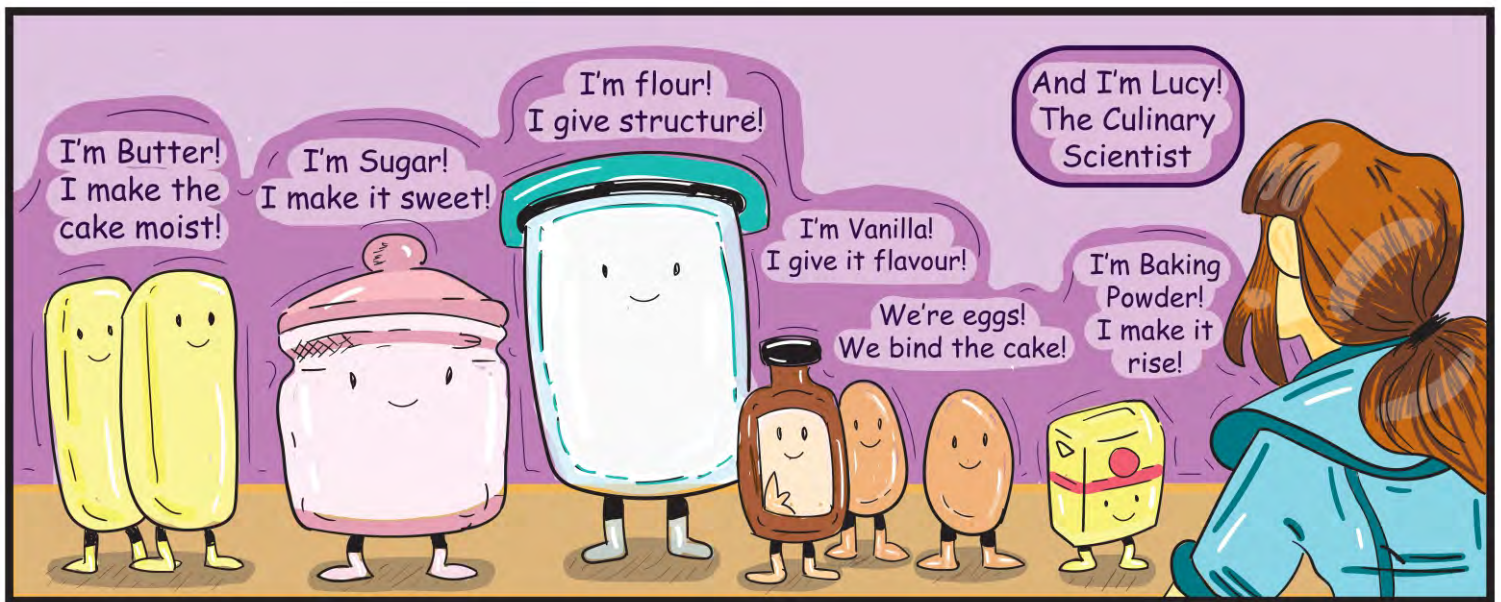
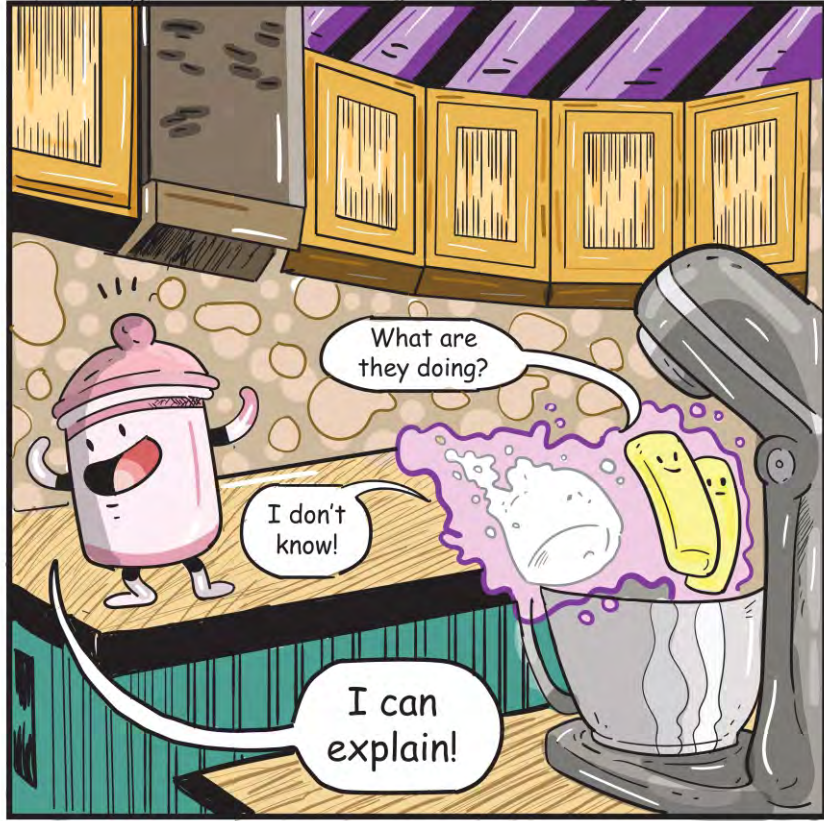


