



**#1: Challenge Course.** Bold, edgy and exciting, the four rooms in this hallway invite visitors to face a series of common fears—those of animals, electric shock, loud noises and falling. We felt it very important to give visitors a chance to experience the emotion they would be learning about in this exhibition about the science of fear. The rooms are simple in design, but pack a powerful punch and delight visitors.



**#2: Wall of Phobias.** This wall, opposite the Challenge Course rooms, presents 10 bright, large images that depict phobias, fears that get out of control. Both common and unusual phobias are displayed, conveying the idea that people can develop phobias of just about anything. Greek terms for the phobias are prominently displayed with each photograph, as well as an English subtitle.



**#3: Challenge Course – Fear of Animals.** Have any animals crawled into the black box? Reach in and find out. These instructions challenge visitors to overcome their fear of animals as they eye a large terrarium filled with creepy creatures (e.g. snakes, tarantulas). An interpretive panel describes the three types of fear—innate (those we're born with), prepared (those we easily pick up because our brains might be evolutionarily inclined to learn them) and learned (those we gain through personal experience).



**#4: Challenge Course — Fear of Electric Shock.** Can you let yourself get zapped? A buzzing Jacob's ladder device is the focus of this room, which invites bold visitors to get zapped with electricity. Three visitors at a time can insert one of their fingers into the shock device, press the start button, watch electricity race up the Jacob's ladder and wait to get mildly shocked. This interactive shows the fear-inducing power of anticipation.



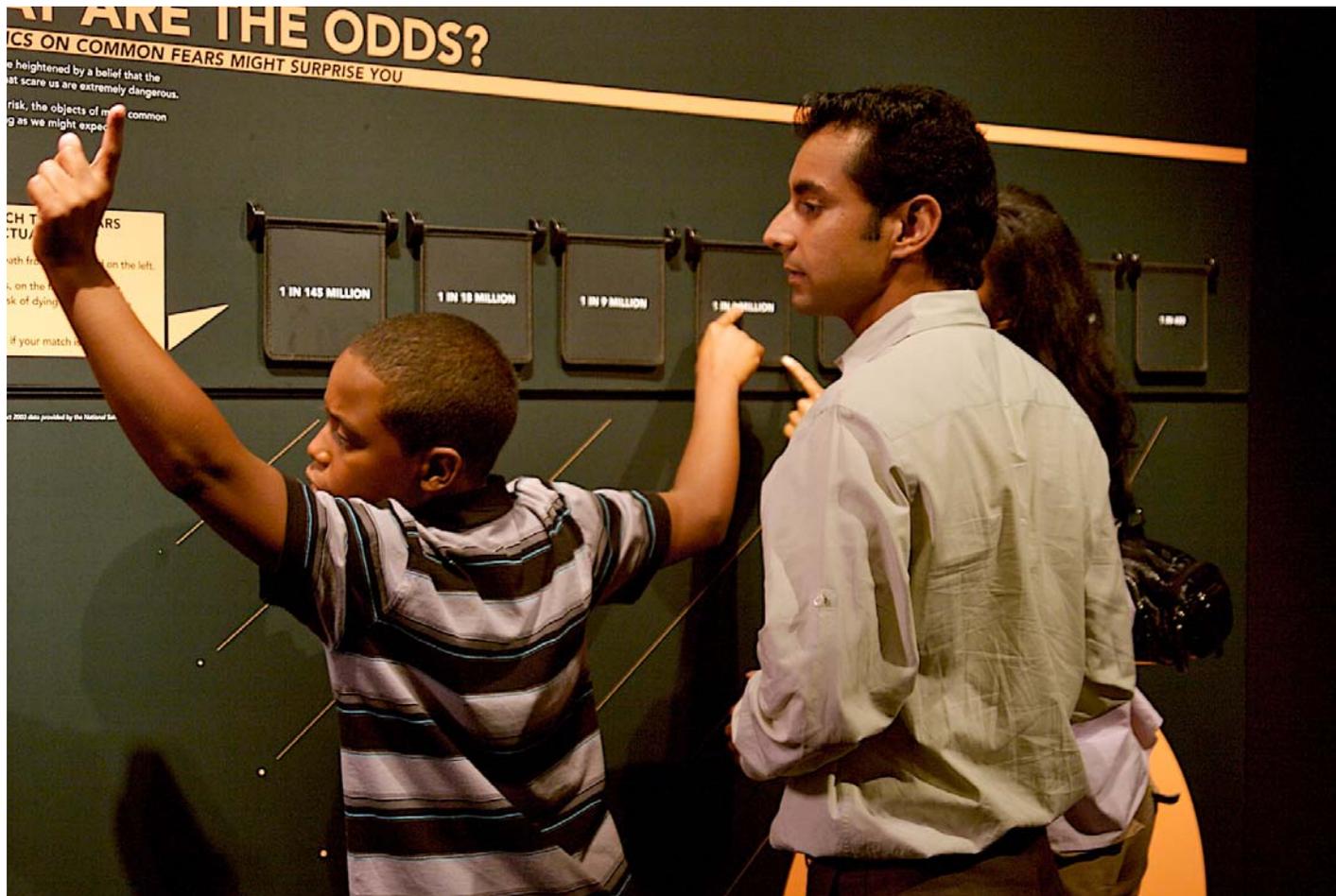
**#5: Challenge Course — Fear of Loud Noises.** Visitors try to keep a straight face while listening to a spooky soundtrack. Then, suddenly, a loud shot fires and a high-speed camera captures their startled looks. Visitors often huddle together to experience the challenge all at once and erupt in laughter when they see their startle reactions played back on the monitor in slow motion.



