

Random Sample

Fright Night

In 2004, when cognitive scientist Lisa Feldman Barrett was looking for ways to raise money for a local food bank charity, her 6-year-old daughter Sophia had an idea. "She loves candy, loves Halloween, and she knew her mom was an 'emotion scientist,'" says Barrett of Northeastern University in Boston. So why not use her research on fear to design the ultimate haunted house?

Their spooky-looking Victorian house was perfect for the job. To maximize its scariness, Barrett and her lab focused on stimulating the amygdala, the ancient, almond-shaped structure deep inside the brain that regulates the arousal crucial for fear. "It is easy to increase amygdala activation by showing people blood and guts," Barrett says, but it can also traumatize, so they focused on subtler triggers: uncertainty, ambiguity, and novelty. If you can't be sure what is inanimate or alive—such

as Barrett's graduate students disguised as ghouls and skeletons—then "the amygdala activates the sympathetic nervous system to increase heart rate, sweating, and breathing rate,"

Barrett says. The amygdala is also wired to detect how much of the whites

of other people's eyes are showing. So they filled the haunted house with actors in costumes with their

eyes showing, creepily tracking visitors as they passed through.

Doors open on 27 October, if you're brave enough to be a research subject in this scary experiment. More details at www.newtonhauntedhouse.org.



ghost that in 2009 11 million painted ladies landed in the United Kingdom and 26 million left—evidence that, far from being a dead end, the British Isles gave the species a boost. <http://scim.ag/PaintedLady>

BY THE NUMBERS

500,000 Number of children who developed tuberculosis in 2011, according to the World Health Organization's first analysis of this disease burden in children, published on 17 October in its *Global Tuberculosis Report 2012*.

17.6 Percentage of journal articles published in 2011 available as open access either immediately or within 12 months of publication, according to a *BMC Medicine* analysis of the Directory of Open Access Journals.

Science LIVE

Join us on Thursday, 1 November, at 3 p.m. EDT for a live chat on a hot topic in science. <http://scim.ag/science-live>