

WISCIENCE COMMUNITY-BASED LEARNING FRAMEWORK

ACTIVITY: SERVICE WITH YOUTH IN STEM (UNDERGRADUATE)

OVERVIEW

Service with Youth in STEM is a semester-long undergraduate course that focuses on building community partnerships, understanding organizational missions and community needs, and implementation of informal science outreach experiences. Students in this course lead after-school science clubs for elementary school students. Course enrollment is approximately 20 students.

ACTIVITIES: REFLECTION ON FRAMEWORK COMPONENTS

Goals

- Recognize the multi-faceted work of community engagement.
- Reflect upon students' initial course expectations.
- Use the framework as a guide to reflect upon aspects of the community engagement that have become apparent after participation in the class.
- Recognize that not all aspects of the framework are relevant to every situation.

This activity is assigned approximately two weeks before the end of semester. There are two versions of the activity centered around the CBL framework. Previous discussions and reflections shared during the class may guide which approach is best suited for an individual course section.

- Activity 1 highlights framework components students DO see as a component of the course in one way or another and is meant as the starting point for a brainstorming activity and discussion of specific activities from their experience that led them to see it represented in the course or related experiences.
- Activity 2 asks students to highlight components that they don't see represented in the class or have difficulty connecting to community based learning as a whole. The most common aspects of the framework that don't resonate with students are used to prompt discussions about how these may be represented in community-based learning as a whole, even if not within this course.

Student: Pre-Class Reflection Prompt

- Look over the community-based learning framework and highlight items that you had not previously thought about but now recognize as part of work in community engagement broadly.
- Consider the component that resonates the most with you and write a one paragraph reflection about the experiences that have contributed to your choice. These can be activities done in class, conversations with classmates or community members (in-depth or brief), anecdotes, relationships built, or anything else that speaks to you.
- Post your copy of the highlighted framework and your written reflection on the course discussion page.

Instructor: Pre-Class Preparation

- Review the highlighted framework components for each student.
- On a “clean” copy of the framework, highlight each box that at least one student in the class selected.
 - An example from a previous semester is attached.
- As you go through student responses, tally the number of students who selected each component.
- Document which components were selected the most frequently.
- Use these as prompts for in-class discussion.

In-Class

- Share the components that were selected the most frequently.
- Write these around the classroom on whiteboards, large post-it notes, or table tents, depending on how your classroom is set up.
- Either assign students or let them self-select into small groups for each for the components you have chosen.
- Have each group briefly discuss the component that have been assigned and what course activities may contribute to those components; it may or may not have been the one they reflected upon in the pre-class work.
- Carousel brainstorm:
 - Each group goes to their own area (whiteboard/post-it location, etc) and writes down some of the ideas from their discussion.
 - After some time, groups rotate, take time to read what the previous group wrote, and then brainstorm in real time to write down additional ideas and/or star ideas that have already been written that they particularly agree with.
 - They can also add questions for previous groups.
 - Groups rotate again until they have seen each brainstorming area. Cycles should take less time as students have overlap with previous groups.
 - Have each group return to their original area, review what others have written, and then share out ideas that were frequently starred, facilitate discussion about questions posed, etc. This may be short since all groups have seen at least part of what is written for each component.
 - *If there is not room in the classroom, or if the course is online, a Google doc can be used to add ideas simultaneously. Groups should still be guided as to which section to focus on as they rotate through the activity.*
- Instructor-led wrap-up discussion

Student: Pre-Class Reflection Prompt

- This community-based learning framework is designed to highlight aspects that are important in community-based work from a variety of perspectives. Some of these may have been what you expected at the beginning of the semester, some may be ideas that you now realize are part of this work, and it is possible that some may still not resonate.
- Look over the community-based learning framework and highlight items that you think do not easily fit into community-based work.

Instructor: Pre-Class Preparation

- Review the highlighted framework components for each student.
- On a “clean” copy of the framework, highlight each box that at least one student in the class selected.
 - An example from a previous semester is attached.
- As you go through student responses, tally the number of students who selected each component.
- To facilitate an in-class discussion, document which components were selected the most frequently OR which components were divided the most evenly in the class.
 - For example, in a class of 10, there may be an instance where nearly all of the students highlight one of the same components. There may also be one where 5 students selected it and 5 did not. The latter may lead to more productive conversation.
- Prepare a free-write reflection document with prompts about the components you have selected for discussion.
 - An example from a previous semester is attached.

