

FOLLOW YOUR STUFF



Who Makes It,
Where Does It Come From,
How Does It Get to You?

Kevin Sylvester and Michael Hlinka



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To Kit, Hap, Kathy, and Al — K.S.

Dedicated to Wyatt: The best thing
that ever happened to me! — M.H.

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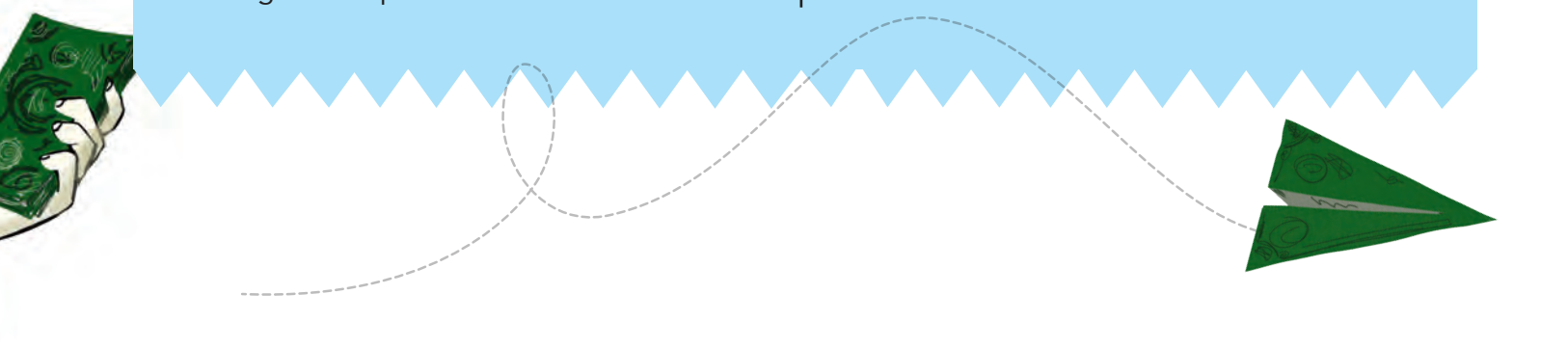
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Getting Ready to GO GLOBAL!

Who made the shirt you're wearing? Do you know? Can you say where it was made without looking at the tag?

The truth is, all of the things we use, consume, and buy are made by other people. Lots of them. Millions of them, in fact, from every part of the globe! People you will never meet. People who might not even know that their own good work helped you stay warm during the last bit of cold weather or helped you see better.

But wait, you say. I've made a cake . . . from scratch!

Not really. "From scratch" means you have access to the basic ingredients, but you are just assembling them. That cake is delicious, sure, but it's not really something you made all by yourself.

Someone else grew the wheat. Someone else harvested the sugarcane, and other people turned that into the sugar you used. Same thing for the flour, the milk, the icing, the food coloring, the chocolate, the candles, the . . . you get the idea.



Who are these people?
Where do they live?
How do they do their work?

Well, if this book had been written even 50 years ago, many of those people might have been your neighbors or lived pretty close to you. Today, thanks to cheaper transportation costs, advances in technology, and other issues we'll look at in the book, they probably live thousands of miles away.

Together, they form a chain of connections from, say, a cotton seed or a bit of rock to the shirt on your back, the phone in your hand, or **THIS VERY BOOK!**

And when you make a purchase, each one of them gets a tiny fraction of what you pay. Some get way smaller fractions than others—which

raises a few questions about the fairness of this global economy.*

THIS VERY BOOK will attempt to explain who those people are, where they are (hint: everywhere!), what they do, how they get paid, and how you are involved in the global economy.

Okay, fasten your seat belts (made in Mexico) and strap on your safety goggles (made in Canada with raw materials from Indonesia), turn the page, and **GET READY TO GO GLOBAL!**

** When we talk about a "global economy," we mean that raw materials and products come from all over the world and are sold all over the world. This "global" market has always been true for some products (such as tea, oil, and spices), but today it's true for almost everything.*





Good Global QUESTIONS

Wait a minute:
we're not quite ready
to go global yet.

Before we get started,
we have to deal with a
huge issue.

"Is it worth it?"

??

