

How Do You Build a

ROBOT?

As told by
our friend the
Roomba®
robot vacuum

by PJ Micele

illustrated by
Samuel Valentino



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How Do You Build a



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**A clean house is a happy house,
and that makes me one happy Roomba!**



You may be asking,
“How did you become a
Roomba robot vacuum?”
Well, let me tell you!



People who make robots are called engineers.



Engineers studied math and science in school to learn everything it takes to bring a robot like me to life!

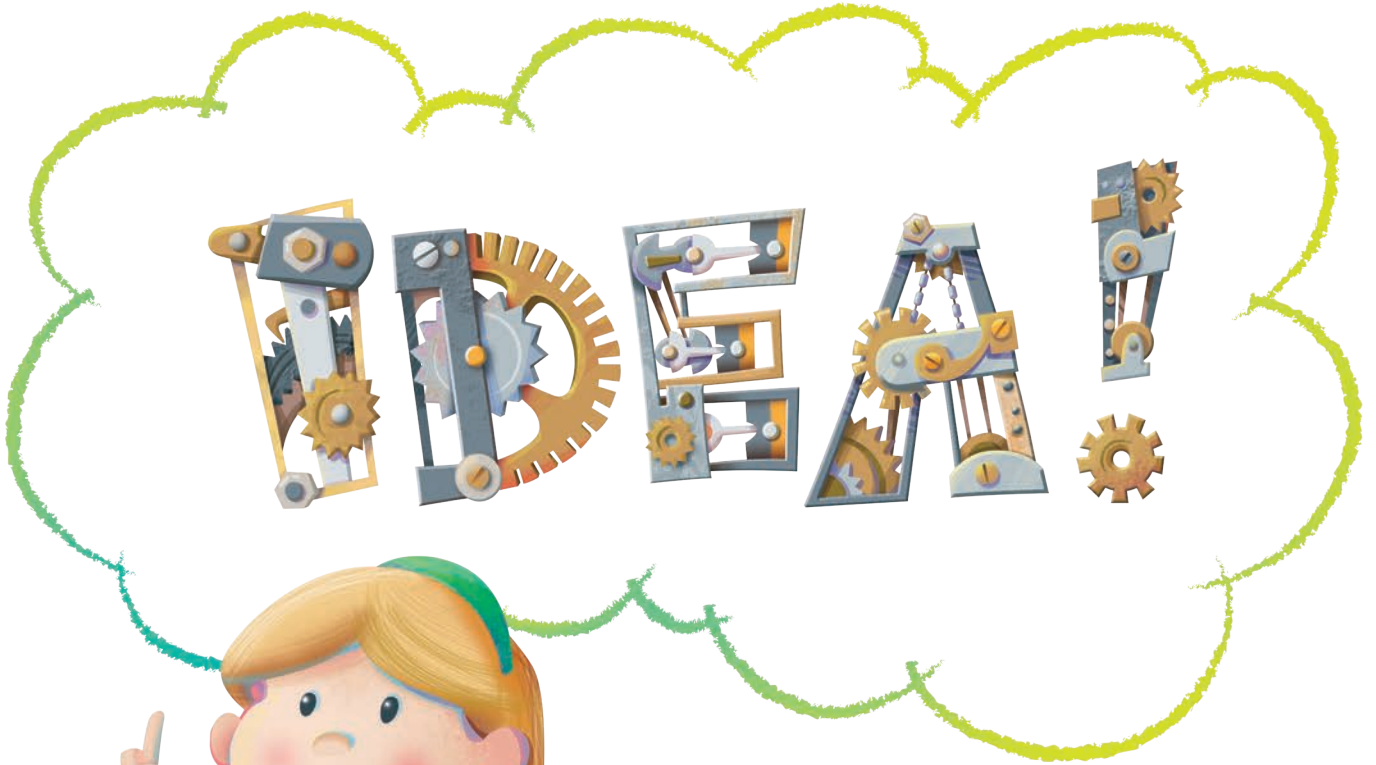
**Before they became engineers,
they were kids just like you!**



**Have you ever taken your toys apart
to see how they work? Or examined a bicycle
to understand how the gears move?**

**Many of my engineer friends did the
same things when they were kids!**

Every robot begins first as an



**Engineers come up
with ideas to solve
a problem.**

**So you ask,
“What problem does
Roomba solve?”**

Sometimes people are too busy working, taking care of their families, or having fun, and they don't have time to clean the house.



That's where
I come in!



**My friends the engineers went to work
thinking about how to save your family time!
So, they thought, “What if we create a robot
that vacuums the house all by itself?”**



Does this sound like a robot you might know?



When I was younger I did not look exactly the same as I do today.

My engineer friends spent a lot of time making sure I looked and worked great.