**#6: Challenge Course — Fear of Falling.** Staff members admit visitors and strap them to a plank device before letting them fall backwards without warning (an airbag cushions their fall at the last moment). Onlookers can watch from two windows and a monitor shows a slow motion playback of the visitor's "fear face" around the corner. An interpretive panel explains that the fear of falling, like the fear of loud noises, is an innate fear.



**#7: Observing Fear.** Large, asymmetrical holes cut into the back wall of the Challenge Course rooms allow visitors to play “fear investigator” as they watch for external signs of the emotion in others in the challenge rooms. The wall is painted in the style of a blackboard featuring the physiological changes that can tip us off to fear and objective measurement tools. An alcove on the opposite side of the hallway gives visitors a chance to try out a skin conductance monitor and a heart rate monitor—two tools scientists use to measure fear in the lab.



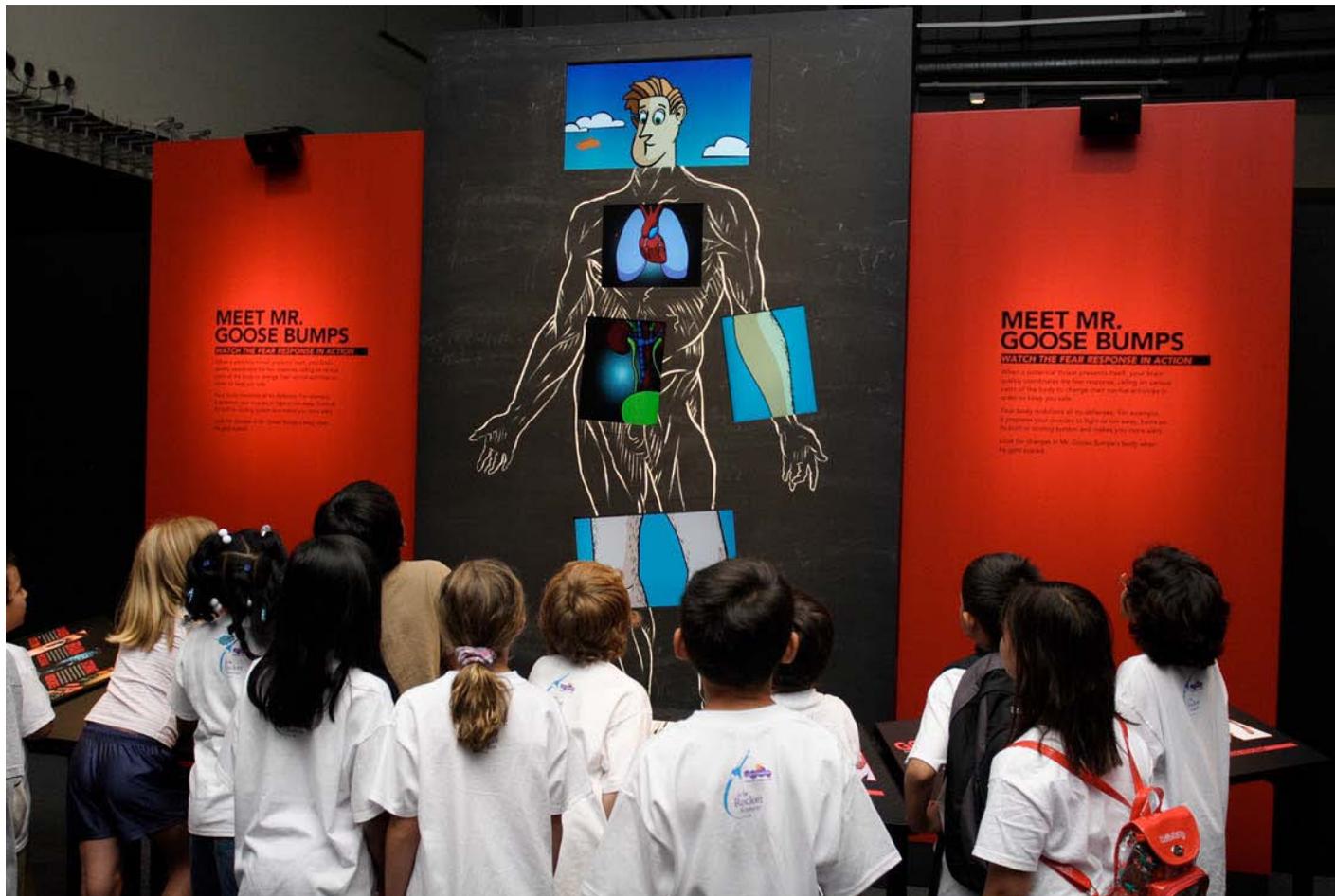
**#8: What Are the Odds?** A large graphic panel with flips challenges visitors to match causes of death with the actual risk of dying from those causes in a particular year. Based on information from the National Safety Council, this simple but popular interactive shows visitors that we often fear things that pose relatively little risk. The component also provides a visual representation of the relative risk of each cause of death featured in this exhibit.