RISE OF THE CAKE

RISE OF THE CAKE

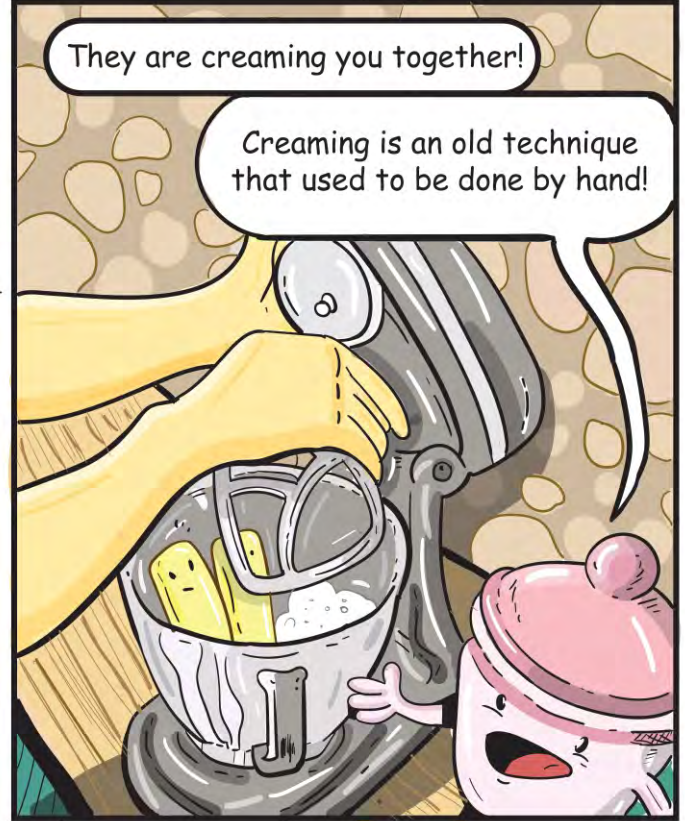




What are they doing?

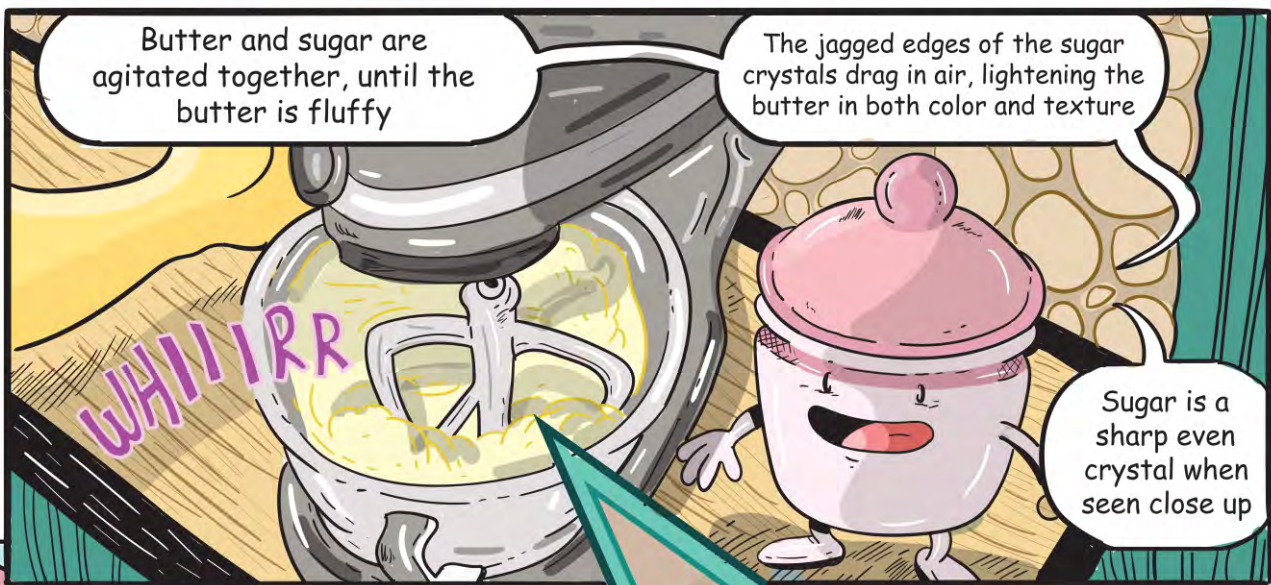
I don't know!

