

TABLE 1: Thinking through a sociotransformative lens.

Domain	Reflective questions for science educators	General actions to support the domain
Identity	<ul style="list-style-type: none"> • How does your identity affect your view of a scientific issue? • How can I design a lesson to assist students to see an identity group outside their own? • How can I portray scientists as multidimensional? 	<ul style="list-style-type: none"> • Create a personal identity map. • Reflect on the identities you feel most connected to or judged by. • Examine the identities of professional scientists.
Diversity	<ul style="list-style-type: none"> • How can I use student identity maps to develop recognition of the diversity within the classroom? • How can I present a range of perspectives on a particular scientific issue? • How can I encourage students to consider perspectives other than their own? 	<ul style="list-style-type: none"> • Venn diagram for comparing and contrasting various perspectives/cultural beliefs about problem/issue. The exemplar focused on disease transmission via social interaction. • Role-play various perspectives within a real-world scientific debate. • Invite guest speakers into the classroom who represent a diverse group of STEM professionals.
Justice	<ul style="list-style-type: none"> • How can scientific discourse be more inclusive? • How can I encourage students to ask questions about how people of different backgrounds are influenced by socioscientific issues? • What are the implications of portraying science as objective? 	<ul style="list-style-type: none"> • Use the See, Think, Wonder thinking routine in the analysis of graphics that reveal inequities to fuel classroom conversations. [The exemplar focused on COVID cases in areas with varying socioeconomic and racial profiles.] • Examine current/historical events where science has put an identity group at risk.
Action	<ul style="list-style-type: none"> • How can students be placed in the role of agents of change? • What actions can be taken to help students identify issues in the community to be addressed? • What networks are available in assisting my students in collective action? 	<ul style="list-style-type: none"> • Engage youth in identifying both problems and solutions within the community. • Identify issues within the curriculum that may allow students to take action. • Assist students in finding stakeholders within the community to help them enact change.

Note. The reflective questions and actions shown here were the result of collegial conversations to consider what a sociotransformative approach to science teaching and learning looks like. Learning for Justice anchor standards and NGSS domains were used as conversation starters.