



National Living Laboratory 2014-15 Cohort Stipend Final Report **UM Museum of Natural History and the University of Michigan Psychology Department**

Who Are We?

The University of Michigan Museum of Natural History (MNH) promotes understanding and appreciation of the natural world and our place in it. The Museum houses exhibits and programs that inspire diverse audiences to engage in exploration of scientific research and discovery. The Museum's vision is to be the hub for science outreach at the University of Michigan and a dynamic community forum, facilitating active participation and promoting the public understanding of science. The Museum has an annual attendance of over 135,000, including about 20,000 school children visiting in groups. The Museum has 19,000 square feet of exhibit space that houses permanent exhibits on dinosaurs and other prehistoric life, Michigan wildlife, anthropology, geology, changing temporary exhibits, and a Planetarium. There are 11 full-time staff working at the Museum, along with 40-50 paid student docents.

The current focus of the Living Lab at MNH is research on children's social cognition and behavior (e.g., studies on topics like children's understanding of social categories, the power of hoping/wishing/praying, the value of resources, etc.). Recently a number of researchers who study other topics (e.g., fNIRS studies of math and language development) have expressed interest in running studies in the Living Lab, so we anticipate seeing a wider range of research topics and methodologies at MNH in the coming months.

The partnership between the MNH and the University of Michigan (UM) started with meetings in July of 2014, and the first visitors participated in studies in the fall of 2014. The Living Lab coordinator, Craig Smith, had been part of the Living Lab at the Museum of Science in Boston, and brought the model to Ann Arbor in 2012, where it has been very successful at the Hands-On Museum. The MNH was excited to try the model as well, and was interested in hosting some studies that the Hands-On Museum was not (e.g., studies that focused on topics like children's views on race, prayer, etc.).

During the school year, researchers run studies and discuss research with visitors about 12 hours per week, on average. This will be closer to 25 hours per week during the summer.



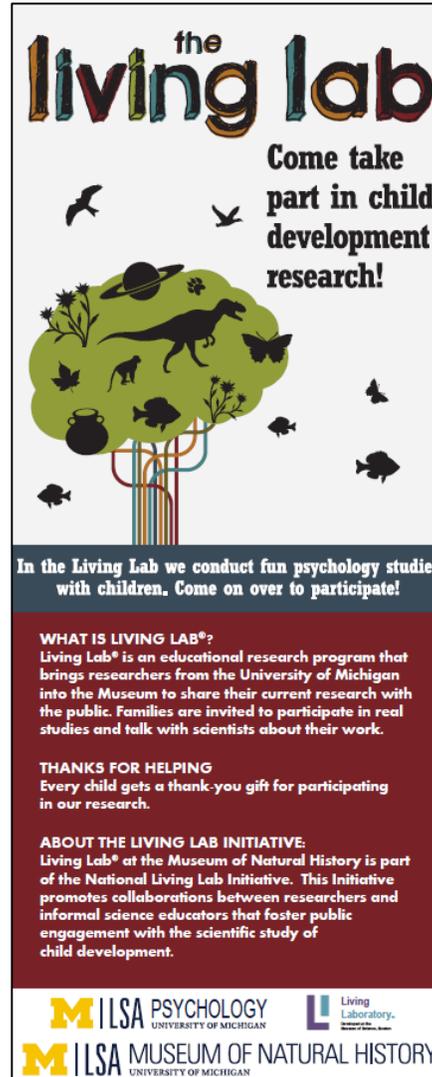
The Living Lab space at MNH, with two undergraduate research assistants ready to welcome visitors.





Goals of the NLL Stipend Award

We applied for a modest stipend to pay for a pop-up sign that we could use to educate visitors about the Living Lab at MNH and to attract parents to the lab area. The sign has worked well, and images are provided below (the sign can also be seen in the image of the lab space that is included above).



Pop-up sign retracted into base, and image of sign.

Enhancing the Visitor Experience

Cumulative Statistics for the Living Lab at MNH through March 2015

Participants	Educational Opportunities	Interactions with Museum staff/volunteers
494	315	87

The Living Lab has fit with some of the Museum’s central goals: to be a hub for science outreach, to facilitate active participation in science, and to promote an understanding of science. Visitors have remarked on how much fun they’ve had taking part in real studies in the museum, and it has been exciting to see the Living Lab table set up right near other hands-on science tables in the Museum. It’s clear that parents view the Living Lab as another way to get in touch with science, and that children have enjoyed helping out with the fun studies that researchers have brought to the Museum.





“I’ve taken my kids to the [psychology department] lab before, but this is the first time I’ve had them do a study in the museum. It’s a great idea for you guys to be here, and they [the children] had a lot of fun. I like supporting research and learning more about new research, so it’s really good for me too.” – *Parent of two participating children*

Mutual Professional Development

Thus far, our Living Lab Team has involved 8 professors, 2 postdocs, 9 graduate students, and roughly 25 undergraduate research assistants from the University of Michigan, and 2 staff members from the Museum of Natural History.

All Living Lab researchers attend orientations at the Museum. These orientations include policies and procedures as well as facilitation techniques, an overview of Museum programs, and information about how Living Lab fits with the mission of MNH. We will be starting researcher greetings in the very near future.

"The Living Lab program is a perfect match for us because of our emphasis on promoting UM Research and providing opportunities for students to have engaged learning experiences. This is one of several ways we have for scientists to interact with the public, and in each case it is a big hit. Working with Craig has been a pleasure - he makes it so easy!" - *Kira Berman, Assistant Director for Education, MNH*

"The Living Lab has been an important resource for recruiting participants. From an educational standpoint, the Living Lab has provided a great opportunity for our undergraduate research assistant to gain hands-on experience interacting with the public, recruiting participants, and conducting psychological research." - *UM postdoctoral fellow in psychology*

Research Happenings at Our Site

Because a sizable number of studies have run in the Living Lab at MNH, it will not be possible in the space provided to list methods, results, etc. for each. Instead we provide a list of the studies that have been a part of this collaboration:

- Does children's feeling of connection to the adults they want to be influence behavior now?
- Links between social resource allocation and mathematical understanding in childhood.
- Children's understanding of antisociality.
- Children's use of parental input when predicting future desires.
- Children's views on the acceptability of revenge.
- Children's understanding about the mental states and abilities of robots.
- Children's categorization of multiracial faces.
- Children's use of race information when thinking about friendship preferences.
- Children's beliefs about the heritability of personality.
- Children's use of hypodescent when categorizing novel creatures.
- Children's evaluations and explanations for novel group stereotypes.
- Children's concepts of social power their connections to children's social judgments.
- Children's understanding of the power of thought (e.g., hoping, wishing, praying).
- Children's thinking about whether race factors into the types of traits individuals learn and/or inherit (in this case, skills)

Outcomes and Future Goals

We plan to expand the focus of the Living Lab at MNH in a few directions:

- The use of new post-study activities that children can take part in that connect methods of science to psychology research (e.g., How many water drops can fit on a penny? Testing this, talking about variables involved, etc.)
- Focus some new LL research questions on topics that the Museum is interested in (e.g., questions that inform exhibit design)
- Cross-programming with the Hands-On Museum Living Lab site
- Bringing in new Living Lab researchers from the university that aren't part of the psychology department.