I can explain!



They are creaming you together!

Creaming is an old technique that used to be done by hand!

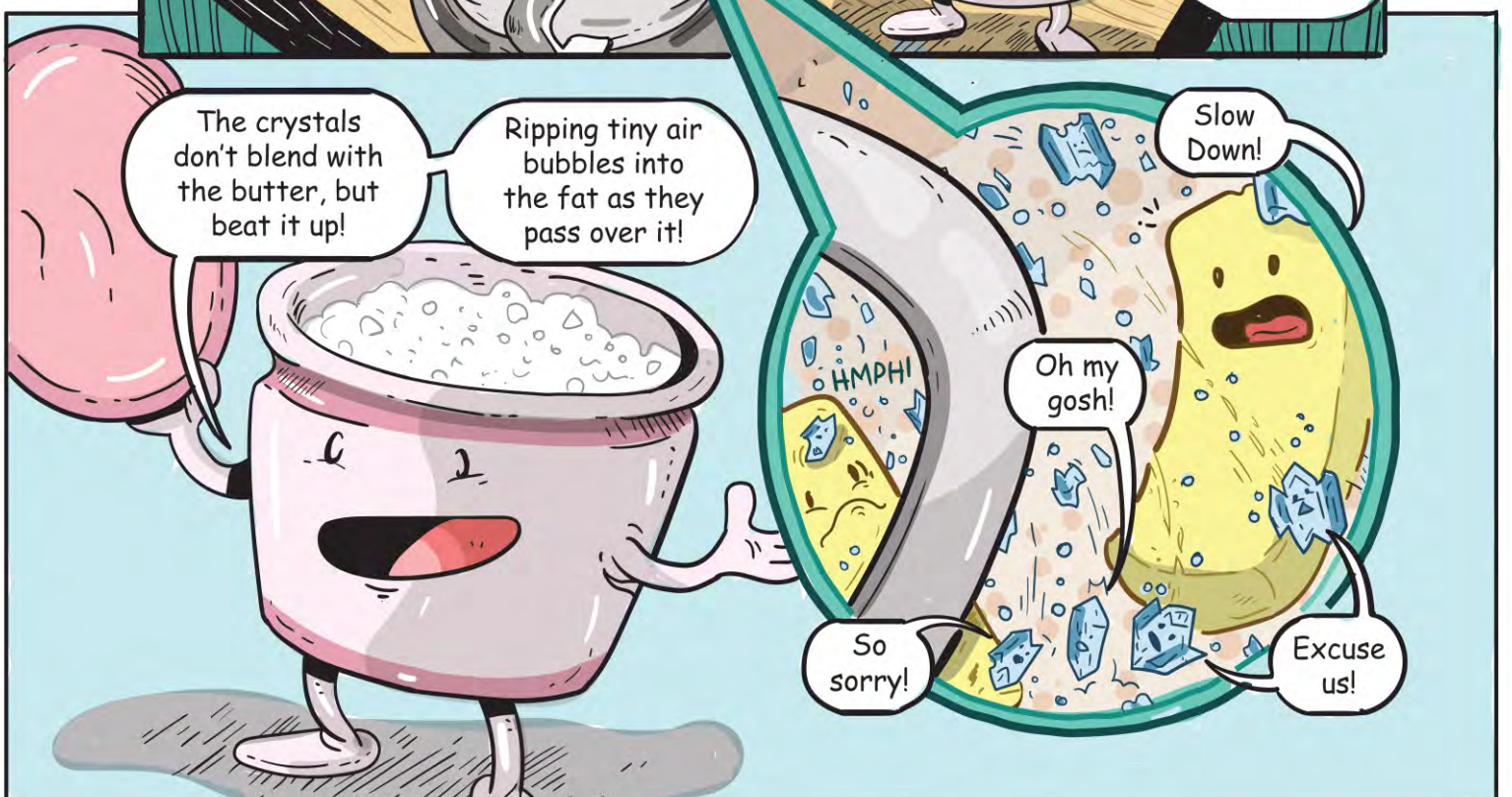


Butter and sugar are agitated together, until the butter is fluffy

The jagged edges of the sugar crystals drag in air, lightening the butter in both color and texture

WHIIRRR

Sugar is a sharp even crystal when seen close up



The crystals don't blend with the butter, but beat it up!

