

Can I Print You Some Dessert?

by Mindy Thomas

The Pop Ups. Stay seated. Three, two, one, ignition. Get ready for an adventure of magnificent proportion.

The Pop Ups. (Singing.) I don't know what you've been told, but we're in a golden age - so many discoveries that are jumping off the page. Wow in the world. Wow in the world. Wow in the world. Wow in the world. Wow in the world. Wow in the world. Wow in the world.

The pop ups. With Guy and Mindy. We're on our way, houston.

<<Outside in the neighborhood – scene opens from Guy's perspective – we hear Mindy's ice cream truck approaching from the distance – pop goes the weasel blares loudly from the truck's pa>>

Mindy. <<On megaphone>> cheeeesecake! Come and get your cheesecake!

Guy. What in the? Mindy??

Reggie. Coo

Mindy. Cheesecakes hot and cheesecakes cold! And one in the back that's covered in mold 'cause I left it on the couch for a week by accident...

Dennis. <<Running up>> Guy Raz! Guy Raz!

Guy. Dennis?

Dennis. [Out of breath] Guy Raz...hurry... Mindy's selling cheesecakes out of her ice cream truck and I need money!

Guy. <<Sigh>> here's five dollars, now please go away!

Dennis. Hooray! A reward for my bad behavior!

Guy. <<Groan>>

Mindy. <<On megaphone>> Come one come all for the best cheesecake deals on four wheels!

<<Clunk sfx ice cream truck comes to a halt>>

Mindy. Aahh!

Reggie. Coo!

Mindy.... well, I guess that's three wheels now. Maaaaaan!

Dennis. Oh good, she stopped. C'mon, Guy Raz!

Guy. Oh boy...

Dennis. <<Running>> Mindy! Mindy! It's me! Dennis! A customer!

<<Ice cream truck service window rolls up>>

Mindy. Oh hello sir. Can I interest you in one of my fine cheesecakes today?

Dennis. [Out of breath] yes, thank you.

Reggie. Coo coo

Guy. [A bit frustrated] Mindy, what are you doing?!

Mindy. What does it look like i'm doing, Guy Raz? I'm trying to make a buck! Care for a slice of cheesecake?

Gramma G-Force. [Walking up] did somebody say cheesesteak?

Mindy. Gramma G-Force!

Fingerling. [Walking up] ooo! Cheesesteaks! Can I have a bite a yours, G-Force?

Mindy. Sorry everyone! No cheesesteaks for sale! At least not yet. So far i'm only able to print cheesecakes.

Everyone but Mindy and Guy. <<Disappointed groan>> awww!

Guy. Wait...did you say...*print*....cheesecakes?

Mindy. Oh yeah! In my 3-d easy-bake-print-a-cake-oven! I built it myself!

<<Reggie drags something heavy from the back of the truck>>

Guy. What in the??

Reggie. Cool!

Mindy. Oh! Sorry Reg...I know it's heavy. Here uh, let me take it off your wings here and...<<drops it heavily on the window counter>>

Mindy. There we go

Dennis. Oh my.

Gramma G-Force. What is it?

Guy. Waaaaait a minute, Mindy...

Mindy. Yeah?

Guy. Did you get this idea from those mechanical engineers at New York's Columbia University? Ya know, the ones who published a new study on 3-d printed *food* in the journal science of food?

Mindy. Yes,Guy Raz! I read about this bonkerballs breakthrough in 3-d food printing technology, and immediately went to my laboratory of bad ideas to build a 3-d food printer of my own!

Guy. Wow! That's great! It looks like...wait... is that *my* printer Mindy?!

Mindy. Uh...<<nervous laugh>>

Fingerling. And what's that welded on the side there?

Guy. What the- that's my toaster!

Mindy. <<Meekly>> Surprise!

Guy. Mindddyyyyyy

Dennis. Now Mindy...what can I get for 5 Razzy bucks?

<<Slams bill on countertop>>

Mindy. Well, that should be enough to get each one of you a slice of the seven-story gingerbread mansion special!

Everyone but Guy. Ooooooooooh!

Gramma G-Force. Question!

Mindy. Yes, Gramma G-Force?