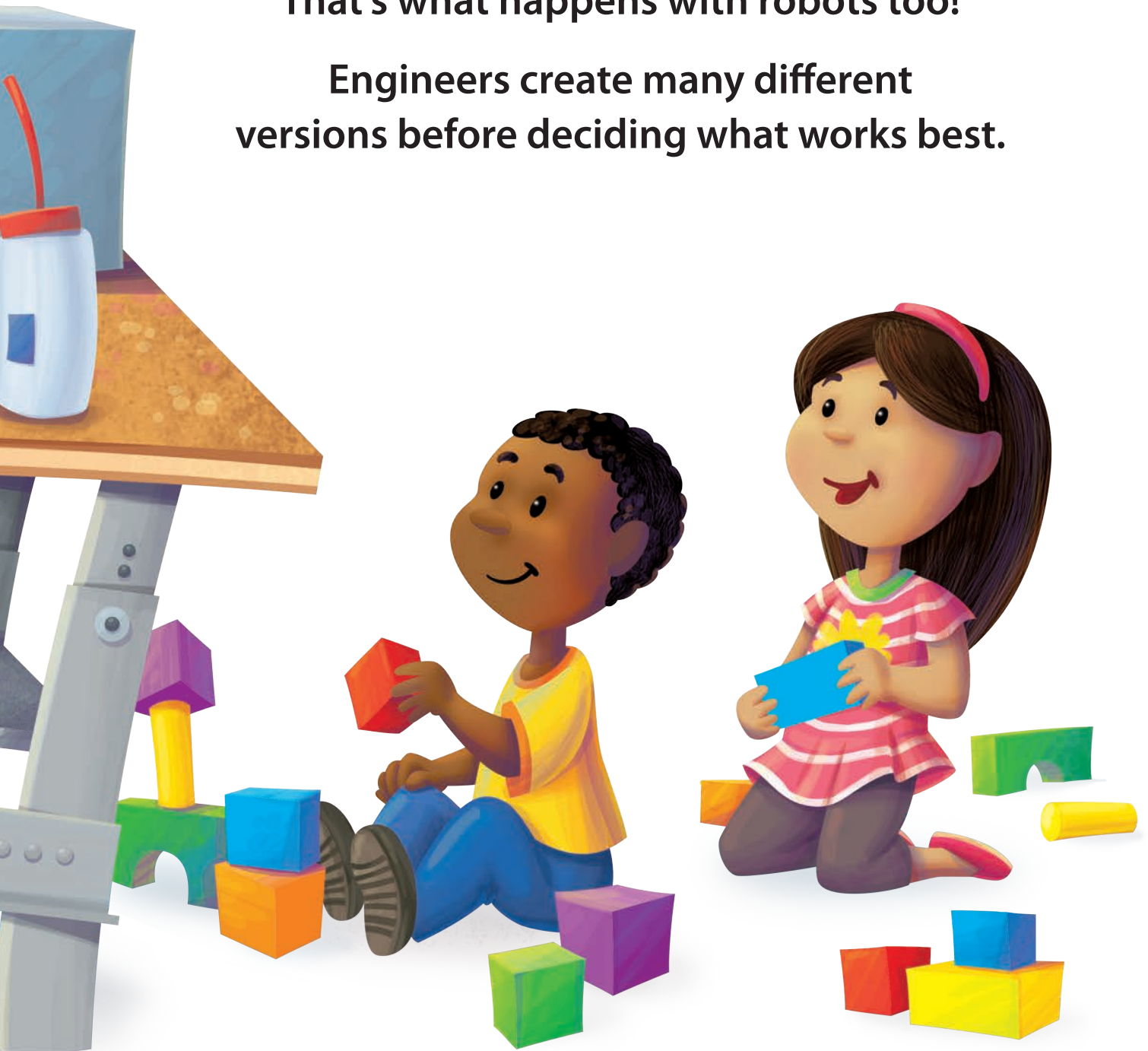


**Sometimes a robot looks very different
when an engineer first starts to build it.**

**Have you ever built a tower with blocks
and had to start over or make changes
as you build?**

That's what happens with robots too!