**#9: Faces of Emotion.** Large portraits smile and scowl at visitors, inviting them to learn about the science of facial expression analysis. An experimental computer interactive, designed by the University of Southern California's Integrated Media Systems Center, walks visitors through a virtual conversation, presenting visitors with various visual stimuli and analyzing the facial expressions visitors make in response.



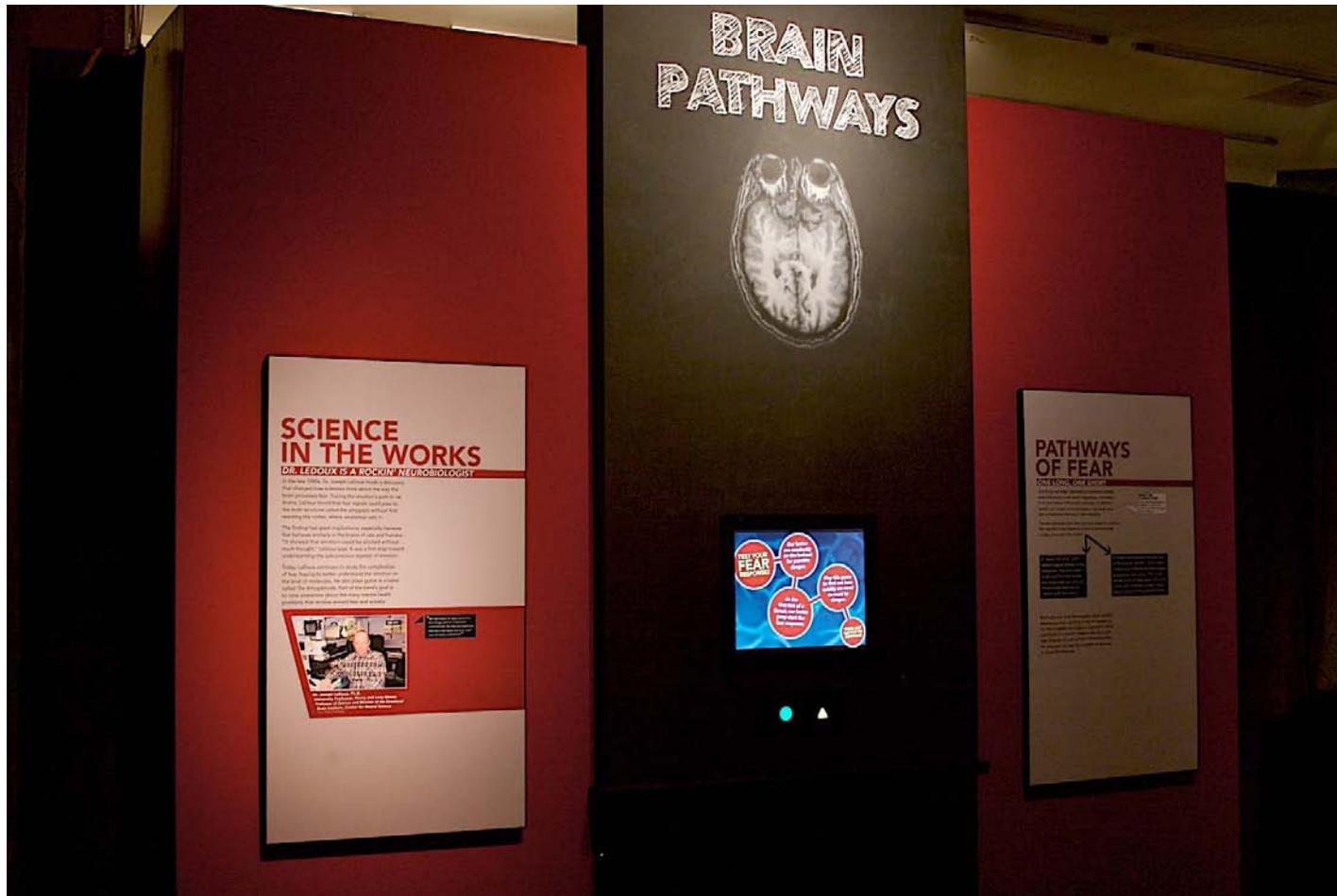
**#10: Fear Lab.** This scientific discovery zone is evocative of a science lab/classroom with a shot of fun injected. A 10-foot-tall classical figure named Mr. Goose Bumps anchors the space, along with three exhibit sections filled with interactive components, audiovisual presentations and content related to Fear & Memory, Brain Structures and Brain Pathways.



