

In my job I get to...

CREATE  
EXPLOSIONS!



I chatted to Kate about why she blows things up to inspire her students!



Kate Biberdorf  
Science Entertainer and Associate  
Professor of Instruction in Chemistry

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**Q** Hi Kate, tell us about your job!

**A** As a professor, I use fire and explosions to teach general chemistry to young college students. If my students actually see fire, they are more likely to understand combustion reactions. I use these fun demonstrations to try to break down complicated topics into more manageable sections. As a science entertainer, I perform the same explosions for really big audiences all across the United States. I love showing strangers my favourite parts of chemistry!



Kate loves doing hands-on experiments with kids!

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Kate brings chemistry to life through her explosive demonstrations.

**Q** What made you so interested in explosions?

**A** It's funny, because this all started with a piano class! I remember walking around in a large circle at three or four years old, and feeling the loud music in my chest. I was obsessed with that feeling, but I could never replicate it with anything other than music. A few years later, we attended a huge firework show, and I vividly remember feeling the BOOM from the fireworks throughout my body. It was that same feeling from the music class, but now bigger and better! I knew in that moment that I wanted to have a career in explosions.

I was worried I might fail my fireworks exam, but I passed with flying colours!



Kate teaches at The University of Texas and performs as Kate the Chemist all over America. If you have any questions of your own for Kate, you can contact her on [info@katethechemist.com](mailto:info@katethechemist.com)

**Q** What's the biggest explosion you have ever seen?

**A** I attended pyrotechnics training a few years ago. We were out in the middle of the woods in South Carolina, when the experts set off the biggest, loudest explosion I have ever seen. They were showing us what could go wrong if you set up the firework display incorrectly. Let's just say that I am very glad that we were far, far away from the ignition site. Safety first, kids!

## HERO QUOTE

"If you can't fly, then run. If you can't run, then walk. If you can't walk, then crawl. But whatever you do, never ever give up!"

Kate's favourite quote, adapted from Martin Luther King's.

**Q** What are your favourite experiments to demonstrate?

**A** It's too hard for me to pick one favourite, but lately I've been really into making oobleck at home. If you mix water and cornflour in a bowl, you can make this freaky non-Newtonian fluid. It's one of the craziest things to hold because the oobleck will drip through your fingers even though the substance feels like a solid.



## Make oobleck

Mix 225 g of cornflour with around 230 ml of water (and a few drops of food colouring, if you like). This will create a goo that feels liquid when you handle it gently, but solid if you hit it with a spoon.

Find out more here!  
[tiny.cc/qmqlez](http://tiny.cc/qmqlez)



Interview with a SCIENCE HERO!

DON'T TRY THIS AT HOME!



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**Q** What advice do you have for young scientists?

**A** Science is full of failures, but you can never give up on your investigation. Ask questions. Talk to your colleagues. Work together. There is always a way to solve the problem. My favourite quote is from Martin Luther King Jr (slightly adapted): "If you can't fly, then run. If you can't run, then walk. If you can't walk, then crawl. But whatever you do, never ever give up!"



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