Gramma G-Force. Go back to the beginning.

Mindy. I'm sorry... the beginning?

Guy. You know what, Mindy? It occurred to me that not everyone here has heard of 3-d printing.

Mindy. Wait...is that true?

Everyone but Guy and Mindy. <<Mumbles yes, I guess, sounds about right>>

Guy. Does anyone know what 3-d or three dimensional means?

Everyone but Guy and Mindy. <<Everyone mumbles some version of no>>

Fingerling. Well I read about it a long time ago

Gramma G-Force. I don't even know what language you're talking

Reggie. Coo

Guy. Okay! Well to start, a 3-d or three dimensional object is something that has three dimensions! Take Mindy's ice cream truck for example. It has width from end to end, it has height, from top to bottom, and length or depth from front to back!

Dennis. Wowwww I never knew her truck had so much depth!

Mindy. Now, so my actual ice cream truck is an example of a 3d object but to give you an example of a two dimensional or 2d object, I am just going to draw a picture of my ice cream truck on Guy Raz's forehead like this....

Guy. What?!

Mindy. Ok, let me just see here

Guy. <<Struggling>> Mindy what are you...

Mindy. Stop wiggling, i'm trying to draw!

Guy. Gah, is this permanent??

Mindy. Andddd there! Now as you can see this ice cream truck drawing only has two dimensions...width and height!

Dennis. Huh

Fingerling. Neat!

Guy. Mindy, did you really need to draw an ice cream truck on my forehead?! Can someone please get me a napkin?

Mindy. Guy Raz you can just lick it off your forehead, it's edible ink..

Guy. <<Groan>>

Mindy. The point is, if what you're looking at is flat, then it's got two dimensions or 2-d and if it's not, it's got three dimensions or 3-d!

Reggie. Coo

Mindy. Now before I improved Guy Raz's printer, it only printed 2-dimensionally on paper. Like his tax forms here! <<Paper rustle>> see! No depth!

Guy. You have my tax forms?!

Mindy. <<Toss paper>> But what if I printed a whole stack of one thousand tax forms? Then the tax forms would have width, height, and length, making it a 3-d tower of tax forms!

Reggie. Coo

Guy. Okayyyy! Let's keep going here, Mindy.

Mindy. Alright now, let's talk about 3-d printing...

Guy. 3-d printing has been used to make everything from toys to musical instruments to cars!

Fingerling. Really?

Mindy. And it does this by printing layer on top of layer on top of layer of materials like plastic and metal.

Dennis. Huh.

Mindy. And as those thin layers build on top of each other, a three dimensional object begins to form!

Fingerling/Gramma G-Force/Dennis. << Wowwww>>

Gramma G-Force. Well that sounds very nice and fancy

Guy. And once we discovered that this could be done with materials like plastics and metals, well scientists started to wonder if they would be able to do it with food!

Dennis. Oh!

Fingerling. A food printer. Ya don't say.

Reggie. Coo

Mindy. Food printing technology has actually been around for almost 20 years, but up until now, it's been super gross and no one has wanted to eat it.

Guy. Which brings us to a new study from a group of mechanical engineers at Columbia University.

Mindy. This group of mechanical engineers was led by food robotics engineer, Jonathan Blutinger!

Guy. Now, Dr Blutinger and his team set out to create the first ever, 3d printed cheesecake!

Mindy. And i'm setting out to create the first ever 2nd ever 3d printed cheesecake by copying what they did! And adding my own twist!

Fingerling. Ooo, copying the smart kid's homework! Nice!

Guy. This was the first time the food was assembled *and* cooked by the 3-d printer.

Mindy. In the olden days of food printing technology, a food had to be cooked or fried separately before it could be eaten. And now it's a one-stop shop!

Dennis. Wow! How does it work, Mindy??

Mindy. Well, I could tell you....

Dennis. Yessssss?

Mindy. But i'd rather show you!

Dennis. Oh Mindy, you rascal!

Mindy. Guy Raz, would you care to join me in the truck here to serve as my sous cheffing assistant?

Guy. Okay

Reggie. Coo

Mindy. Now Reggie, would you do me the honor of plugging in my 3d-easy-bake-print-a-cake-oven?