You need to ask this question every time you're about to make a purchase—a purchase that will have an effect, remember, around the world. In fact, it's such an important question that it does double duty: you can (and should) ask it in two ways, neither of which is answered with a simple **yes or no.**



RELATIVE VALUE



ONE:
Is it (whatever it is)
worth paying for?

Most of us don't have endless supplies of money, so when we buy something, we have to determine if the expense is worth it. Is it worth parting with our hard-earned allowance to have this thing?

Another way to ask this question is, "What's worth more? A \$50 video game or a \$50 pair of jeans?"

Of course, it's a trick question. They both cost \$50. But, you might be willing to pay \$50 for one and not for the other. This is a really important concept known as "relative value." Here, "relative" means that different things are worth more (or less) to different people, even if they are priced the same.

The people who make goods and the people who sell them are constantly balancing what they can charge for an item versus what it costs them to make that item. If no one wants a video game, then it's not

worth \$50. And this price target moves all the time. Want to pay \$2,000 for a metal furrowing plow? No. But 100 years ago, you would have gladly shelled out the money because the plow was something you wanted and needed.

Manufacturers (the people and companies that make goods) try to cut or control costs while still making a profit. So they might shop for cheaper raw materials such as cotton or computer chips. Reducing costs lets them both lower prices and increase profits.

**Another cost they
can control is wages.
Which leads us to . . .**

TWO:
**Is it worth what it costs
someone else?**

People get paid to make the goods you buy. They are compensated for their skill and labor. In a perfect world, people doing the same job would be paid according to their skill and how hard they work. But actually, how much they get paid could depend more on where they live than how well they do their job.

A textile worker in Germany might get paid \$15 an hour to make a shirt, while a person doing the same job in Guatemala might get \$1. So, a shirt made in Guatemala might be cheaper for you to buy, but that's only because someone is getting paid a lot less to make it.

Not everyone agrees on whether that's a good thing or a bad thing. In fact, there are no simple answers when it comes to questions about "fair wages."

In Germany, \$15 an hour is about the minimum wage and just slightly below the average hourly wage for all workers.

In Guatemala, \$1 an hour is well above the average wage. That tells us a lot about the different poverty levels in the two countries, and it also shows why a textile company might move a factory to Guatemala rather than pay higher wages in Germany.

Should they pay their workers more? Good question. And that's just scratching the surface of the ways in which wages affect the global economy.





Throughout the book, you will see big question marks like the one above. They're telling you that it's time to start thinking more deeply about a particular issue. Maybe it's the wage of the miners who dug the ore that was used to make your cell phone. Or perhaps it's safety concerns about the product itself. A lot of fuel is burned to move things around the globe, so that environmental impact is also something to consider.

We're not going to answer the questions. But you need to ask them every time you buy something.

You are a huge part of the global economy, and every dollar you spend is part of a system that touches dozens of lives directly, and millions indirectly.

Okay, now we're ready to go.



T-SHIRT?

More Like A-to-Z-shirt!

There are dozens of people (at least) who helped turn a living plant into the cotton T-shirt on your back.

That's a cool-looking tee you just picked up at the Fits U 2 a T shop at your local mall. It's even got the logo for your favorite band, the Globals. Let's say you paid \$25 for it (plus \$2.50 in tax* that goes to the government). Who got what?

Let's start at the beginning.

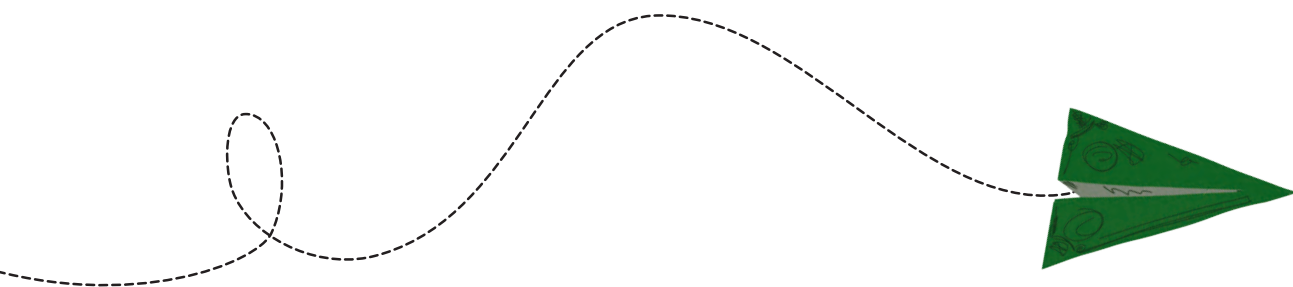
** Taxes vary depending on where you live or shop. To keep it simple, when we talk about tax in the book, we've rounded it to an even 10 percent.*



One more thing to clear up before we move on. Throughout the book, we'll discuss "profit." But there are two kinds.

