

# How to build and keep a memory

**T**he miniature skyscraper, built with brightly colored wood and plastic materials, stretches skyward, nearly touching a cardboard cloud dangling from the ceiling. A mother and her young child share the experience of building the structure while a remote camera captures images of their activity. Their answers to a series of questions about the experience are recorded. When they return home, mother and child log onto a Web site where they can view the photos and listen to their oral narrative.

They are among the thousands of people who have participated in the award-winning Skyline exhibit at the Chicago Children's Museum, which is designed for children and their caregivers to work together on an activity while simultaneously reflecting on their experience, then later sharing their memories.

Behind the scenes, the process is being studied by Catherine A. Haden, PhD, director of the Children's Memory Study at Loyola. Haden, an associate professor of psychology, conducts research on how preschool-age children (3-5 years old) form memories and how their memories can be enhanced through conversations and by reviewing photographs and audio files of their experiences. So far, research shows that if preschoolers retain memories of learning experiences and can relate personal stories of those events, their literacy skills improve. And, in the case of activities such as the Skyline exhibit, those children show an enhanced understanding of science, technology, engineering, and mathematics.

"Our sense of self-worth and our ability to learn is shaped in part by our memories," Haden says.

Haden has been interested in developmental psychology for more than two decades and earned her master's degree and doctorate in that subject at Emory University. She established the Children's Memory Study at Loyola in 1997.

Haden began her research by creating learning experiences in people's homes, using props and inventing make-believe "events" such as camping trips, bird watching, and pirate adventures. For example, a child and parent might don outdoor clothing and sit in a tent and pretend to



*A father and son work together to build a structure at the Chicago Children's Museum as part of an exhibit being studied by Catherine Haden, PhD.*

be on a camping trip.

Two Chicago museums then invited Haden to conduct research in their interactive children's exhibits. Besides observing children and caregivers build skyscrapers at the Chicago Children's Museum, Haden watched them play with and learn about fossils and artifacts at the Southwestern Pueblo and Plaza exhibit at the Field Museum.



*Catherine Haden, PhD*

While the observation opportunities are helpful for Haden's research, the museums also benefit. "Dr. Haden's work allows us to look at how learning really works in a museum and allows us to offer programs that enhance the learning experience," says

Tsivia Cohen, the Chicago Children's Museum's director of family learning initiatives.

In addition to enriching children's learning experiences, and helping parents and educators understand that process, Haden has inspired a new generation of developmental psychologists. Consider Erin Wilkerson, 26, a research assistant who is working on her doctorate in developmental psychology at Loyola.

"The work has been incredibly valuable," Wilkerson says. "We're only one of a few psychology labs doing this kind of work, and one of the very few doing this work in local museums. I feel very blessed to be a part of this."