

CONSENT TO PARTICIPATE IN NON-BIOMEDICAL RESEARCH

A Pedagogical Study of Equity in Maker Education:

Parent Consent Form

You are asked to participate in a research study conducted by Katherine Weishaar, Bachelor of Science Candidate, from the Department of Architecture at the Massachusetts Institute of Technology (M.I.T.). Results will be included in her senior thesis. Your student was selected as a possible participant in this study because he/she/they is a participant in Spark and therefore target age for the maker education pedagogy developed during the study. You should read the information below, and ask questions about anything you do not understand, before deciding whether or not to allow your child to participate.

- **PARTICIPATION AND WITHDRAWAL**

Your child's participation in this study is completely voluntary and you are free to choose whether to allow them be in it or not. Your child may participate in the workshop without participating in the study if you so choose. If you choose to allow your child to be in this study, you may subsequently withdraw them from it at any time without penalty or consequences of any kind. The investigator may withdraw them from this research if circumstances arise which warrant doing so.

- **PURPOSE OF THE STUDY**

With this study, I aim to answer the question "How does introductory maker instruction impact who becomes a lifelong maker?" by identifying and testing the variables that affect a student's first experiences with making. I hope to design and test an introductory activity that uses a vinyl cutter as a canvas for teaching basic principles of design and making that will be applicable across machines. A truly equitable makerspace (a space with machines, tools, and/or materials for students to build physical projects) provides guidance that can help students of all genders, races, and socio-economic backgrounds feel comfortable and confident with making. To promote equity, I intend to focus on the educational concept of scaffolding, a popular technique in traditional learning environments but one that is often neglected in makerspaces. Scaffolding refers to a variety of supportive instructional techniques used to move students progressively toward stronger understanding and, ultimately, greater independence in the learning process. My main goal will be adaptability, creating a set of guidelines for scaffolding the maker learning process that can be implemented by teachers in a variety of contexts with different types of students.

- **PROCEDURES**

If you volunteer your child to participate in this study, we would ask them to do the following things:

1. Complete a short (2-5 minute) survey about their identity as a maker and how they understand making/fabrication.
2. Participate in a two-hour workshop offered as a class in MIT Spark that will teach them basic digital fabrication concepts and techniques.
3. Design and fabricate a small paper lantern using a vinyl cutter.
4. Complete another short survey at the end of the workshop.

- **POTENTIAL RISKS AND DISCOMFORTS**

Your child will not face any significant risk beyond what they would normally experience by participating in Spark. They will be asked to take a short survey which could possibly make them uncomfortable, but the questions are limited to their understanding of making and themselves as makers as well as basic demographic questions, so we do not anticipate significant discomfort. All questions will be optional, and students will be told not to answer anything that makes them feel uncomfortable.

- **POTENTIAL BENEFITS**

Your child will benefit from this study by getting to take part in a Spark class that is based on significant amount of research and planning. Your child will also be adding to existing knowledge about the best ways to teach maker skills to students their age.

- **PAYMENT FOR PARTICIPATION**

Subjects will not be financially compensated for participation in this study.

- **CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. In addition, your information may be reviewed by authorized MIT representatives to ensure compliance with MIT policies and procedures.

Personal data collected will include the results of a survey about your child's maker identity and basic demographic information, observations during the workshop, and photographs of student work. Photographs of students will not be collected. Student names will only be collected through consent forms and will not be directly connected to any data. If your child is directly referenced in the thesis, a pseudonym will be used.

All data and information will be kept by the student investigator, and data not used in the thesis will be destroyed after the thesis defense in May 2018.

All survey questions and direct questions asked during the workshop will be voluntary, and your child will be notified thusly through their minors' assent form as well as on the survey itself.

- **IDENTIFICATION OF INVESTIGATORS**

If you have any questions or concerns about the research, please feel free to contact

Katherine Weishaar – katew@mit.edu - 301-928-8323 – Student Investigator
Cherie Abbanat – abbanat@mit.edu - 617-320-1136 – Faculty Sponsor

- **EMERGENCY CARE AND COMPENSATION FOR INJURY**

If you feel you have suffered an injury, which may include emotional trauma, as a result of participating in this study, please contact the person in charge of the study as soon as possible.

In the event you suffer such an injury, M.I.T. may provide itself, or arrange for the provision of, emergency transport or medical treatment, including emergency treatment and follow-up care, as needed, or reimbursement for such medical services. M.I.T. does not provide any other form of compensation for injury. In any case, neither the offer to provide medical assistance, nor the actual provision of medical services shall be considered an admission of fault or acceptance of liability. Questions regarding this policy may be directed to MIT's Insurance Office, (617) 253-2823. Your insurance carrier may be billed for the cost of emergency transport or medical treatment, if such services are determined not to be directly related to your participation in this study.

- **RIGHTS OF RESEARCH SUBJECTS**

You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you feel you have been treated unfairly, or you have questions regarding your rights as a research subject, you may contact the Chairman of the Committee on the Use of Humans as Experimental Subjects, M.I.T., Room E25-143B, 77 Massachusetts Ave, Cambridge, MA 02139, phone 1-617-253 6787.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

Name of Subject

Name of Subject's Parent/Guardian

Signature of Subject's Parent/Guardian

Date

SIGNATURE OF PERSON OBTAINING INFORMED CONSENT

In my judgment the subject is voluntarily and knowingly giving informed consent and possesses the legal capacity to give informed consent to participate in this research study.

Name of Person Obtaining Informed Consent

Signature of Person Obtaining Informed Consent

Date