GROSS profit is what's left over after subtracting the direct costs of making a product from the selling price. So, for example, if it costs a company \$10 to make a pair of pants and they sell those pants for \$40, they've made a gross profit of \$30.

But there are other costs that businesses have to consider—things such as rent, insurance, electricity, and so on. Once those costs are taken into account, there's less than \$30 left. This is the NET profit. And if the total cost to produce and sell the product is more than the selling price of the product, that's a LOSS.

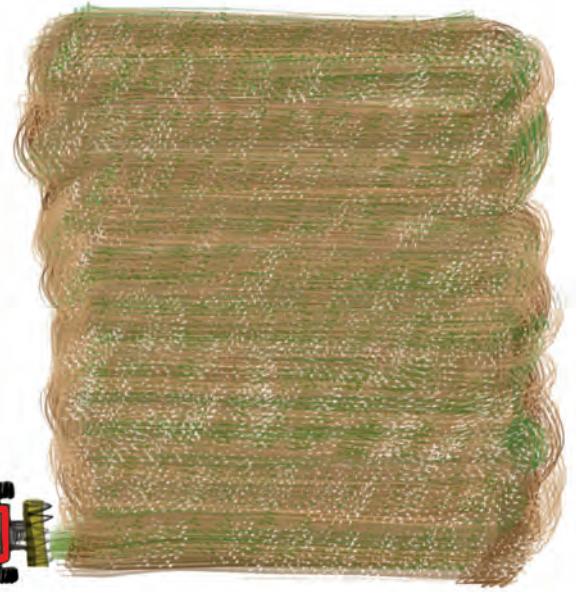


TOTAL COST

A (COT)TON OF FUN

It all starts with a seed.
Cotton is grown all over the world,
but the cotton in your shirt came
from a farm in China.

The farmer uses a machine to sow thousands of seeds in a field, which is divided into acres—squares about 64 meters by 64 meters (209 feet by 209 feet). Then she pays for fertilizer, water, and workers to make sure the plants yield a good harvest.



There is often a conflict between profit and human rights. A few countries use incredibly cheap labor, or even forced labor, to harvest crops. That makes your T-shirt much cheaper for you to buy, but is it worth it?

She might use a machine to harvest the cotton, or she might use workers. They get paid about \$15 per acre—from seed to harvest. That's not a lot for months of labor.



COSTS per acre:

Seeds:	\$100.00
Fertilizer/pesticide:	\$100.00
Water:	\$4.00
Machinery costs:	\$50.00
Labor/wages:	\$15.00
Business costs (repairs, fuel, insurance):	\$150.00
TOTAL:	\$419.00

Each acre yields the farmer about 500 pounds (226.80 kilograms) of cotton. Cotton prices vary, but let's say the average is \$1 per pound (0.45 kilogram). That means the farmer has made \$500 from her cotton per acre, but she spent \$419 to get that.

PROFIT*:

$$\begin{array}{ccccccc} \mathbf{500} & = & \mathbf{\$500} & - & \mathbf{\$419} & = & \mathbf{\$81} \\ \text{pounds of} & & \text{SUBTOTAL} & & \text{COSTS} & & \text{TOTAL} \\ \text{cotton at \$1/} & & & & & & \\ \text{pound} & & & & & & \end{array}$$

*The net profit might be higher or lower, depending on the day. Commodities (like cotton, beef, and oil or gas) are subject to price changes based on "supply and demand." If a storm wipes out a huge part of the cotton crop, the supply is low (scarcity) and prices go up. But if it's a perfect year and there is too much cotton (a glut), prices can drop a lot.

