

Title of Research Study: Seeing the World Differently

Principal Investigator: Michael Garrett

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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.

- **Purpose:** The purpose of this research study

This study is helping me understand how professional development on scientific modeling for early childhood teachers might be improved. The study uses a workshop that asks teachers to work in different ways in small groups to describe and explain simple things they might see in daily life. Teachers use pencil and paper to record their thinking and then discuss their thinking with each other and with a physics expert to see the similarities and differences in how people understand the physical world. These experiences were helpful to early childhood teachers in the past and I want to understand better what parts of the workshop teachers find useful and interesting. I also want to understand what teachers do and how they talk when they work to describe and explain the physical world.

- **Duration:**

By this point in the study, you should have completed an online questionnaire about you and your feelings about teaching science. Next, you will participate in a single half-day workshop held at ETSU in Johnson City this Spring. A few weeks after the workshop, you will fill out one more online questionnaire. This should take about 15 minutes. Prior to the workshop, I'll send you a few short readings to get ready. They should take no more than an hour to read. After the workshop, I will offer to work with you individually and to visit your class if you like, but that would be optional and not part of the study.

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

If you participate, I will email to you a few short readings for you to read over before the workshop. The workshop itself will start on a weekend morning. At the beginning, we will talk about the readings, about science, and about teaching. We will then form into small groups. The groups will get to explore three different simple and familiar phenomena. For about 20 minutes each, they will try to describe what is going on and to explain why. Your group will capture their thinking with pencil and paper in little booklets I call Flipbooks. At the end, I'll collect these up, but you can get a digital copy of your work if you like. The booklets won't include your name or anything that will identify you.

During the workshop, I will circulate around to help people ask good questions. We will take a break and then come together as a whole group to talk about what everyone is seeing, what makes sense, and what doesn't. Then each group will make a final try at describing and explaining what they explored in three new Flipbooks. Finally, we will meet together as a group and discuss the ways people

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DOCUMENT VERSION EXPIRES

APR 04 2016

APR 03 2017

Title of Research Study: Seeing the World Differently

Principal Investigator: Michael Garrett

were seeing things and compare that to how a physicist would see it. We will talk about how science work is like everyday thinking and how it is different and about ways to bridge between these two in a classroom.

I will give you a little journal at the beginning of the workshop and ask you to answer a few questions and to comment on your experiences after each part of the workshop. At the end, I'll collect these up and ask you to fill out a questionnaire on how you thought the whole workshop went. Finally, about two weeks later, I will contact you again by email to direct you to a final online questionnaire, which should take about 15 minutes. None of this material will have your name or anything that would identify you.

During the workshop, I'll have someone videotape the group activities so I can later look at the kind of things people were doing when they were exploring. The videos will be stored in a way that does not connect them to your name or school or other information that would identify you.

In this study, I will use the journals, Flipbooks, and video to look at what people do and how people talk and feel when they are describing and explaining the physical world. In addition, I would further like to keep the journals, Flipbooks, and video after my study is finished. I may use these in future research, such as comparing this workshop to others. I may use images or video clips from the workshop in public or online forums, such as national or international presentations, publications, or discussions or in teaching. However, you will not be identified by name or school and any references to these in the clips will be edited out before they are used in this way. If you decide you do not want your journals, Flipbooks, or video clips used in this way, you can opt out by contacting the researcher at any time.

- **Alternative Procedures/Treatments:** The alternative procedures/treatments available to you if you elect not to participate in this research study are:

This study gives you the chance to participate in novel professional development to help you improve your science teaching and your understanding of how science works. There are other professional development experiences that aim to do this using different techniques. Some might be available through your school system. Others are given by professional organizations like the National Science Teachers Association and the National Association for the Education of Young People. You can find out about these by asking your school administration or by searching online.

- **Possible Risks/Discomforts:** The possible risks and/or discomforts from your participation in this research study include:
 - A risk of loss of confidentiality. I may use clips from the videotapes for teaching or at conferences. I may use images or video clips from the workshop in public or online forums, such as national or international presentations, publications, discussions, or in teaching. However, you will not be identified by name or school and any references to these in the clips will be edited out before they are used in this way.
 - Besides this, there are no risks to participating in this study outside of what you would encounter in normal life.

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DOCUMENT VERSION EXPIRES

APR 04 2016

APR 03 2017

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

I've used the methods in the workshop elsewhere with early-childhood teachers and with students. They typically say that it helped them understand science and gave them ideas for their classrooms, and that it made science and science teaching seem more approachable and enjoyable. Also, by participating, you will get reproducible materials you can use in your own classroom and access to an ongoing blog about how these methods work. Finally, you will have the opportunity for follow-up work with your peers and with me on how to integrate science work with mathematics, literacy, and social studies in your own classroom.

Research has shown that many elementary school teachers are worried about trying to teach and learn science based on their past experiences with science subjects, especially with physics, and that they tend to avoid science subjects in their classroom and avoid learning more about science. It has also shown that this can reduce what their students learn about science and can pass on negative attitudes to them. By participating in this study, you may help me and others understand how to make successful science teaching more a part of elementary school.

- **Compensation in the Form of Payments to Participant:** You will not be paid for participating in this study.
- **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 Michael Garrett, whose phone number is 423-434-9873. 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.
- **Contact for Questions:** If you have any questions, problems or research-related medical problems at any time, you may call Michael Garrett, whose phone number is 423-737-7899. You may also call the Chair 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.
- **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 the researcher's file system for at least 5 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 Michael Garrett and his research team have access to the study records. They will not be revealed unless required by law, or as described in this form.

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By: 
Chair IRB Coordinator

ETSU IRB

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Principal Investigator: Michael Garrett

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

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By: MS
Chair IRB Coordinator

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