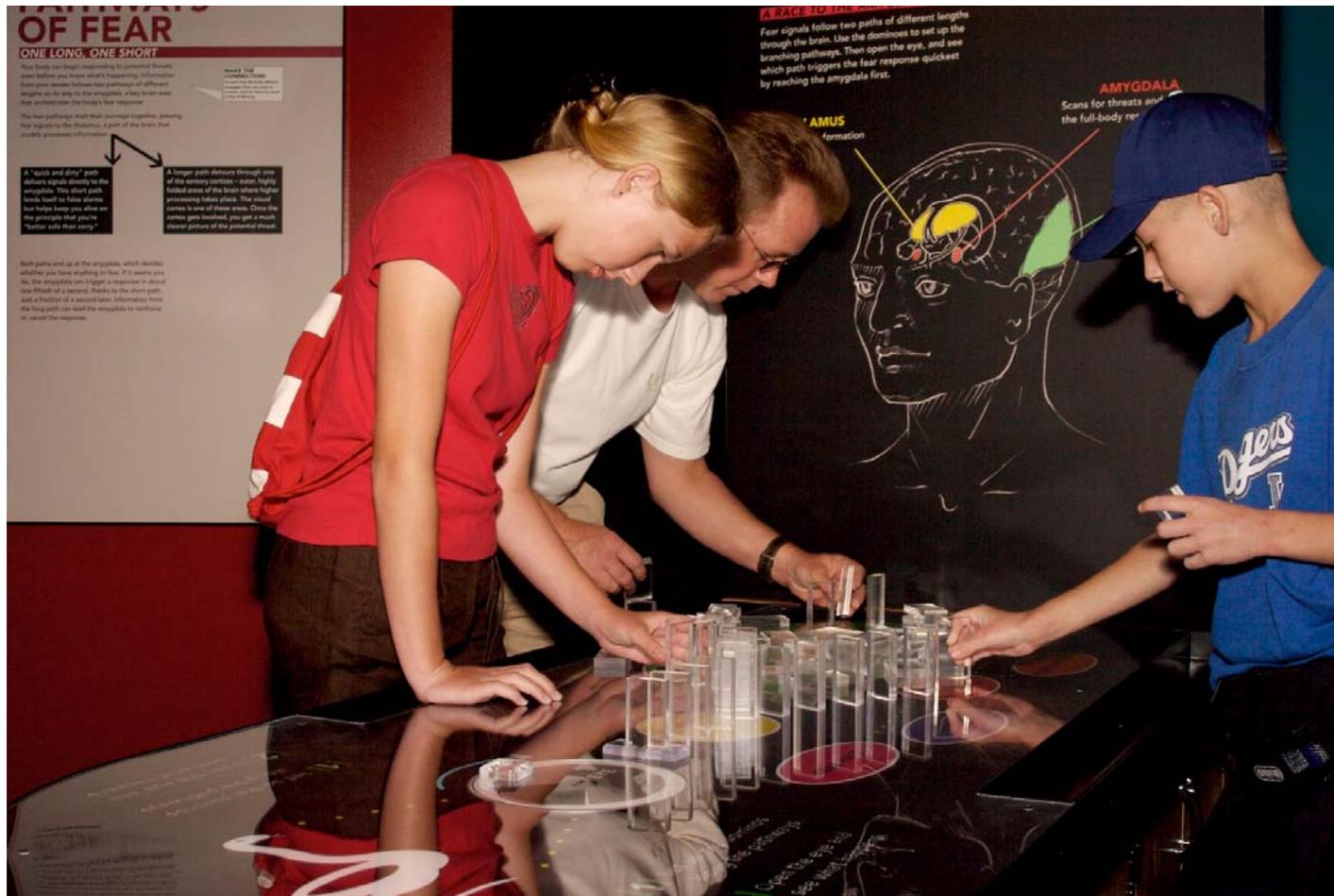
**#11: Fear Lab — Mr. Goose Bumps.** This 10-foot-tall classical, anatomical drawing “comes alive” with colorful animations, which playfully illustrate how the fear response is triggered by the brain and the various physiological changes that follow. A reading rail calls out the changes that take place in Mr. Goose Bumps’ body when he gets scared.