Reggie. Coo <<plugs it in and sparks zap and fly>>

Everyone but Mindy. Whoaaaaah!!

Mindy. It's fine...it does that all the time.

Fingerling. It definitely should not do that.

Reggie. Coo

Mindy. Now, when Dr Blutinger and his team tried this in their lab, they gathered seven key ingredients in the form of edible inks.

Dennis. So Mindy, what were the seven ingredients?

Mindy. Oh great question, Dennis! Guy Raz...when I list the ingredients, take their ink cartridge out of the printer and squeeze it to demonstrate, okay?

Guy. Oh uh..okay..

Mindy. The seven ingredients that they used for this experiment were....graham crackers!

Guy. Ok, let's see here, graham crackers... <<squirt>>

Mindy. Peanut butter!

Guy. Peanut butter... <<squirt>>

Mindy. Nutella!

Guy. This one here... <<squirt>>

Mindy. Mashed bananas!

Guy. Eww...<<squirt>>

Mindy. Strawberry jelly! <<Squirt>> ... frosting <<squirt>> ... and cherry drizzle! <<Squirt>>

Everyone but Mindy and Guy. Ooooooooooh!

Gramma G-Force. Well well

Fingerling. Wait wait wait. So you mean to tell me, that those engineers from Columbia University filled ink cartridges up with ingredients and they printed food? Just like that?!

Mindy. Well, sort of!

Fingerling. Oh ok.

Guy. Uh I can help to explain this, Mindy. Ya see, first of all, the engineers made a special printer, not a modified paper printer stolen from my house.

Mindy. Hey!

Guy. But in many ways, it worked just the same! The edible ink cartridges were full of these soft, squeezable ingredients. Although, some of the ingredients were more squeezable than others.

Mindy. Yeah, the nutella, peanut butter, and strawberry jam were already pretty smooth, but the graham crackers had to be crushed up and made all squishy and soggy with water.

Dennis. Oh I don't like that.

Reggie. Coo

Guy. The next thing these engineers did, was to create a computer model of the cheesecake they were trying to create. Uhh, Mindy do you mind if I pull up your cheesecake model on the computer here?

Mindy. Oh sure!

<<Keyboard typing>>

The *computer* model of the cheesecake held the instructions for the printer. Like the size and shape of the cheesecake and the order of the layers.

Guy. That's right! And once they had the instructions and a printer loaded with the edible ink, they got to work!

<<Enter storytime>>

Mindy. Using different combinations of the seven ingredients we mentioned, they set out to create the perfect slice of cheesecake. But it wasn't easy!

Guy. Now, one of the biggest challenges the engineers faced, was getting the shape of the cheesecake just right.

Mindy. Because the engineers quickly found that some of the ingredients were not very sturdy...

<<Melting plopping sound effect>>

Mindy. In order to print a cheesecake that wouldn't fall apart, the team experimented with the order of the layers.

Guy. They wanted to see which combination would be best.

Fingerling. Oh like, graham cracker, then nutella, then mashed bananas, then peanut butter?

Guy. Right.

Mindy. And after eight different failed experiments...

<<Printer sound effect>>

<<Melting plopping sound effect>>

Guy. The researchers discovered that the winning combo involved using the *sturdier* ingredients...

Mindy. Like the graham crackers, nutella, and peanut butter...

Guy. To support the softer ingredients...

Mindy. Like banana puree and strawberry jam.

Fingerling. Ahhhh I see...

Dennis. Oh wow

Guy. And as they alternated the layers, they held it all together with a sort of graham cracker paste.

<<Printer sound effect>>

<<Order up ding sound effect>>

Gramma G-Force. Mmm, paste. Now i'm hungry.

<<End storytime>>

Dennis. Ok, are we done talking about this? When are we gonna get to the showing part?

Fingerling. Yeah!

Mindy. Well, how about right now?

Guy. Alright!

Fingerling. Oo-da-lolly

Dennis. Oh boy!

Gramma G-Force. Give me the paste!

Mindy. Guy Raz...would you please hit the print button for us here?

Guy. Okay...on the count of three...one...two...three!