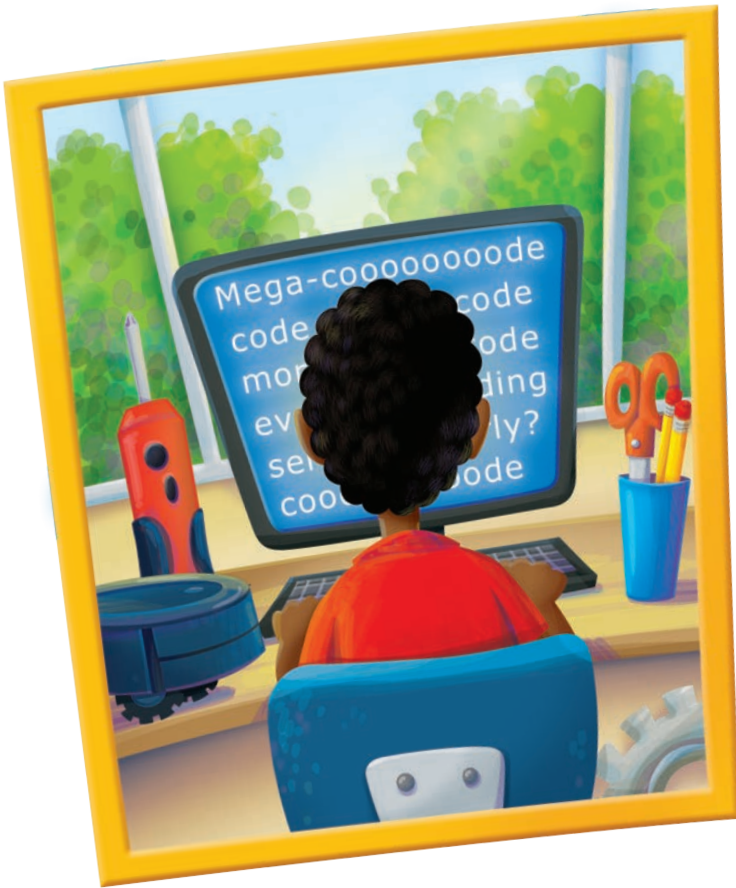
**Engineers create many different
versions before deciding what works best.**



The engineers that created me spent many years deciding how to make me look like I do today. Many different types of engineers worked together to help create me.



My friends the **mechanical engineers** made sure that all of my many parts were in the right places. Then, my friends the **electrical engineers** gave me all of the energy and sensors I needed to move around your house!



Software and systems engineers made sure all of my parts could understand each other and work as a team. They were the ones that gave me a brain!

Last but not least, my **industrial design** friends made me look like you see me now! They make sure people know what my buttons, sounds and lights mean.





Before I could end up in your home
I had many tests to pass in Robot School.
Yes, that's right!
I had to go to school just like you do!

The test engineers
wanted to see how much
dirt I could pick up to
make sure your home
is always clean!

Then, I had to see how
long I could clean before
I needed to recharge.



Sometimes when you're building robots,
you need to test and make changes along the way.
My engineers made sure that when I do long
cleaning jobs, I have enough power.



**My friends, like your teachers, made sure
I learned everything I needed to know to
be the best robot .**



**After I finished school and passed
all my tests, I had help from other friends
to make sure I could end up in your home!**



**Salespeople, marketers, finance people,
designers, and lawyers all played important
roles in my life! I had so many friends
on my journey that I'm not sure I'd be able
to name them all.**

I hope you learned a lot about robots and the many different people that make them. What kind of engineer would you like to be?



Do you want to give
the robots their power
and ability to do things
like see and hear?



Then you'd be a great
**electrical
engineer!**

Maybe you want to
figure out how all my
parts communicate
and be the one to give
robots a brain.



That would make you a
**software or
systems engineer!**

What if you want to put
the parts together and
see how they all fit?



**Mechanical
engineering**
would be the perfect
fit for you!

Or, you might want to
design or draw how a
robot looks.



If so, you'd be a great
**industrial
designer!**

Uh-oh! I just received a message that it's
time to clean!



If you are at the park and need me to clean before you get home just use your phone and send me a message. All you need to do is press "Clean."



OK, now it's really
time for me to get
back to work.



