



A TIME for PHYSICS FIRST

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Job Title: Coach or Mentor



Program summary

A TIME FOR PHYSICS FIRST is a partnership between the University of Missouri-Columbia (MU) and several Core Partner school districts. The project is supported by a National Science Foundation Math-Science Partnership Institute grant, September 2009-Aug 2014.

The vision of the project is to prepare Missouri's 9th grade science teachers to become intellectual leaders as they learn to teach a yearlong freshman physics course. Leadership skills will be built through research-based professional development (PD) that includes comprehensive physics content, pedagogy, research and evaluation. The project will

- Strengthen 9th grade science teachers' and their students' understanding of physics and the application of physics to the world around them.
- Create a solid base of knowledge for students' subsequent science coursework.
- Build a strong learning community among research faculty and high school teachers to enable year-round professional development.
- Create leaders who will become advocates for excellence in mathematics and science.
- Increase interest of students in future science coursework and toward their career choice.
- Provide PD through three years of summer academies and academic year support.

Through this project, participants (Fellows) and university faculty will gain an expanded range of leadership expertise, content knowledge and pedagogical proficiency to share with others, as they become resources and catalysts for reform in science education at the secondary and post-secondary institutional levels. Ultimately, the overall goal is a significant increase in student achievement in science and science coursework.

Eighty 9th grade science teachers will be selected and divided into two cohorts for this project. Each cohort will attend a 3-year series of summer academies at MU. Cohort 1 will begin their series of academies in June 2010, and Cohort 2 will begin in summer 2011. The Physics First program supplies an incentive-rich package to aid Fellows in implementation of the yearlong physics course that is a requirement for participation.

Job description - Coaches and Mentors

The project is seeking Coaches and Mentors who will mentor Physics First Fellows for the duration of the project. Successful applicants might be retired district science personnel with mentoring experience, a strong science background and a desire to improve science education, along with outstanding communication skills. The position requires commitments during both the summer and academic year.

The primary function of both Coaches and Mentors is to support their mentees in implementation of Physics First curriculum and leadership. During the summer, Coaches and Mentors have similar responsibilities; however, during the academic year, Coaches primarily work face-to-face with their Fellows, while Mentors conduct activities with Fellows virtually via the web.

- Coaches and Mentors will attend the *summer academies with their respective mentees. Coaches work with Cohort 1 Fellows, and Mentors work with Cohort 2 Fellows.
- The summer commitment is four weeks during years 1 and 2 (160 hours/summer), and two weeks during year 3.
- The academic year time commitment totals 400 hours, including three daylong Saturday follow up sessions during the academic year.
- Each Coach or Mentor will maintain contact with the mentee's building administrators quarterly in order to ensure ongoing mentee support.
- Each Coach or Mentor will maintain contact with the project leadership through regularly scheduled meetings and/or teleconferences.

*The summer academies consist of a three-year series: four weeks in Years 1 and 2, then two weeks in Year 3, all during the month of June at MU in Columbia, MO. Cohort 1 Fellows and their Coaches begin their three-year series in Summer 2010, and Cohort 2, with their Mentors, begins in Summer 2011.

Coaches

- Support Cohort 1 Fellows starting with academy attendance (at MU) in Summer 2010 and continue during the academic year.
- Coaches will be assigned mentees close to their geographical location.
- Coaches visit mentees classrooms eight times annually, both in-person and via webcam.
- During visits Coaches will observe the mentee's class for two class periods, and meet with them for another hour. Webcam visits will follow a similar format.
- Coaches will take turns responding to online discussion of their mentees on the Physics First website, with each Coach "listening in" on a rotating basis.
- Coaches will be trained using the Cognitive Coaching Model.
- Coaches will provide periodic written feedback to project personnel, using Missouri's MSIP or similar observation form.
- Coaches will be accessible to their Fellows to discuss PF content, pedagogy, classroom management, classroom implementation needs, and leadership action plans.

Mentors

- Mentors will support Cohort 2 Fellows, starting with academy attendance (at MU) in June 2011.
- Mentor assignments are similar to the Coaches, except that they will interact with their Cohort 2 mentees through the website during the academic year instead of making classroom visits in person.

- Mentors will be trained using the Cognitive Coaching Model
- Mentors will provide periodic written feedback to project personnel.
- Mentors will be accessible to their Fellows to discuss content, pedagogy, classroom management, classroom implementation needs, and leadership action plans.

The time commitments listed above are for Years 1 and 2. Time commitment decreases in Years 3-5.

Required Qualifications:

The successful applicant must support the Physics First concept, implementation of a yearlong physics course in 9th grade, agree with Inquiry and Modeling Methodology and commit to the Physics First program from Spring 2010 – Aug. 2014.

Preferred Qualifications:

- Background in teaching high school physics OR
- Background in teaching 9th grade physical science
- Experience in mentoring and observing of science teachers
- Experience in providing professional development for science teachers
- For Coaches, live in or near the project Core Partner Districts
- For Mentors, possess a working knowledge of online technology

Compensation – see potential income table below

- Coach-Mentor stipends equal \$200/8-hour day
- Air-conditioned dormitory rooms, meals and mileage will be provided during the academy; mileage will be provided during the academic year.
- Coaches and Mentors will be employed as consultants to the University of Missouri-Columbia

To Apply:

- Submit a CV or resume
- Submit 3 references, including title, relationship, email address and contact information
- Submit a brief (1 page) statement describing relevant background and experience related to the required and preferred qualifications for this position

Send all application materials and direct any inquiries to:

Sarah Hill, Dept. of Physics & Astronomy, 223 Physics Bldg.
University of Missouri, Columbia, MO 65211

Email: hillsar@missouri.edu Phone: (573) 882-7997 FAX (573) 882-4195

To receive full consideration, please submit your application materials before Feb 28, 2010.

Income Scenario: 8 mentees/Coach, or 10 mentees/Mentor

Daily stipend rate: \$200/day;

Duty	Stipend	Other Benefits
Attend 4 week academy in June	\$4,000	Mileage, meals and dorm room
Attend 3 Saturday Follow-up meetings	\$600	Mileage, meals, including conference registration
Academic year coaching and mentoring activities	\$9,400	Mileage
Advisory Board (2 mentors)- 2 visits	\$400	Mileage, meals
Total	\$14,400	Plus expenses