<<Button press>>

<<Printer oven boots up nicely>>

Everyone. Oooo

<<Printer oven begins printing smoothly>>

Everyone. Ahhhh...

Gramma G-Force. So fancy

<<Oven goes berserk>>

Everyone. <<Excited exclamations>>

Dennis. [Shouting over the printer] what's happening, Mindy?!

Mindy. [Shouting over the printer] don't worry everyone! This is completely normal!

Fingerling. Save me, pigeon!

Reggie. Coo

Mindy. [Shouting over the printer] see? My printer is printing layers of graham cracker, and nutella, and peanut butter..

<<Oven still going berserk>>

Guy. [Shouting] oh I see! And it's alternating those layers with layers of banana puree and strawberry jam!

Everyone. Wowwwww

<<Printer oven powers down>>

Fingerling. Neat

Gramma G-Force. Gimme that. I wanna eat it now!

Guy. No no, Gramma G-Force, it hasn't been cooked yet!

Gramma G-Force. Well I like my steak raw.

Mindy. Okay, again...it's cake, not steak. And second of all, Guy Raz is right! It still has to be cooked!

Dennis. How do we cook it, Mindy?

Mindy. Uh Guy Raz, do you see the button for the laser?

Fingerling. The laser!?

Guy. Uhh...lets see. Oh, is it this button shaped like a cat with lasers shooting out of its eyes?

Dennis. <<Gasp>> Laser cat!

Mindy. Yep! That's the one! The engineers from Columbia University also used a laser, but the button for mine is way cooler.

Fingerling. I'll say!

Reggie. Coo

Guy. Okay, laser-eyed, cat face...do your thing!

<<Button press>>

<<Lasers power up>>

Everyone. Ooooooooooh!

Mindy. It took the researchers 30 minutes to cook their cheesecake, but I modified my laser cooker with the guts out of Guy Raz's microwave to make mine faster.

Guy. You what?!

Mindy. Sorry Guy Raz, I had already used the guts of my microwave for my reverse freezer oven.

Guy. Ughh

<<Cheesecake oven stops>>

Dennis. [Clapping] ahh-hahaha!! It's done!

Reggie. Coo

Dennis. Ok, Mindy, now make mine!

Mindy. What do you mean, make yours?

Dennis. Well I have a lot of dietary restrictions. I need a cheesecake with no peanut butter or nutella.

Guy. Oh, do you have a nut allergy, Dennis?

Dennis. No, I just don't like them. I also don't like bananas or graham cracker mush.

Guy. <<Sigh>> Dennis...

Mindy. It's ok, Guy Raz. The researchers actually think this technology could be useful in making foods for people with special dietary needs.

Guy. Really?

Mindy. Yeah! Even though this particular experiment was dessert-based, they believe that food printers like my 3d-easy-bake-print-a-cake-oven here could be suitable for making healthier foods– foods using plant-based meat products, and meals requiring careful preparation because of food allergies.

Guy. Wow!

Mindy. I know!

Dennis. <<Gasp>> you know what else we could do with this thing?

Mindy. What?

Dennis. The great robot bake off!

Guy/Mindy. What?

Dennis. The great robot bake off! It's a new tv show I just invented!

Fingerling. Oh yeah, a show where robot bakers compete in a series of baking trials to find out <<Mindy joins>> which robot baker is the <<Dennis joins>> best robot baker of them all!

Fingerling. I call being the judge!

Mindy. Meet ya back here in 5! Run, run, run, run

Guy. <<Sigh>>

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Mindy. And anyway, it's not done yet! It's still got one more step to go!

Everyone but Mindy. Oh?

Mindy. The cherry drizzle on top!

<<Nothing happens>>

Mindy. I said...the cherry drizzle on top!

<<Nothing happens>>

Mindy. I said....the...

<<Loud splat>>

Everyone. Ahhhhhhhh!!!

Dennis. Mindy! I'm bleeding! I'm covered in blood! We're all covered in blood!

Fingerling. This blood sure is tasty! Taste like cherry!

Gramma G-Force. I'm a vampire now.

Mindy. Well, looks like there are still a few kinks to work out with the cherry drizzle function.

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