Ripping tiny air bubbles into the fat as they pass over it!

Slow Down!

So sorry!

Oh my gosh!

Excuse us!

HMPH!

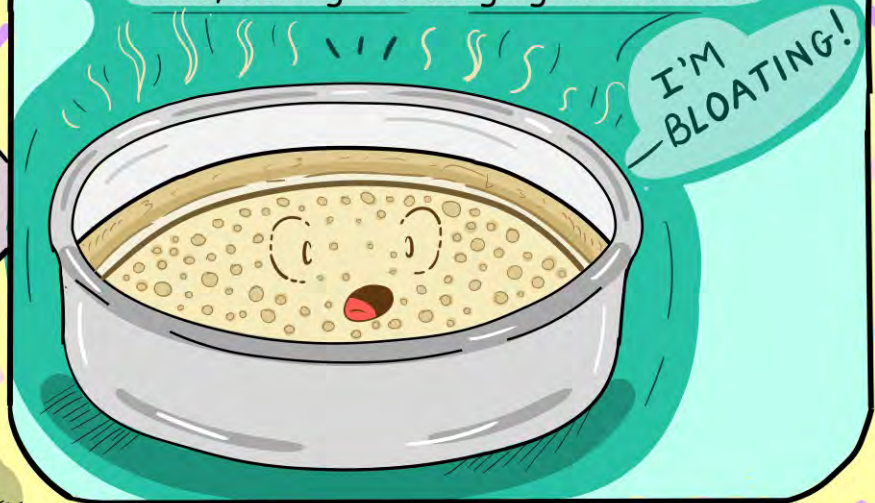


The fluffy beaten-up butter holds on to that air.

Adding in to the finished batter



When baked, the trapped air expands from heat, making the dough grow and rise.



I'M BLOATING!

Now go in the eggs.
Don't under-egg-stimate them!

We work with flour to give the cake structure!

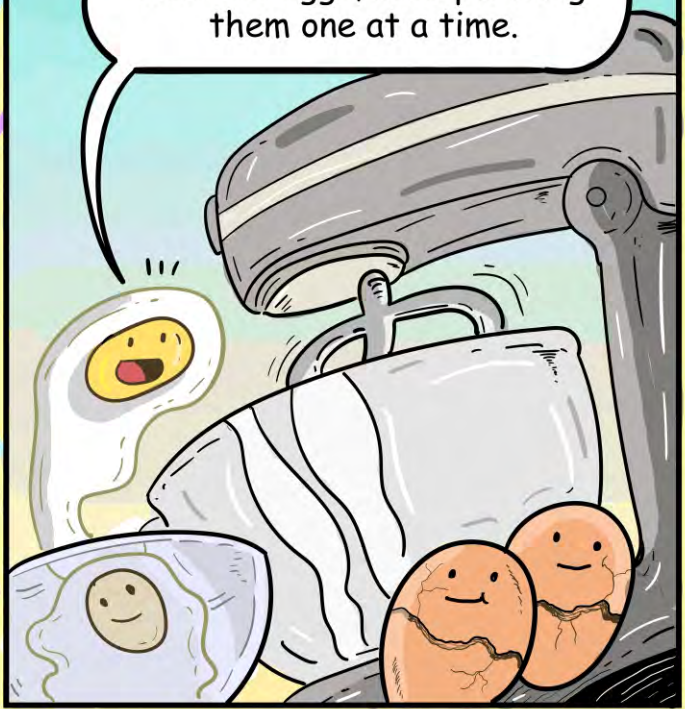
POKE

WHEE!

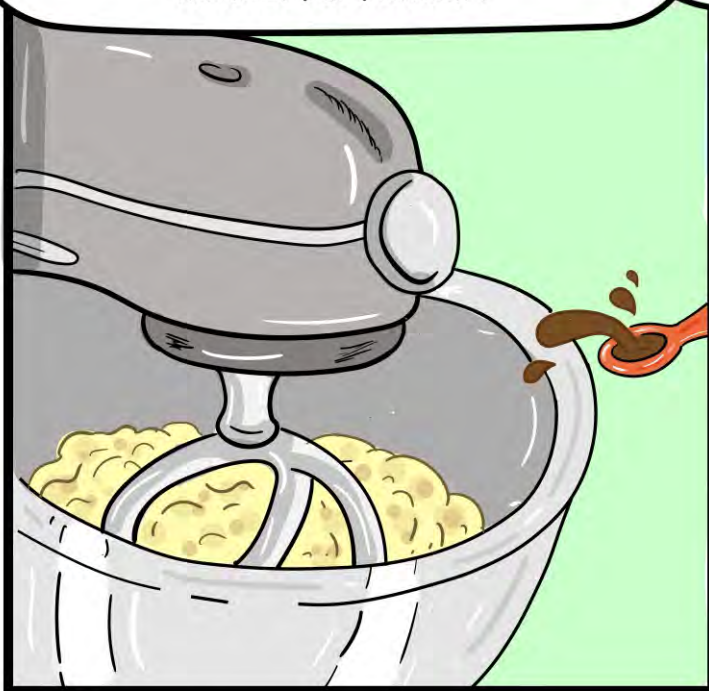
We also give it color and texture!