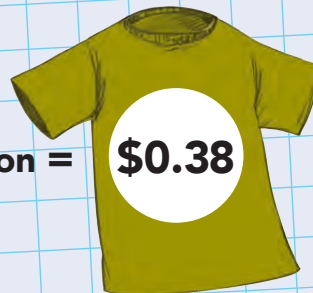
(although the farmer invests much of this back into the farm for upgrades to buildings, machinery, and so on)

$$\begin{array}{ccc} \mathbf{1} & = & \mathbf{16} \\ \text{pound} & & \text{ounces} \\ \text{(0.45 kilogram).} & & \text{(453.6 grams).} \end{array}$$



$$\begin{array}{ccc} = & \mathbf{6} & \\ & \text{ounces} & \\ & \text{(170 grams).} & \end{array}$$

There are 16 ounces (453.6 grams) in a pound, and a T-shirt contains about 6 ounces (170 grams) of cotton. That means the cotton only makes up about \$0.38* of the cost of your shirt.



$$\mathbf{\$1 \times 6/16 \text{ ounces of cotton} = \$0.38}$$

At the end of this stage, we've got an extremely large pile of cotton balls, picked and ready to be sent to a factory that will turn them into woven fabric.

CREATING CLOTH

The raw cotton is sent to a textile manufacturer. These can be found all over the world, but the fabric for this shirt was made in Guatemala.



Many textile workers are known as “unskilled laborers.” This means that their work can be done by almost anyone, with a little bit of training. This leads some companies to offer poor working conditions, including long hours for low wages. If employees don’t like it, there’s not much they can do. Would you pay more if you knew it would raise wages for those workers?

The cotton balls are fed into a series of machines. They are spun into thin strands and then woven into sheets. The workers get paid about \$325 a month.*

A T-shirt is made from about 1 meter (3.28 feet) of fabric, and it takes about 10 minutes, from start to finish, to make that in the factory.

** In Sri Lanka, textile workers make about \$60 a month; in Turkey, they might get \$850 a month. Workers in North America might get \$2,600.*





COSTS per T-shirt:

Wages:	\$0.10
Factory/machinery:	\$0.25
Chemicals* for treating fabric:	\$0.20
Dyes for making it green:	\$0.30
Markup:	\$0.20
TOTAL:	\$1.05

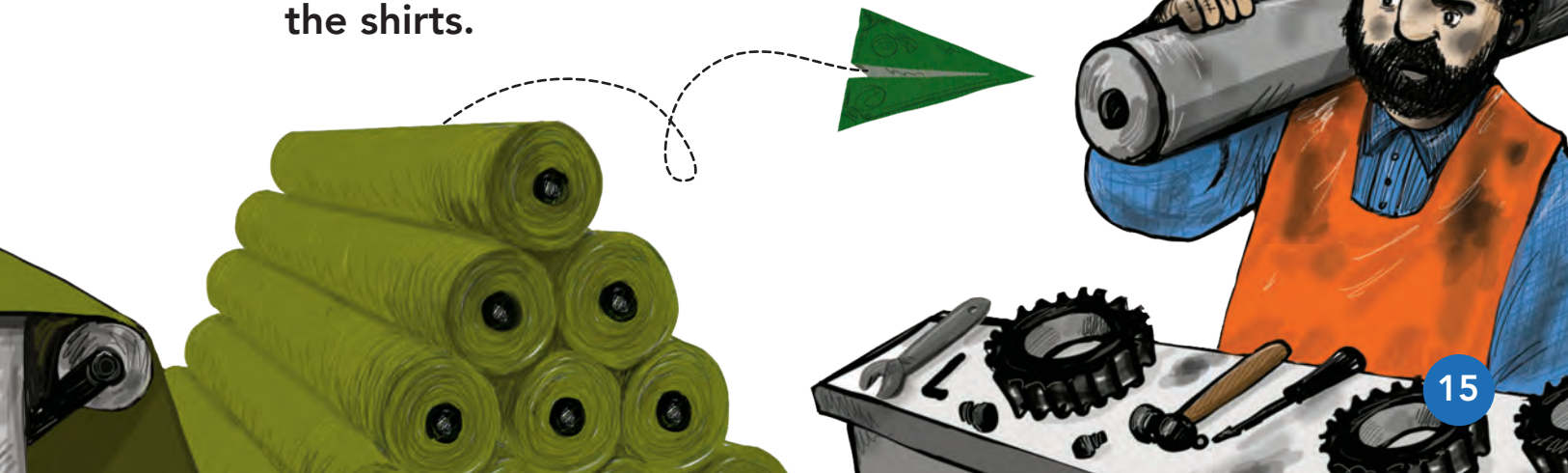
* Chemicals are used throughout this process. They're needed to clean the fibers as they are spun and woven. Cotton is often bleached, for example, to make sure it is evenly white. And since the Globals love yellow, the fabric will be dyed before it's sent to the factory that assembles the shirt.

