
Understanding Science Project
Teacher Recruitment Flyer
Force and Motion 2008-09

Dear colleague,

As part of a large-scale, national research study funded by the Institute of Education Sciences, your district is offering a science content course for teachers, on force and motion at the middle-school level. The course features best practices in science professional development and is designed to help you expand your knowledge of science concepts and pedagogy.

To help you decide whether this study is a good fit for you and your students, this form offers a complete description of what is involved. If you have questions or need more information, please contact me at the number below.

We hope you find the project compelling and join us in what we believe will be a professionally valuable and fun journey that benefits everyone involved (students, teachers, staff developers and researchers), as well as the educational community at large.

Thank you for your time and consideration.



Joan I. Heller,
Ph.D.
510-873-0808
jheller@edservices
.org



About the Study

The following is a description of a research study to be conducted by Heller Research Associates to evaluate the impact of a WestEd staff development module, *Understanding Force and Motion*, for teachers of grades 6-8.

Understanding Science staff development modules are designed to help teachers:

- Learn major science concepts
- Examine how children make sense of those concepts
- Analyze and improve their science teaching

Each module focuses on cases of actual classroom practice that illustrate students' science ideas and highlight important teaching dilemmas—ones that any teacher might face. Teachers engage in hands-on science activities that parallel those of students in the case, examine student work, and critically analyze instructional activities and decisions.

Understanding Science staff development modules are correlated to the National Science Education Standards for easy use with any standards-based science curriculum.

What It Means to Participate

The study is a randomized, controlled experiment (like a clinical trial in medicine), so if you agree to participate, you will be randomly selected to participate in one of two “conditions”.

Teachers assigned to the PD group attend the professional development first, and then provide teacher, classroom, and student data during the 2008-09 school year. Teachers assigned to the delayed-PD group provide teacher, classroom, and student data during the 2008-09 school year and then have the option of attending the professional development course. (Hence the name of their group: delayed professional development control.)

If you decide to participate in the study, you will:

- Be randomly assigned to either attend an *Understanding Force and Motion* course in August 2008, or attend the course in August 2009.
- Teach a classroom force and motion unit by March 31, 2009.



- Provide data for the course evaluation.

With that in mind, below is a detailed description of what you will be committing to do, if you decide to participate in the study.

Attend one professional development course

The *Understanding Science* staff development dates for your site are **August 2008** and **August 2009**. The 32-hour course is comprised of eight four-hour sessions during a five-day period.

Teach force and motion by March 31, 2009

You will be asked to teach whatever force and motion unit you normally teach, and to complete the unit no later than March 31, 2009.

Provide data for the evaluation of the course

As a participant in the study, you will be asked to complete the following instruments:

- Two surveys (30 minutes each), one each during project meetings at your site in Spring 2008 and Spring 2009.
- Two science quizzes (30-40 minutes each), one each during project meetings at your site in Spring 2008 and Spring 2009.

If you are randomly selected to be a part of a classroom substudy, and you agree to participate, you will also take part in:

- Interviews by research staff (60 minutes) in Spring 2008 and Spring 2009 relating to your experience teaching force and motion.
- Classroom observations and audio-recording of two lessons during the 2008/09 force and motion unit, and the interviews about the lessons before and after the classroom observation. The pre-lesson interview is estimated to be 15 minutes long; the post-lesson interview is estimated to take 30 minutes.

You will also be asked to assist in collecting the following student data by March 31, 2009:

- Work with a district staff person who is responsible for proctoring student science quizzes (30 minutes each) provided by the project—the quizzes must be administered to your students within two weeks before and after your 2008/09 classroom unit on force and motion (in two sections you teach).



What You Get

Stipend

You will receive \$1,000 for your participation in this study—half upon completion of the Spring and Summer 2008 data collection requirements, and the remainder upon completion of the 2008/09 data collection requirements. If you are chosen to participate in the classroom study, you will receive an additional stipend of \$100. If you are assigned to the delayed-staff-development control group and opt out of the professional development offered the summer following the study, but complete your data collection requirements, you will receive \$200.

Voluntary Participation

Your decision to participate in the study is voluntary. However, if you agree to take part, *you are committing to complete all project activities described in this form* (attend professional development, teach force and motion, and provide classroom and student data), and to do so for the full term of the project (May 2008-May 2009).

Benefits

This study is intentionally designed to provide maximum benefit to you, while contributing to the development of the professional development modules. More specifically, your professional development course is designed to help you:

- Deepen your understanding of core science concepts.
- Examine how students make sense of those concepts and commonly misunderstand them.
- Analyze and improve your science teaching.

The ultimate long-term contribution of this study is greater potential for nation-wide gains in middle school students' science achievement, resulting from widely available, low-cost professional development courses that enhance middle school teachers' science content knowledge and improve their teaching practices.

Risks

We foresee no risks to you or your students from participation in this study. All interactions are those that normally are part of regular classroom activity. The classroom audiotapes will focus on academic instruction in science. The interviews also pose very little risk to teachers or students. The questions we will ask about students' science ideas are those that the students typically are asked in classrooms



or homework about force and motion, and there will be no grading or evaluation of the students' answers. If a teacher or student experiences any discomfort answering questions, the survey, test, or interview may be stopped at any time.

Confidentiality

The information we collect will be kept entirely confidential. Your name (and the names of students at your site) will not appear with any quiz, survey, transcript of interview or observation, report, or other publication. We will use a participant ID number in place of your name. Responses to this data collection will be used only for statistical purposes. The reports prepared for this study will summarize findings across the sample and will not associate responses with a specific district or individual. We will not provide information that identifies you or your district to anyone outside the study team, except as required by law. All identifying information will be stored in a locked cabinet or password-protected computer file to which only the research staff will have access.

Our Team

Heller Research Associates

- Rebecca Brown, Research Support Specialist
- Ricardo Delgado, Science Content Specialist
- Joan I. Heller, Principal Investigator
- Alissa Shethar, Research Associate
- Carol Verboncoeur, Research Associate

Understanding Science Team at WestEd

- Kirsten Daehler, Senior Research Associate
- Jennifer Novakoski, Graphic Designer/Project Coordinator
- Mayumi Shinohara, Senior Research Associate

District Partners [Names of coordinators and facilitators by site]

Whom to Contact

For more information about the research, or your rights as a research participant, please contact Joan Heller or Robin Bhaerman.



Research and Evaluation

Joan I. Heller, Ph.D.
Director
Heller Research Associates
510-873-0808
jheller@edservices.org

Your Rights

Independent Review Board
Robin Bhaerman
Independent Review Consulting
415-485-0717
robin@irb-irc.com

How to Apply Online

The deadline to apply to participate in the study is May 1, 2008.

Step 1: Download and carefully read the Teacher Consent Form at [URL].

Step 2: Confirm your eligibility to participate in the study (5 minutes).

Step 3: Submit an online application (5 minutes).

Once your application has successfully been submitted, you will receive an email to confirm receipt. Click “begin” to start.

