

The Mathematical Inquiry Project

REQUEST FOR PROPOSALS

ACTIVITY REVISION COLLABORATION (ARC)

The Mathematical Inquiry Project (MIP) welcomes proposals by 2-3 faculty to modify a single activity or assignment (e.g., an in-class activity or a homework assignment) to better promote inquiry-oriented learning in an entry-level mathematics class. The guiding principles of the MIP are to promote inquiry through active learning, meaningful applications, and academic success skills. The MIP believes there are numerous existing, in-class activities or homework assignments that faculty across the state are familiar with that can be adapted to meet the guiding principles of the MIP.

Active Learning: Students engage in active learning when they work to resolve a problematic situation that requires them to select, perform, and evaluate actions whose structures are equivalent to the structures of the concepts to be learned.

For more information on the MIP Active Learning Principle, visit <https://okmip.com/active-learning/>

Meaningful Applications: Applications are meaningfully incorporated in a mathematics class to the extent that they support students in identifying mathematical relationships, making and justifying claims, and generalizing across contexts to extract common mathematical structure.

For more information on the MIP Meaningful Applications Principle, visit <https://okmip.com/applications/>

Academic Success Skills: Academic success skills foster students' construction of their identity as learners in ways that enable productive engagement in their education and the associated academic community.

For more information on the MIP Academic Success Skills Principle, visit <https://okmip.com/academic-success-skills/>

Description of the final product: Revised Activity or Assignment

The products produced by each Activity Revision Collaboration should contain four features.

1. A description of the primary conceptual goals: This analysis should include details such as the ways of understanding desired as an outcome of the activity, common entry points for students' understanding, and a progression of the challenges and solutions that students should engage through the activity to develop these understandings.
2. The revised activity: The revision should be designed to support understanding of the targeted concept over the period of roughly one class session. The revised materials should include commentary for instructors about implementation of the activity.
3. A description of how the revised activity supports the MIP components of inquiry: active learning, meaningful applications, and academic success skills.

4. A brief assessment for students following the activity/assignment, with a description of what understanding(s) it assesses.

Proposal

A proposal for an Activity Revision Collaboration should be fewer than 1000 words and include the following information

1. A cover page (not included in the word count) designating the entry-level college course(s) for which the activity is intended, names of the team members (2-3 people), their institutions, email addresses, and phone numbers.
2. A description of the original activity (if attached, the activity is not included in the word count).
3. A description of the concept(s) the activity develops.
4. A description of how the collaboration team plans to revise the activity to promote the MIP components of inquiry: active learning, meaningful applications, and academic success skills.

Completed proposals should be emailed to William (Bus) Jaco at william.jaco@okstate.edu.

Review and Revision

Once an Activity Revision Collaboration submits a revised activity, it will be reviewed by at least two other faculty with expertise in the topic to inform an editorial decision of “accept with minor revision,” “revise and resubmit,” or “reject,” along with directions for revision if appropriate. (This more formal stage of review is distinct from the more informal feedback that a team might receive by interacting with an MIP team member on an ongoing basis.) After a favorable review, the team will further revise the activity, incorporating feedback gained during the review process and submit a final activity for publication on the project website.

Consultation

The MIP encourages those who are interested in submitting a proposal to discuss their ideas with a member of the MIP project team, who can (1) provide feedback and advice on initial ideas, (2) connect potential team members with others who are interested in working on similar ideas, and (3) offer guidance throughout the preparation and execution of the proposal.

Author Stipends

Each author in an Activity Revision Collaboration will receive a \$1,000 stipend after delivery of a complete initial draft of the revised activity and an additional \$250 stipend after delivery of a further revision based on the peer reviews and editorial decision.