The textile factory buys the chemicals and dyes from factories in China and the United States.

The total cost of the shirt, in materials and wages, is now about \$1.43



Rolls of cloth are now ready to be shipped to a factory that will cut, sew, and assemble the shirts.



STITCHING IT TOGETHER

The cotton—now in fabric form—has arrived at an assembly plant. Check the tag on your shirt. It says India? That means your shirt was put together at a factory there.



The pressure to make clothes quickly and cheaply can lead factories to become "sweatshops." People are crammed into decaying buildings, working long hours on overheating machines, with few or no breaks and for little or no money. In 2012, a deadly fire at a factory in Bangladesh showed how horrible, and dangerous, those conditions can be. More than 100 people died after the building caught fire. Do you know the working conditions where your shirt was made? How can you find out?

A worker known as a "cutter" literally cuts the cotton sheets according to the pattern* the company gives her. The cutter makes about \$105 a month and cuts hundreds of pieces in that time.

Once the fabric is cut, it's sewn together by a seamstress. She might sit at a sewing machine at the factory, or take pieces

home to assemble the shirts and then bring them back to the factory for shipping. Either way, she makes about \$125 a month and will assemble hundreds of shirts.

Both workers make just a few cents for every shirt they measure, cut, and sew.

** That pattern was developed by a designer in Canada. He was paid a one-time fee, so that doesn't add much to the cost of the shirt. But without his design, it wouldn't fit properly.*

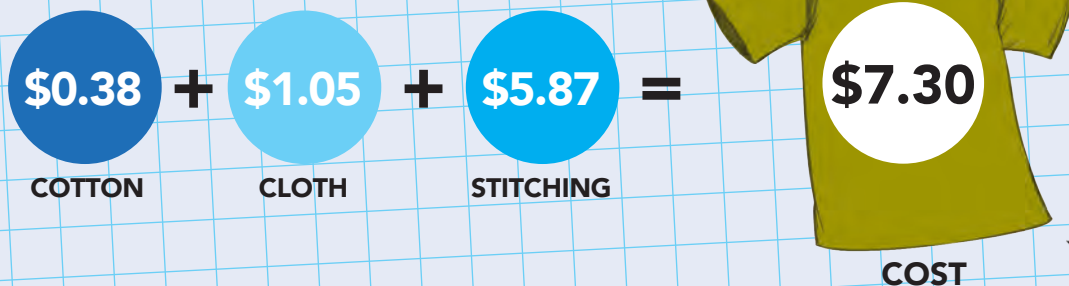


COSTS per T-shirt:

Wages:	\$0.65
Machinery:	\$2.00
Factory (power, fuel, etc.):	\$1.00
Rent/insurance:	\$1.00
Thread*:	\$0.02
Agent:	\$0.20
Storage:	\$0.10
Markup:	\$0.90
TOTAL:	\$5.87

* The seamstress uses nylon thread to sew the T-shirt's arms and body together. The thread comes from a lab in Mexico. It costs about \$0.02 per shirt and is a by-product of the petroleum industry. A by-product is what's left over after making fuel from crude oil.

The total cost of the assembled shirt, in materials and wages, is now about \$7.30.



But it still needs that awesome logo.



THE GLOBALS Get Their Cut

The logo is stamped onto the fabric using a process known as silk-screening.



Some people think it's okay to use images without paying the artist. Knockoffs, or fakes, are usually much cheaper than the real thing and are available online or on street-corner markets the world over. Maybe the super-famous Globals won't feel the hit so much, but the designer will. Each illegal sale hurts his ability to make a living. Should you pay extra for an official shirt?

Sometimes the logo might be added at the same factory in India. But this time, it's done by yet another factory in Mexico.

A printer operates the machine that stamps the logo onto each shirt. He gets paid about \$150 a month and prints a

Globals' logo on a shirt about every minute. This includes placing the shirt on a press, angling it properly, and then letting it dry.

