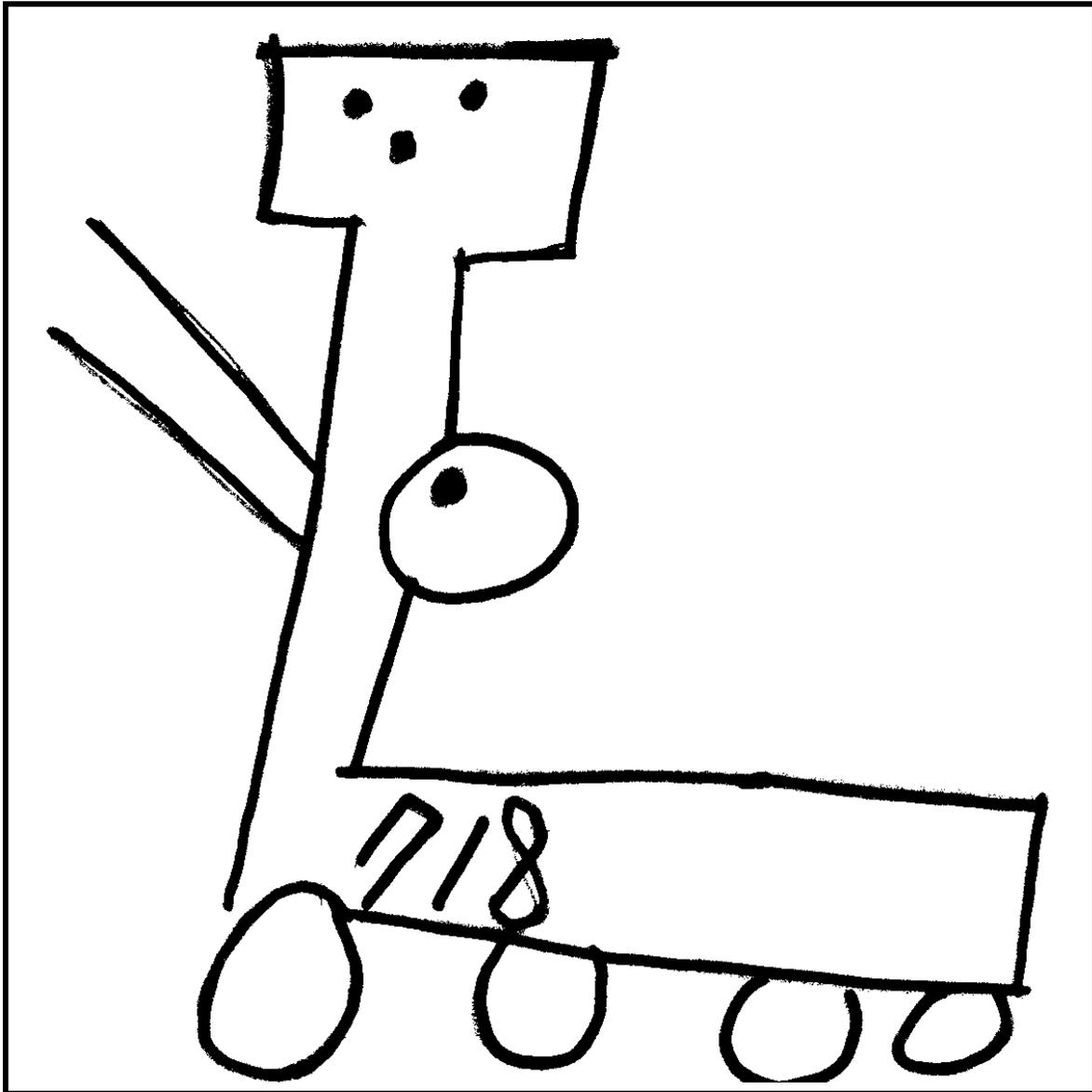
When our team goes to competitions, some of us wear really crazy hair styles. It stands straight up, or it gets dyed bright green, or we braid it with stuff like shoe laces or pipe cleaners. If we had a robot to help with our wild hairstyles, we could sleep later in the morning. All thanks to you - Naomi the Inventor!



Party girl is my cool robot. It can shoot party decorations and bubblegum. It uses wings to put decorations in high places. By Katelynn - 2<sup>nd</sup> grade

MOE says

You are really onto something big here, Katelynn. One of our engineering heroes is named Lonnie Johnson. He is an aerospace engineer who also invented the **super soaker!** You and Party girl are following in some famous footsteps there!

