

# EXCELLENCE *in* TEACHING CONFERENCE

## *Making STEM a Force for Good*



### **Making STEM a Force for Good Reflection Tool**



Forming STEM classrooms that attend to content, relationships, and social justice can be complex. Informed by the four tenets – 1) elevating the dignity of the individual; 2) promoting the common good; 3) acting with rights and responsibilities; and 4) empowering the marginalized and vulnerable – the following tool provides self- or group reflection questions that can be used to move you along a continuum to more fully realizing how STEM education can empower all students and address the common good.

#### **STEM Education**

Educational equity & justice recognizes the potential and worth of each student, engaging them in intellectually rigorous content and disciplinary practices. Effective curriculum and instruction is characterized by disciplinary core ideas, practices, questions, and ways of thinking that support students in solving authentic problems and understanding the world around them.

- Do my expectations of students' intellectual abilities and my curriculum reflect their innate dignity?
- Does the content of learning experiences for students align with major disciplinary ideas prioritized by professional organizations, standards documents, and students' interests?
- Do students have opportunities to engage in disciplinary practices (e.g. plan and carryout investigations, attend to precision, execute a design cycle) to construct meaning about the world?

#### **A Force**

Teachers and administrators are agents of change. Their instructional decisions affect how students relate to the content, to each other, and to their world. Effective curricular and instructional decisions empower students by changing how systems recognize all voices and distribute power.

- What explicit structures or instructional approaches position students' ideas and prior knowledge as central to the class's collective learning?
- What norms frame how all members of the community contribute to and participate in tasks?
- How are the voices of all students, especially those most often marginalized, heard and valued?

#### **For Good**

The aims of education move beyond achievement on tests or ideas to be memorized. Effective education transforms the learner and the community. Learning is not an end in itself, but a means for promoting equity, social justice, and the flourishing of all people.

- How might learning experiences be shaped to illuminate and address disparities among different groups?
- How might learning experiences promote the idea that 'no one wins unless everyone in a community wins?'
- How might learning experiences empower students' participation and relationships with their family, school, community, government, or nation?
- What learning experiences authentically address the needs of those on the margins?

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