



# 3D PRINTING

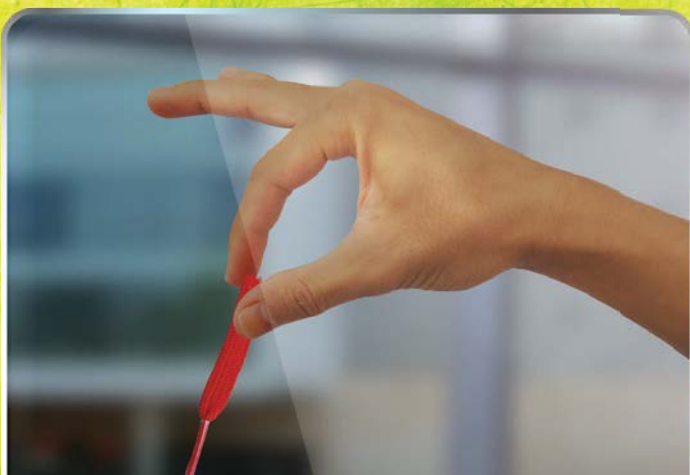
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## Chapter 1

# SAVING THE DAY

Ben is a runner.  
He puts on shoes.  
Then he pulls his laces tight.  
One snaps.

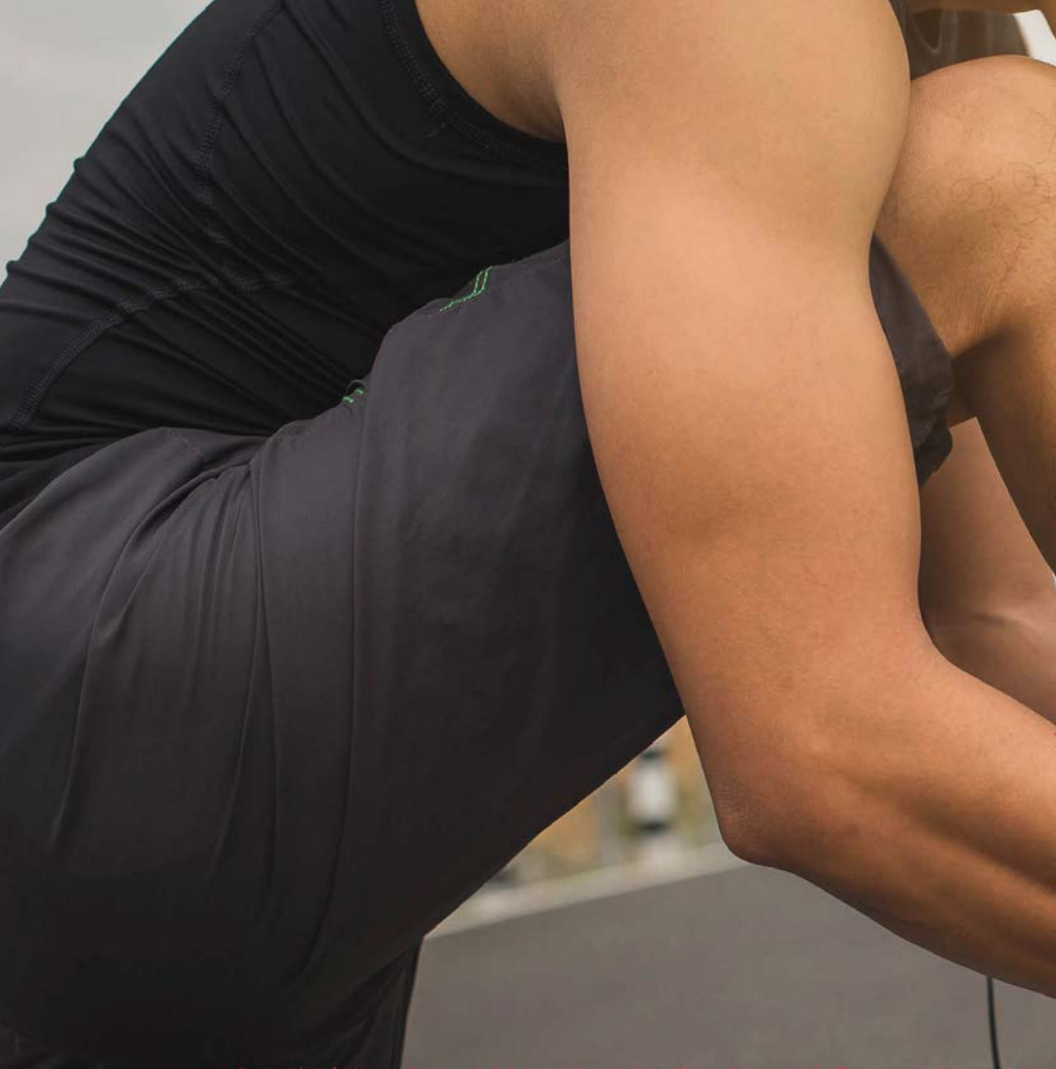
*Oh no!*  
He needs a new lace.  
There is no time.  
The race is soon.  
His team needs him.





Ben opens his laptop.  
He searches.  
There is a *plan*.  
It is for a new lace.  
He copies it.