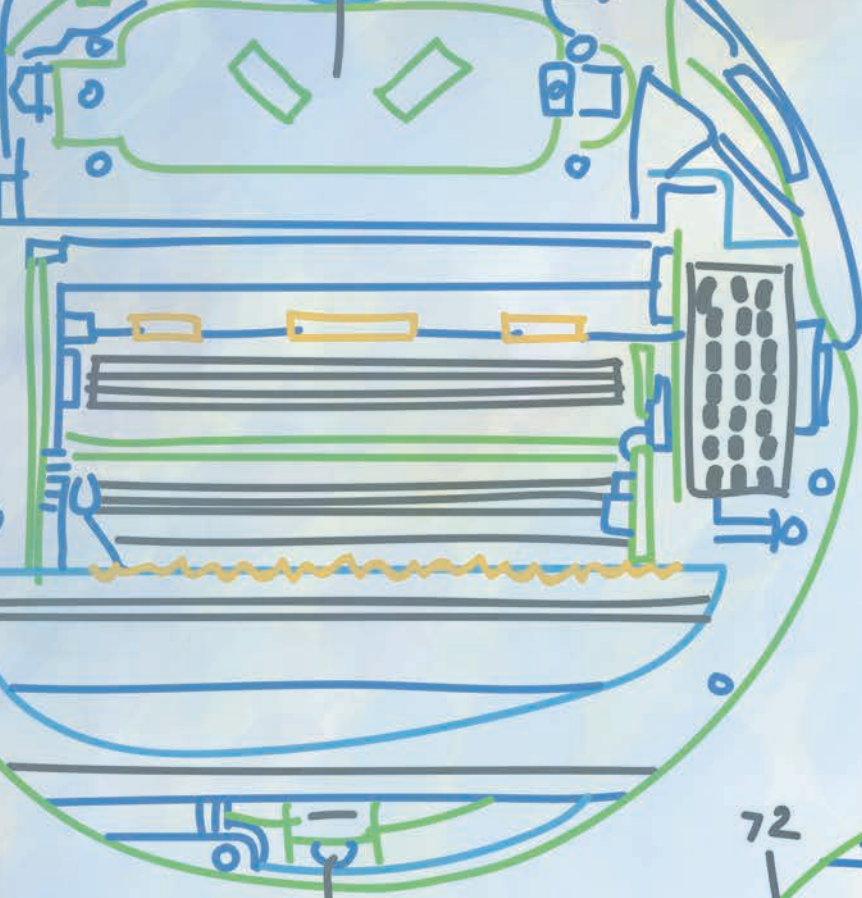
Like I said, a clean house is a happy house,
and I am a very happy Roomba!



The End

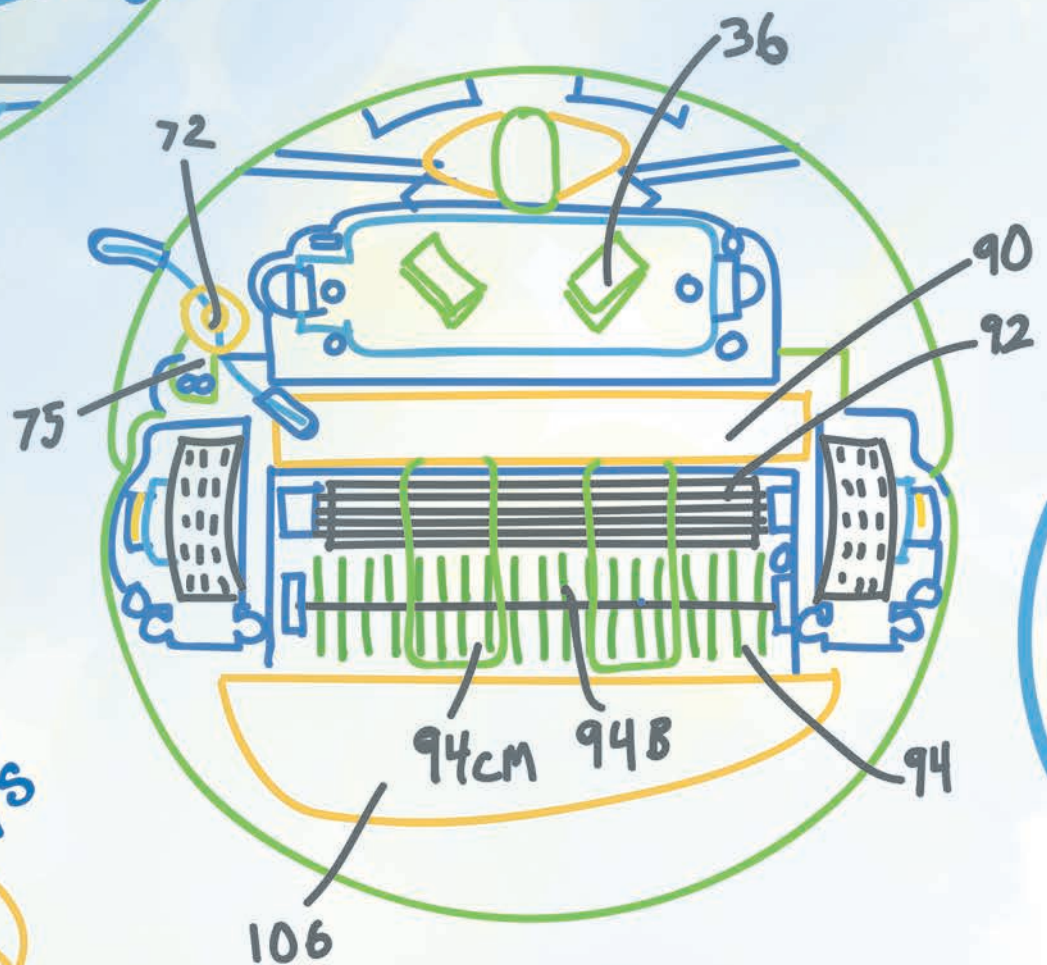
See you soon!





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awesome!