This ***postdoctoral mentoring plan*** establishes the guidelines for work to be performed by one postdoctoral researcher in support of this NSF-DUE project titled "Collaborative Research: Teacher Leadership: Investigating the Persistence and Trajectories of Noyce Master Teaching Fellows*"*. The postdoctoral researcher (PR) assigned to this project will perform his/her work under the supervision of Principal Investigator (PI) Gregory Rushton, Ph.D. at Middle Tennessee State University.

Orientation will include in-depth conversations between the PI and PR regarding (1) the level of independence required by the PR, (2) mentoring expectations of graduate and undergraduate researchers, (3) expectations of productivity and scientific publications, (4) work ethic and responsible conduct of research, and (5) documentation of research methodologies and experimental details to facilitate the continuation of the work by future researchers.

Career counseling will focus on providing the PR with the skills, knowledge, and experience needed to pursue a career in academia at a research-intensive institution. The PR will be encouraged to discuss career options with the PI and other faculty members at Middle Tennessee State University. The PR will be introduced to coordinating research efforts across multiple PIs and institutions, mentoring undergraduate and graduate research assistants, and developing his/her own research agenda.

Experience with preparation of grant proposals will be gained through the direct involvement of the PR in proposals prepared by the supervising PI. The PR will have the opportunity to learn best practices in proposal writing- identifying key research questions, defining objectives, outlining research designs, and constructing work plans, timelines, and budgets.

Publications and presentations are expected to result from the work supported by this grant. These will be prepared under the direction of the PR while he/she is guided and trained in the preparation of manuscripts for scientific journals and conference presentations including those organized by the Association for Science Teacher Education (ASTE), the National Association for Research in Science Teaching (NARST), and the American Educational Research Association (AERA).

Teaching and mentoring skills will be developed in the context of weekly meetings within the research group during which graduate students and postdoctoral researchers discuss their ongoing work to colleagues within the group and assist each other with solutions to challenging research problems, often resulting in cross fertilization of ideas.

Instruction in professional practices will be provided on a regular basis in the context of the research work and will include fundamentals of data collection, analysis and management, human subjects research protocols, qualitative and quantitative methodologies, and collaborative partnership development. In addition, the PR will be encouraged to affiliate with one or more professional societies in his/her chosen field including the Association for Science Teacher Education (ASTE) and the National Association for Research in Science Teaching (NARST).

Responsible conduct of research training is required for all PRs. Middle Tennessee State University offers regularly scheduled, face-to-face, faculty-led discussion around topics of mentorship, plagiarism, authorship, conflicts of interest, data management, and scientific misconduct among others on a regular basis. The full plan is available for review upon request.

Success of the mentoring plan will be assessed by monitoring the progress of the PR through his/her Individual Development Plan (IDP), meetings to discuss her satisfaction with the mentoring program, and tracking his/her progress toward his/her career goals after completing the postdoctoral position.