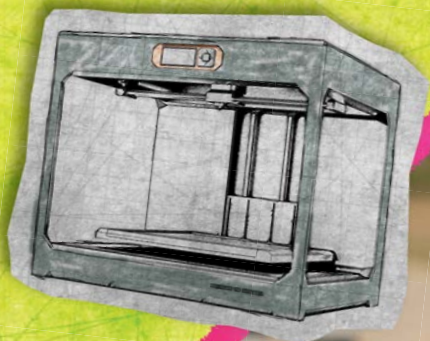




Ben picks the color.  
It is red.  
That is the team color.  
He goes to the printer.  
It starts to hum.  
Then it stops.

Ben grabs the lace.  
He strings it.  
Then he ties his shoe.

A printer saved the day.  
It was a **3D printer**.





## Chapter 2

# WHAT IS 3D PRINTING?

Many printers use ink.

3D printers do not.

Some use wax.

Others use *plastic*.

Metal can be used too.

3D printers make many things.

These can be toys or car parts.

They can even make bones and pizza.

Think about this book.

There are words on the page.

They are made from ink.

The ink sits on paper.

There are two *layers*.

Paper is one.

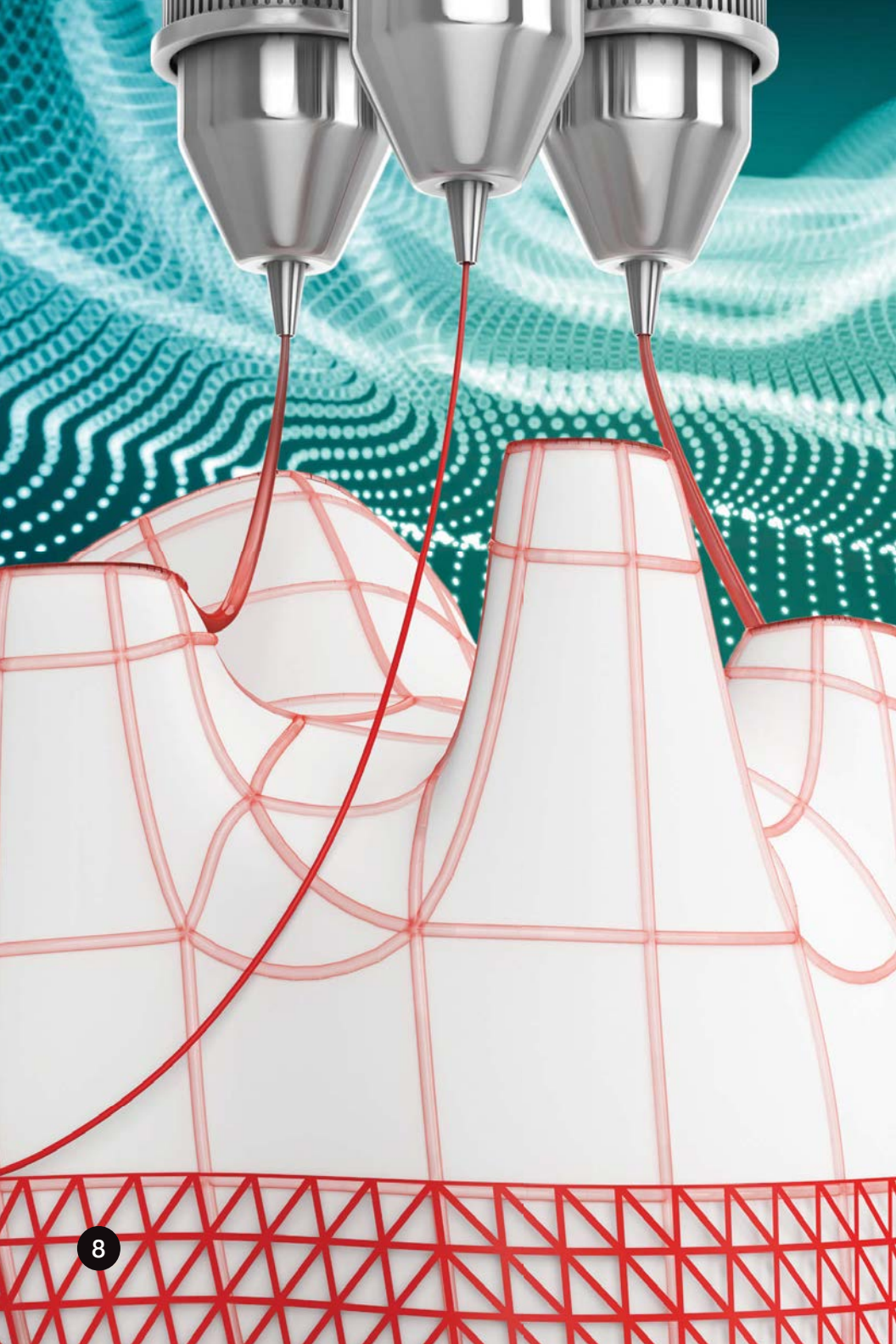
Ink is the other.



**3D-printed  
car parts**









## A 3D World

In 2016, an 11-year-old from Michigan printed a working violin in his own home. He now plans to start his own 3D-printed violin business.

Material for 3D printing



3D printers are different.  
They print a layer.  
Another layer is added.  
This keeps going.  
It can happen millions of times.

The layers build.  
An object takes shape.  
Finally it is ready to use.