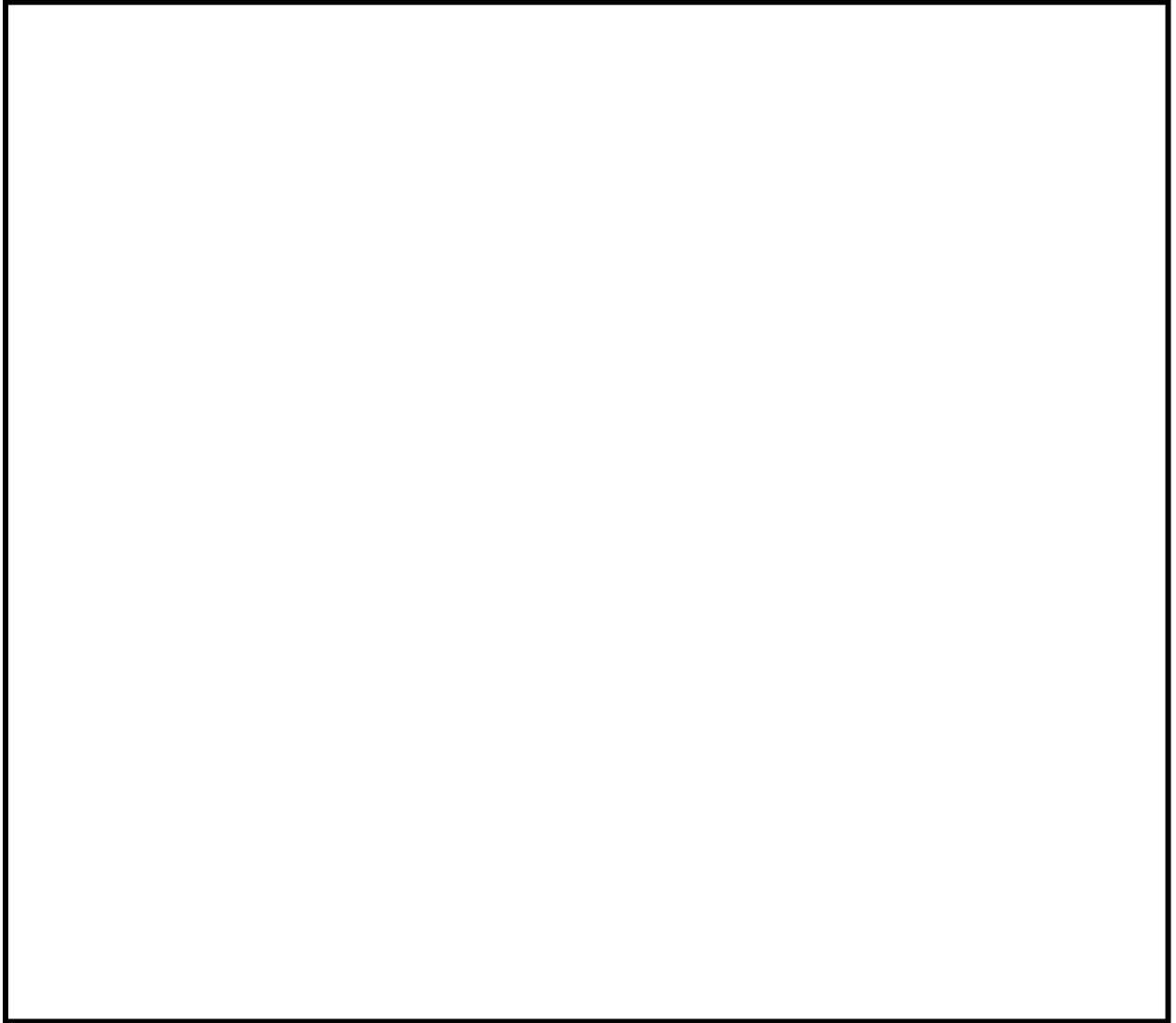


Dogsilla is my cool robot. It can guard my house and see any people and I can ride it. It uses its eyes and nose to see people.

By Avery - 3<sup>rd</sup> grade

MOE says

When we build robots, we give them electronic sensors, similar to Dogsilla's eyes and nose. We gave our robot Dynamoe SONAR to sense when it was too close to a wall. We used a GYROSCOPE SENSOR to tell us when the robot was turning and we used WHEEL ENCODERS to tell us how far the robot had traveled.



Now it's YOUR turn! Invent a robot that can help you solve problems or one that can make you smile.

\_\_\_\_\_ is my cool robot.

It can \_\_\_\_\_ and

\_\_\_\_\_. It uses \_\_\_\_\_

to \_\_\_\_\_

## Learn more about real robots on the internet!

**Asimo** - It walks and talks. It follows simple directions when you talk to it.

<http://www.honda.com/asimo/>

**Dextre** - It works on spaceships in space. <http://antwrp.gsfc.nasa.gov/apod/ap080611.html>

**LEGO Mindstorms** - You are the builder here.

[http://mindstorms.LEGO.com/eng/Vienna\\_dest/Default.aspx](http://mindstorms.LEGO.com/eng/Vienna_dest/Default.aspx)

**Phoenix** - Its robotic arm explores the Martian soil.

<http://phoenix.lpl.arizona.edu/>

**S-Bots** - They swarm together and solve problems using teamwork.

<http://www.swarm-bots.org/>

**DaVinci** - It helps doctors make very tiny cuts and stitches in surgery.

<http://www.intuitivesurgical.com/index.aspx>

**Abe** - It uses SONAR to explore and map the ocean floor.

<http://www.whoi.edu/sbl/liteSite.do?litesiteid=4050>

**DynaMOE** - It races around a track, picks up giant balls and lifts them over an over- pass. It's hot green and we built it in six weeks! You can build robots, too.

[http:// www.moe365.org](http://www.moe365.org)