At least four other people then fold the dried shirts, seal them in plastic, and box them for shipping to the store.



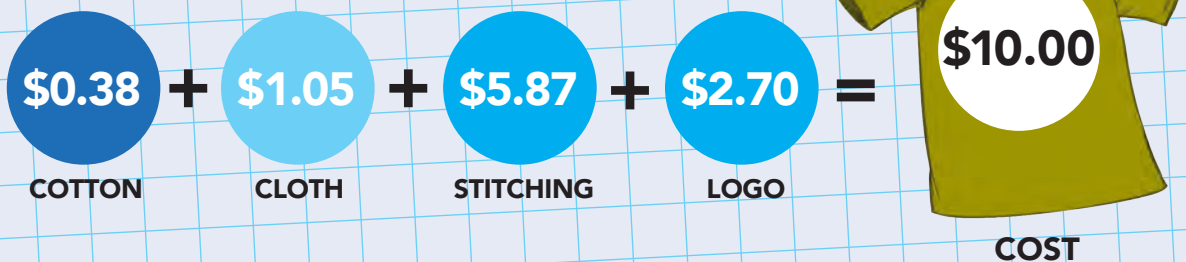
COSTS per T-shirt:

Wages:	\$0.50
Factory costs (power, fuel, etc.):	\$0.20
Ink:	\$0.10
Royalties* (to the band):	\$1.00
Markup:	\$0.90
TOTAL:	\$2.70

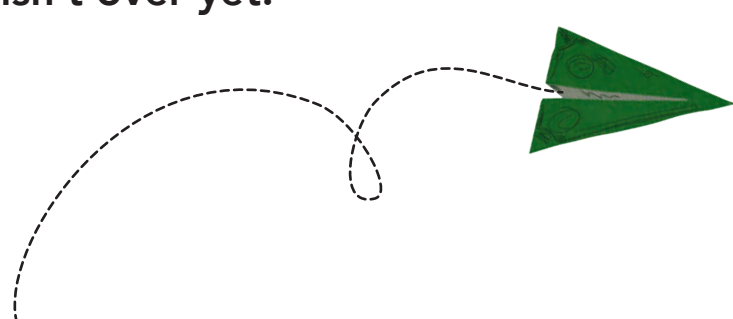
* Royalties are money paid to artists for the right to use their name, artwork, logo, etc. The T-shirt manufacturer knows they can charge more for an official Globals shirt than they can for a normal yellow shirt. So they agree to pay a bit of the price of every shirt to the band.

The band didn't design the logo. They hired a designer who lives in Los Angeles to design one. And they give him a 10 percent royalty on every sale, or \$0.10.

The total cost of the shirt is now \$10.



The shirt is *finally* packaged and sent to the store. And the journey isn't over yet!



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ABOUT THE AUTHORS



Kevin Sylvester wishes he understood the economy better. (You probably wish you did too.) That's why Kevin hangs around with smart people such as Michael Hlinka . . . to try to figure out complicated stuff. What Kevin does have is curiosity. He wants to know as much as he can about how everything works—sports, space travel, cooking, bikes, cars, and money. And he loves to draw.

This has led him down many interesting roads and has led to many books. *Follow Your Stuff* is only his latest book with Annick. There was, of course, *Follow Your Money*, but also *Basketballogy*, *Baseballogy*, *GameDay*, and *Showtime*. He writes novels too!

He has a book called *Mucus Mayhem* about a girl who can make her boogers come to life. His sci-fi trilogy MINRs is a bestseller and critical success.

His cooking mystery collection, *Neil Flambé Capers*, is now at six books. And picture books! *Super-Duper Monster Viewer*, *Splinters* and his brand-new *Gargantua (Jr.) Defender of Earth!*

Kevin also does more than a hundred school presentations per year—featuring farting contests, five-second cartooning classes, and cat poop coffee.



Michael Hlinka wishes he was more creative. (You might wish you were too.) That's why Michael hangs out with imaginative people such as Kevin Sylvester.

What Michael does have is high energy and a strong work ethic.

During the day he teaches business courses at George Brown College, and during evenings and on the weekend he runs two different programs for the University of Toronto School of Continuing Studies.

In his spare time, Michael likes to work out and play all the sports in the world with his wife and son.