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SCHOLASTIC

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It's a Mini-Me!

This lifelike figure is just one of
the many objects people are
making with 3-D printers. [Page 4](#)



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VIDEO

Dream It,
Print It!

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Getting Beehives Buzzing Again [p. 2](#) • Remembering Hurricane Katrina [p. 6](#)



Me in 3-D

A Scholastic News editor explains how 3-D printers are being used to make all kinds of objects—including a lifelike figure of him!

I am staring at an 8-inch version of myself. Everything about us looks identical, from the curls in our hair to the wrinkles in our clothes. The figure is pretty cool—and it wouldn't have been possible without a 3-D printer.

A 3-D printer isn't like an ordinary printer that uses ink to put words and images on paper. Instead, it actually creates new objects, using materials like plastic or metal.

A company called DOOB USA used a powder to print my "mini-me" (see "How I Got Printed"). The figure cost about \$300.

Words to Know

innovative (IN-uh-vay-tiv) *adjective*. original and unusually creative

prosthetic (prahs-THET-ik) *adjective*. describes a device used to replace a missing or injured body part

3-D printers have been around since the 1980s, but they didn't become popular until the past few years. These days, people are using this technology in all kinds of **innovative** ways that go far beyond making lifelike figurines.

Shop and Print

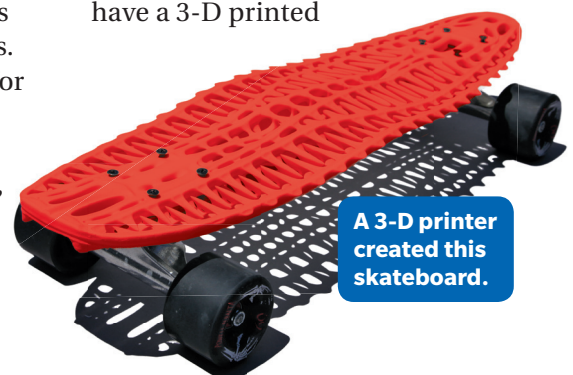
Not everyone has to go to a store to print 3-D objects. Many people are doing it themselves with home 3-D printers. Some printers cost less than \$1,000. People have used them to make everything from iPhone cases and chess sets to skateboards.

Anyone looking for ideas for 3-D printed objects can find plenty of inspiration online. The popular site Thingiverse, for example, has more than 100,000 free designs for users to download.

A Helping Hand

For some people, 3-D printing is changing their lives. Dawson Riverman is one of them. The 13-year-old from Forest Grove, Oregon, was born without fingers on his left hand. His parents couldn't afford a typical **prosthetic** hand, which can cost up to \$10,000. Instead, Dawson got one created by a 3-D printer. The materials used to make the new hand cost only about \$35.

Dawson is one of at least 1,500 kids worldwide who have a 3-D printed



A 3-D printer created this skateboard.

prosthetic hand. The plastic hand opens and closes when Dawson moves his wrist. It enables him to do everyday tasks he struggled with in the past. That includes playing his favorite sport, baseball.

“The 3-D printed hand helps me swing a bat and throw a ball,” Dawson says.

Out of This World

The possibilities for 3-D printing even go beyond our own planet. Last year, astronauts used a 3-D printer for the first time aboard the International Space Station (ISS), the giant laboratory orbiting Earth. They printed 20 objects, including a wrench and a storage container.

Having a 3-D printer on the ISS could one day eliminate the need to send spacecraft to

resupply the station. Those missions require months of planning and can cost tens of millions of dollars.

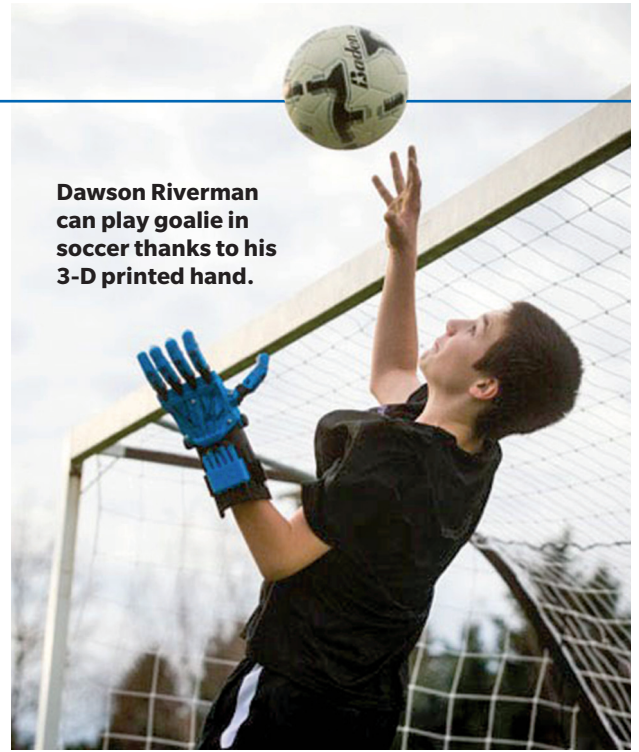
“Now you can just print what you need when you need it,” says engineer Brad Kohlenberg. He works for Made In Space, a company that helped develop the 3-D printer for the ISS.

In the future, astronauts may even be able to print their food. NASA, the U.S. space agency, is experimenting with a 3-D printer that uses powdered ingredients to make pizza.

Experts say there’s no limit to what this technology will help us create in the future.

“We’re really just on the cusp right now of what 3-D printing

Dawson Riverman can play goalie in soccer thanks to his 3-D printed hand.



can do,” says Michael Anderson, the chief executive of DOOB USA.

As I look at my mini-me, I’m amazed by what is already possible with 3-D printers. And I can’t wait to see what’s next.

—by Joe Bubar

How I Got Printed

Step 1:

At the DOOB store in New York City, I stood inside a scanning booth, where 54 cameras took photos of me from nearly every possible angle.



Step 3:

A 3-D printer used a special powder to print the figure one thin layer at a time. The printer added color and glue to each layer to hold them together. Printing took about 18 hours.



Step 4:

A technician removed the excess powder from the figure. Then he dipped it in a chemical to strengthen the material. I was able to “meet” my figure after it dried overnight.

Step 2:

A technician at DOOB used special software to turn all those photos into one 3-D model of me on a computer. Then he just hit print.