In-Class

- Share the components that were selected the most frequently.
- Briefly highlight any commonalities in the framework domains (if any).
- Give each student the free-write reflection document and give about 3-5 minutes for them to write some thoughts about how the component might connect to the course and/or community, along with any disconnects they see. If many students feel disconnected, this may not take long.
- Reflect upon and discuss one prompt before moving on to next to help focus ideas and thoughts.
 - If you chose components that were selected by about half the class, facilitate a large-group debrief to share ideas and see if new connections are made.
 - If you chose components that nearly all students identified as a disconnect, prepare some examples of how they might be seen in examples of community-engaged work that occurs with a different lens within your class.
- Instructor-led wrap-up discussion. Recognizing that the framework is not designed to encompass every aspect of all community-engaged work (and vice versa) is important.

WISCIENCE Community-Based Learning Framework A resource for instructors and students in community-based learning courses						
Learning Domains ¹	ACADEMIC AND PROFESSIONAL DOMAIN	CIVIC DOMAIN	COMMUNITY ENGAGEMENT DOMAIN	DIVERSITY AND INTERCULTURAL DOMAIN	PERSONAL GROWTH AND LEADERSHIP DOMAIN	SOCIAL AND COMMUNICATION DOMAIN
Student Outcomes²	Learn disciplinary concepts through integration of course and community settings	Understand pathways to participation in public life	Engage with community members	Develop knowledge of diverse human experiences	Develop leadership skills	Develop active listening skills
	Demonstrate understanding of disciplinary concepts in an applied setting	Develop the skills to participate in civic life	Develop independence in community-engaged work	Interact effectively across differences	Develop ability to accurately self-assess knowledge and skills	Develop interpersonal communication skills
	Consider the public purpose of scholarship	Develop and integrate civic identity	Develop the ability to learn through critical reflection	Develop a systems view of power, privilege, and bias	Develop awareness of personal identity	Develop teamwork and collaboration skills
	Develop experience and skills relevant to career development	Develop civic agency and self-efficacy	Understand and adapt to the culture and context of community environments	Develop skills to approach work with cultural humility	Develop resilience	Develop and maintain authentic relationships
	Articulate the value and challenges of translating theory into practice	Develop knowledge of contemporary societal issues	Understand how large social forces are localized in the community	Recognize and honor individual lived experience and contributions of others	Act in an ethical and socially responsible manner	Engage controversial social issues with civility
			Value community engagement and collective action to affect social change		Develop a values framework through which societal and institutional structures can be interrogated	

This framework is used to guide community engaged programming at WISCIENCE, is available for other educators to use, and is licensed under [CC BY-NC 4.0](#). It was developed by Jessica TeSlaa (WISCIENCE) and Mo Bischof (Office of Assessment), and adapted by Anna Courtier (WISCIENCE). It was funded by an Undergraduate Science Education grant from the Howard Hughes Medical Institute to the University of Wisconsin–Madison (#52006959) and by the Wisconsin Institute for Science Education and Community Engagement (WISCIENCE).

¹ **Learning domains** – Broad categories encompassing multiple student outcomes, which have been generated both through participatory workshops with CBL instructors and by consulting the literature.

² **Student outcomes** – Areas of focus which an instructor might use to guide development of clear and measurable learning outcomes or objectives. As written in the framework, they are generally too broad to be considered specific learning outcomes themselves.

