**Principal Investigator’s Contact Information**: [kernsn@etsu.edu](mailto:kernsn@etsu.edu), (865)307-6746

**Organization of Principal Investigator:** East Tennessee State University

**INFORMED CONSENT**

This Informed Consent will explain about being a participant in a research study. It is important that you read this material carefully and then decide if you wish to voluntarily participate.

1. **Purpose:** The purpose of this research study

There have been studies that have taught in a certain way called “scaffold teaching” which is when a teacher guides a child through a complex task that is initially beyond their own abilities. I believe this way of teaching will help me better understand how this can be useful in teaching students how to think differently about problem solving – specifically in math. Furthermore, I want to know if thinking this way will be internally motivating. I also want to know if this will change student’s view on succeeding in their academics. This study is designed to be a mathematical enrichment. The students will learn new skills to approach math problems that they could use in their normal everyday math classes. They could discover and develop new perspectives of math. It may help them build a good attitude toward math. This study is also trying to help build a better outlook on math which could lead to more students going into the STEM fields in the future.

1. **Duration:**

There will be an initial questionnaire that will take approximately ten minutes. Then, there will be an after-school class that will also about one hour. The after-school class will be held onsite at that school in a natural environment. After the class there will be another questionnaire that will take approximately ten minutes. Finally, there will be a closing session that is optional and is a way to end the class but is not part of the study.

1. **Procedures:** The procedures, which as a participant in this research will involve you, include

I will send out a questionnaire for the students to fill out about their demographics and expectancy for success in computer science or other STEM fields. The student’s will then come to the after-school class. In the after-school class students will work at desks or tables either singly or in small groups as they prefer. Students will work through a given algorithm for finding greatest common divisor of two integers. The students will be asked to read and interpret an algorithm flow chart, walk through the algorithm with different inputs, describe their thinking while working out the algorithm, and evaluate their work for efficiency. Finally, they will be asked to fill out another questionnaire about their expectancy for success in computer science or other STEM fields, and whether they found the class intrinsically valuable.

I will allow the students to use scratch work to use to work through their problems and write down what they are thinking. I would like to keep the scratch paper to use in my study. The paper may also be used for future research or displayed during an academic presentation to other teachers and faculty. There will be no personal identifiable information on them. If there is, it will be redacted.

1. **Alternative Procedures/Treatments:** The alternative procedures/treatments available to you if you elect not to participate in this research study are:  
     
    other through your school system or other professional organizations. You can search online or ask your school for more information.
2. **Possible Risks/Discomforts:** The possible risks and/or discomforts from your participation in this research study include

Risks include psychological discomfort because the survey will ask personal questions about their education. Students will not experience any more frustrations or negative outlooks toward math than they do in a typical math classroom setting. The child will be able to leave the classroom if they are uncomfortable or do not wish to participate anymore.

1. **Possible Benefits:** The possible benefits of your participation in this research study are

This study is trying to help build a better outlook on math which could lead to more students going into the STEM fields in the future. By simply putting students in another math class they are developing academic skills that they can use for rest of their future education.

1. **Compensation in the Form of Payments to Participant:** There will be no pay for participating in this study.
2. **Voluntary Participation:** Your participation in this research experiment is voluntary. ***You may choose not to participate.*** If you decide to participate in this research study, you can change your mind and quit at any time. If you choose not to participate, or change your mind and quit, the benefits or treatment to which you are otherwise entitled will not be affected. You may quit by calling Nikole Kerns, at (865)307-6746. You will be told immediately if any of the results of the study should reasonably be expected to make you change your mind about continuing to participate.
3. **Contact for Questions:** If you have any questions, problems, or research-related medical problems at any time, you may call Nikole Kerns, at (865)307-6746, or Michael Garrett at 423-302-0331. You may also call the Chairperson of the ETSU Institutional Review Board at 423.439.6054 for any questions you may have about your rights as a research participant. If you have any questions or concerns about the research and want to talk to someone independent of the research team or you can’t reach the study staff, you may call an IRB Coordinator at 423.439.6055 or 423.439.6002.
4. **Confidentiality:** Every attempt will be made to see that your study results are kept confidential. A copy of the records from this study will be stored in an enclosed envelope in the office of the faculty mentor in Gilbreath Hall. for at least 6 years after the end of this research. The results of this study may be published and/or presented at meetings without naming you as a participant. Although your rights and privacy will be maintained, the ETSU IRB and Nikole Kerns and her research team have access to the study records. They will not be revealed unless required by law, or as described in this form.

By signing below, I confirm that I have read and understand this Informed Consent Document and that I had the opportunity to have them explained to me verbally. You will be given a signed copy of this informed consent document. I confirm that I have had the opportunity to ask questions and that all my questions have been answered. By signing below, I confirm that I freely and voluntarily choose to take part in this research study.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of Participant Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Printed Name of Participant Date

If signed by someone other than the Participant, state your relationship to the Participant and a description of your authority to act on the Participant’s behalf: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

[Above Included only if being signed by LAR]

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of Principal Investigator Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of Witness Date