**#12: Fear Lab — Brain Structures.** This cluster highlights the amygdala and other brain structures that play crucial roles in the fear response. Visitors can slide a magnifier over real brain slices from different animals to see that all mammals, birds and even reptiles have amygdalae. Younger visitors are particularly drawn to the coloring station where they can color in and take home an anime-style drawing featuring the brain's fear structures.



**#13: Fear Lab — Brain Pathways.** Each of three main sections in the Fear Lab—Brain Structures, Brain Pathways and Fear & Memory—features an exhibit structure like this one, including an audio-visual component and a blackboard-style painted brain scan. This section conveys the idea that fear signals follow two paths to the amygdala—a direct, short path, and a longer path involving the sensory cortex. This important idea is repeated in a variety of ways, through an audio-visual game, several graphic panels, an animated cartoon and a dominoes game.



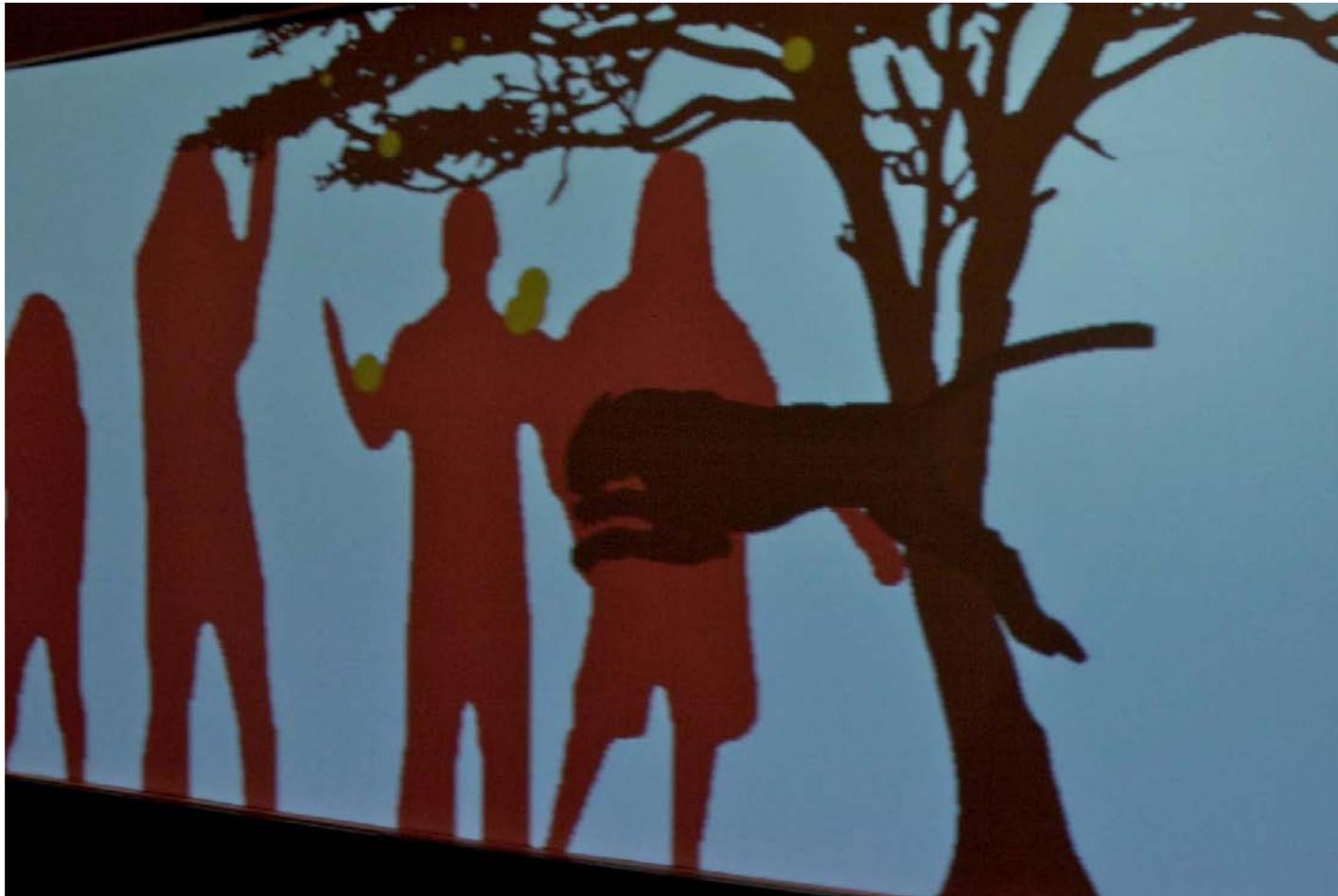
**#14: Fear Lab — Triggering Fear.** A dominoes table invites visitors to set the pieces up along the two branching brain pathways fear signals follow on their way to the amygdala, the brain structure that orchestrates the fear response. The brain areas on the table light up as the dominoes fall over them. The short path reaches the amygdala first, triggering the fear response. Once the longer path reaches the amygdala, the lights of the fear response brighten.



**#15: Educational Carts – Creepy Crawly Creatures.** A presenter from the education staff shows visitors that many of the animals—such as snakes, millipedes and cockroaches— are really quite harmless, despite our fears. These carts provide an opportunity for staff members to enhance visitors’ learning experiences by gauging their interest and educational level and tailoring additional content to meet those visitors’ needs. Videos showing animals fighting and fleeing danger in the Fear in the Wild area can be seen in the background.



**#16: Fear in the Wild — Freeze Game.