

# Fiery flick wins the Flame Challenge

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**Ben Ames' Flame Challenge animation goes to the gates of hell to explain a flame.**

By Alan Boyle, Science Editor, NBC News

What is a flame? Scientists were challenged to explain the concept in terms an 11-year-old could understand, and a grad student specializing in quantum physics has taken the prize for a cartoon that's as entertaining as it is educational.

After sifting through more than 800 entries from 31 countries, organizers of the [Flame Challenge](#) announced on Saturday that the winner is Ben Ames, a 31-year-old Missouri-born researcher studying quantum optics at the University of Innsbruck in Austria. And if this physics thing doesn't work out, Ames can always fall back on his obvious skills as an animator/writer/musician.

"When I learned about this wonderful contest, I had finally found a project where I could put all of my interests to use," Ames, a graduate of the University of Utah, [told The Salt Lake Tribune](#).

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The contest was the brainchild by Alan Alda, an actor who's best-known as the star of the long-running "M-A-S-H" sitcom and has gone on to become the host of science-rich programs such as "[Scientific American Frontiers](#)." In

a [Science editorial](#) published three months ago, Alda reflected on the difficulties that some teachers have when they try to communicate scientific concepts in terms that kids can understand.

He recalled an exchange he had with a teacher at the age of 11. "What's a flame?" the young Alda asked. The teacher replied simply and unsatisfyingly: "It's oxidation."

"That was a discouraging moment for me personally, but decades later I see the failure to communicate science with clarity as far more serious for society," Alda wrote. So, in cooperation with Stony Brook University's Center for Communicating Science, Alda set up the Flame Challenge to have scientists answer his schoolboy question as best they could. The twist was that the primary judging would be done by thousands of 11-year-olds across the country.

Scientists sent in poems, essays, songs, videos and graphics to define a flame. Any of the entries from [the contest's five finalists](#) would do the trick, but Ames' seven-minute animation — starring a long-bearded prisoner, a scientist and a happy little devil in Hades — was the standout.

The lesson is summarized in Ames' original song, featured at the end of the clip: "The fuel loses mass, and turns to a gas," he sings. "Before the next change is through, some atoms shine blue. When the process is complete, it gives off heat. Extra carbon will glow, red, orange, yellow."

Pretty hard to beat that, don't you think? For his efforts, Ames won a flame-shaped trophy, a T-shirt and a trip to the [World Science Festival](#) in New York, where the winner was announced.

Now [the Flame Challenge is asking 10- to 12-year-olds to suggest the next scientific concept](#) to explain. What questions would you put on the list? Even if you're not an 11-year-old, feel free to pass along your suggestions as

comments below, and we'll try to get them to the right folks at the Center for Communicating Science.