WISCIENCE Community-Based Learning Framework – Service with Youth in STEM Activity 1 Results A resource for instructors and students in community-based learning courses						
Learning Domains	ACADEMIC AND PROFESSIONAL DOMAIN	CIVIC DOMAIN	COMMUNITY ENGAGEMENT DOMAIN	DIVERSITY AND INTERCULTURAL DOMAIN	PERSONAL GROWTH AND LEADERSHIP DOMAIN	SOCIAL AND COMMUNICATION DOMAIN
Student Outcome	Learn disciplinary concepts through integration of course and community settings	Understand pathways to participation in public life	Engage with community members	Develop knowledge of diverse human experiences	Develop leadership skills	Develop active listening skills
	Demonstrate understanding of disciplinary concepts in an applied setting	Develop the skills to participate in civic life	Develop independence in community-engaged work	Interact effectively across differences	Develop ability to accurately self-assess knowledge and skills	Develop interpersonal communication skills
	Consider the public purpose of scholarship	Develop and integrate civic identity	Develop the ability to learn through critical reflection	Develop a systems view of power, privilege, and bias	Develop awareness of personal identity	Develop teamwork and collaboration skills
	Develop experience and skills relevant to career development	Develop civic agency and self-efficacy	Understand and adapt to the culture and context of community environments	Develop skills to approach work with cultural humility	Develop resilience	Develop and maintain authentic relationships
	Articulate the value and challenges of translating theory into practice	Develop knowledge of contemporary societal issues	Understand how large social forces are localized in the community	Recognize and honor individual lived experience and contributions of others	Act in an ethical and socially responsible manner	Engage controversial social issues with civility
			Value community engagement and collective action to affect social change		Develop a values framework through which societal and institutional structures can be interrogated	

Number of students identifying component as a newly recognized aspect of CBL. Bold outline: Topics selected for class discussion; Total Students n=15	0	1-2	3-4	5-6	7-8
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WISCIENCE Community-Based Learning Framework – Service with Youth in STEM Activity 2 Results						
A resource for instructors and students in community-based learning courses						
Learning Domains	ACADEMIC AND PROFESSIONAL DOMAIN	CIVIC DOMAIN	COMMUNITY ENGAGEMENT DOMAIN	DIVERSITY AND INTERCULTURAL DOMAIN	PERSONAL GROWTH AND LEADERSHIP DOMAIN	SOCIAL AND COMMUNICATION DOMAIN
Student Outcomes	Learn disciplinary concepts through integration of course and community settings	Understand pathways to participation in public life	Engage with community members	Develop knowledge of diverse human experiences	Develop leadership skills	Develop active listening skills
	Demonstrate understanding of disciplinary concepts in an applied setting	Develop the skills to participate in civic life	Develop independence in community-engaged work	Interact effectively across differences	Develop ability to accurately self-assess knowledge and skills	Develop interpersonal communication skills
	Consider the public purpose of scholarship	Develop and integrate civic identity	Develop the ability to learn through critical reflection	Develop a systems view of power, privilege, and bias	Develop awareness of personal identity	Develop teamwork and collaboration skills
	Develop experience and skills relevant to career development	Develop civic agency and self-efficacy	Understand and adapt to the culture and context of community environments	Develop skills to approach work with cultural humility	Develop resilience	Develop and maintain authentic relationships
	Articulate the value and challenges of translating theory into practice	Develop knowledge of contemporary societal issues	Understand how large social forces are localized in the community	Recognize and honor individual lived experience and contributions of others	Act in an ethical and socially responsible manner	Engage controversial social issues with civility
			Value community engagement and collective action to affect social change		Develop a values framework through which societal and institutional structures can be interrogated	

Number of students identifying component as disconnected from CBL. Bold outline = Topics selected for class discussion; Total Students n=14	0	1-2	3-4	5-6	7-8
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WISCIENCE Community Based Learning Framework

Service with Youth in STEM Activity 2 Free Write

(Note: Leave more space between issues so students have room to write a response.)

Discussion Topic: Develop Resilience

Free write, on your own:

- What is something from this course that you identified as connected to developing resilience?
OR
- What is an example of resilience that you can think of in a context outside of community-engagement?

Discussion Topic: Systemic Power, Privilege, and Bias

Free write, on your own:

- What is something from this course that you identified as connected to the concept of systemic power, privilege, and/or bias?
OR
- If you remove the word “systemic,” can you identify something from this class that impacted your views on power, privilege, and/or bias? If yes, what is it?

Discussion Topic: Engage Controversial Issues with Civility

Free write, on your own:

- What are some controversial issues in STEM fields that come to mind?