Add the eggs, incorporating them one at a time.



Add in the vanilla, as the paddle moves. And from here comes the wonderful flavour!



We know it's ready when the mixture is thick and sauce like and falls off the paddle in a ribbon.

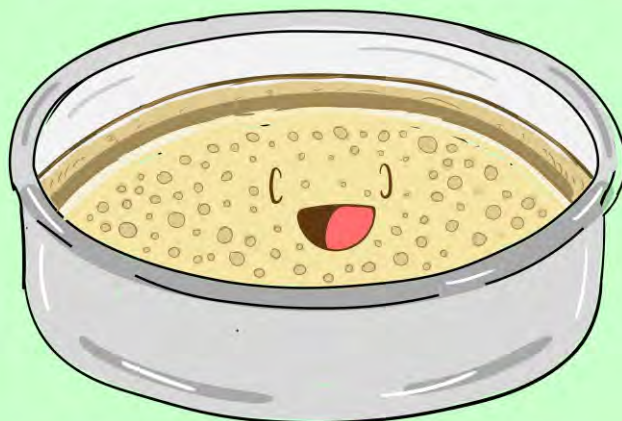


It sort of looks like thick yellow icing.

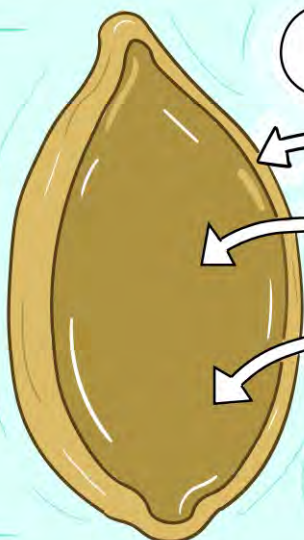
Add the sifted flour and baking powder pouring them in slowly and gently



Baking powder is a leavening agent! It make the cakes rise by releasing carbon dioxide gas into the batter.



There are three parts to every grain, gluten or not!



Bran: hard outer shell, mostly fiber.

Endosperm: mostly starch, some protein.

Germ: mostly protein, some fat.

Wheat grain is the most common flour because it can be milled in so many different ways, resulting in flours with varying levels of protein.



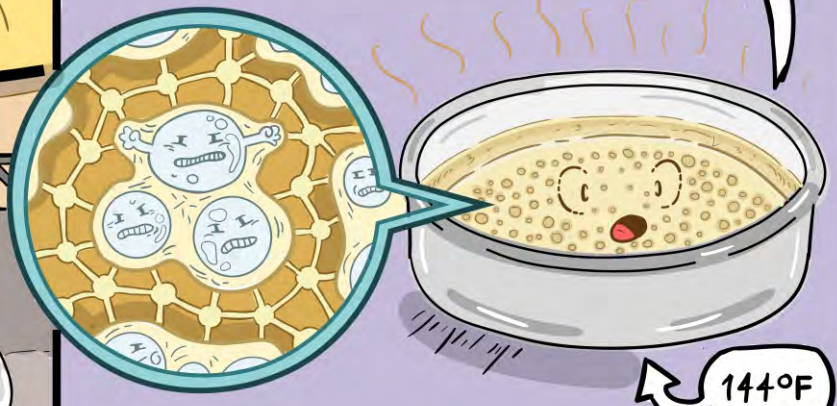
What exactly is happening to all of you in there?

It's all about the science of heat!

First the butter melts outward, and the air wants to escape upward. This makes the cake spread and expand, but the flour holds everything together.



As the temperature of the cake rises, the egg proteins expand as well. The heat makes them harden in place, even after the cake cools.



The proteins harden, sugars liquefy, and everything becomes a delicious golden brown. This crisping and browning is called a Maillard reaction and only happens at this heat or higher.

310°F





The Science of Baking is a Piece of Cake!

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