** An immersive, full-body video interactive designed to look like an African savannah with a pouncing leopard, entertains children as they learn the importance of the freeze response. Visitors recognize their silhouettes on the screen as soon as they enter the interactive area. They can move and gather falling fruit when the leopard is pacing but risk being attacked if they fail to freeze when it looks their way.



**#17: Freeze Game.** The virtual leopard attacks a guest's silhouette when she fails to freeze. As is the case for animals in the wild, visitors in the interactive have a better chance of survival if they freeze when the predator looks their way.



**#18: Fear & Society.** An illuminated marquee welcomes visitors into a theater space for a live demonstration or documentary-style film about our collective fears and popular culture. In an alcove to the left, children discover what a difference sound can make in eliciting fear as they add soundtracks and effects to neutral movie scenes. An encased cabinet, to the right, shows off an array of objects representing moral panics—collective fears that historically grew far out of proportion with actual threat. A monitor plays top-of-the-hour news stories highlighting some of these panics.



**#19: Fear Theater — Live Demonstration.** Presenters from the education staff introduce visitors to fear conditioning—one of the most important techniques scientists use to study fear. During the show, visitors experience fear conditioning first-hand and see how objective measurement devices work on a volunteer.



**#20: Coping with Fear.** A living room setting and a shift in image style and color scheme indicate that this is a calmer area designed for reflection. On one wall, five large, illustrated accordion murals depict the way our fears change over a lifetime. Text panels between the murals provide useful tips for helping children cope and for handling everyday stress. Visitors can also watch interviews with anxiety disorder patients and a psychologist as they learn that fear can spiral out of control, but that there are healthy ways of dealing with fear of any severity.