

Working with youth as colleagues and creating empowering settings

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Introduction

Youth Lead the Way: A Youth Advisory Research Board Model for Climate Impact Education (YLTW) is an NSF-funded project led by Oregon Museum of Science and Industry (OMSI) that offers a theory-based approach for youth in frontline communities to work in paid positions as purveyors of climate science, develop leadership skills, and engage in timely conversations that impact their own communities. Using a cohort model, teens hired to OMSI's Youth Advisory Research Board (YARB) created evidence-based personal narratives, called *climate stories*, focused on various local climate impact topics while concurrently serving in an advisory role at OMSI. Youth participated in shaping relevant museum programs and practices, and developed and presented their climate stories to raise public understanding and awareness about local climatological changes and impacts.

Building on lessons learned through implementing and studying the Youth Lead the Way program, a professional development (PD) workshop was developed with project partners from the Sciencenter in Ithaca, New York, to train Sciencenter youth and adult staff on practices and approaches for including teen voices in their museum, shifting the focus and operations of current youth programming to be more youth-directed, and incorporating youth-led research into programming outputs. While the training conducted at Sciencenter was tailored to the specific needs, interests and programming at that institution, much of the material from that workshop can be relevant and valuable to museum professionals interested in working with youth broadly.

This guide was created by adapting the Sciencenter PD materials for broader dissemination. It is intended to provide some general information and tips on incorporating more youth voices in an ISL setting, as well as a framework for convening discussions with others at your institution around the topic.

Rationale

ISL (informal STEM learning) institutions, such as science centers, are uniquely situated to play a significant role in promoting collective public response to many social issues. As science centers and museums begin to recognize communities' assets and strive to build on them, it has become evident that there is a need to consider different actors' knowledge, expertise, and ways in which they are impacted by and are, at the same time, shaping societal issues. The theory of civic science argues that the public should have a stake in the processes at the intersection of policy and science (Bäckstrand, 2004), and ISL institutions must find new ways in which, "scientists and citizens can work in a collaborative spirit to create common resources that support

science-driven, civic outcomes." (Garlick & Levine, 2017, pp. 693–694). For science centers, this is by centering citizens—including youth—as experts and leaders in scientifically informed action. Recognizing the accomplishments of youth, and building on their enthusiasm, activism and passion, provides an opportunity for the ISL community to learn from young leaders, while further empowering them with resources specific to the field. In short, integrating more youth voices into ISL institutions can be a mutually beneficial endeavor. Through participation in science centers' programs, youth can gain access to:

- Certain opportunities for engagement (networking, partnerships) that may have been previously invisible or inaccessible (Prince, 2019),
- Resources to help youth hone their message and develop effective, evidence-based storytelling, and
- A platform for youth voices that may otherwise go unheard (via science centers' access to large audiences).

Along with access to resources specific to the ISL field, partnering with science centers can benefit youth in other valuable ways, such as:

- Youth participate in meaningful experiences and roles that allow them to build on their strengths and expertise
- Youth take on responsibilities and contribute to decisions that affect themselves and their community
- Youth develop skills and competencies that will help them achieve their goals in the future.

On the other hand, science centers can also gain a lot from collaborating with youth. These benefits include but are not limited to the following:

- Staff gain fresh ideas and approaches to the organization's programming and functions
- Staff learn to work with youth (OMSI, 2023)
- Staff learn to support youth empowerment (Shagott et al., 2023; Maton, 2008; Zimmerman, 2000).

Team activity: Reflecting on youth involvement

Think about how youth are currently involved at your institution (if at all). Brainstorm a list of your hopes and goals of working with youth. Next, think about some hurdles that you anticipate. What could be some possible solutions to the hurdles you identified? What resources would you need to enact that solution?

Creating empowering environments

The importance of fostering an empowering setting within a youth program was one of the guiding themes in the research of the OMSI YARB. Through studying and implementing the YARB, we learned that both youth and science center staff benefit from being a part of an empowering environment. We identified the following as some of the evidence-supported reasons:

- Youth find the programming relevant and engaging when they create the programming.
- Youth grow research skills and experience the importance of evidence-based decision making
- Youth foster leadership, interpersonal, and job readiness skills
- Youth grow a deeper understanding of the issue they are exploring (such as climate change, in our case)
- Youth socialize in a community of like-minded people
- Staff increase their sense of urgency to act (e.g. on climate change or a similar socio-scientific issue)
- The organization grows an empowered future workforce.

In the next few paragraphs we provide some more details about our study of OMSI YARB as an empowering setting. For the purposes of the study, we define empowerment as "a process by which people, within the systems in their environment, gain understanding and control over their lives and democratic participation in the community" (adapted from Rappaport, 1987, as cited in Perkins & Zimmerman, 1995).

As mentioned above, the Youth Lead the Way project aimed to leverage the unique roles of youth and ISL institutions in the climate movement, addressing the need for collective action around climate change. For the purposes of the project, collective action is defined as people working together, in an informed, evidence-based way, to positively change their community.

The Youth Lead the Way project supported collective action at multiple levels and intersections—youth working together, with OMSI, with community partners, and with the public. Focusing on the core of this collective action—the youth and their experience as part of the OMSI YARB - the project's research team conducted a qualitative study to create a local YARB model.

Evidence-based details of an empowering YARB setting

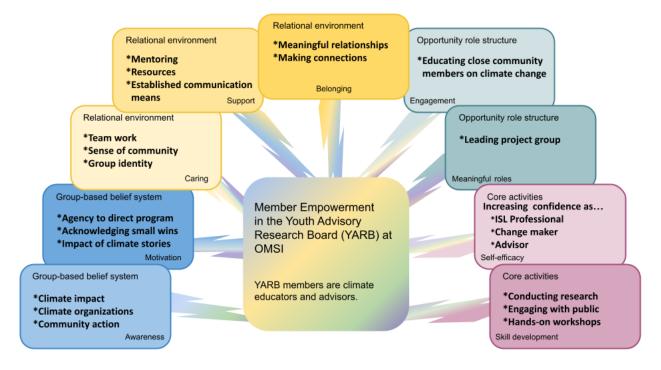


Figure 1. Model of Youth Advisory Research Board (YARB), with evidence-based details of an empowering YARB setting at OMSI (identified by asterisks [*]). Adapted from Maton, K.I. (2008), Empowering Community Settings: Agents of Individual Development, Community Betterment, and Positive Social Change. American Journal of Community Psychology, 41: 4–21.

This YARB model provides constructs and details that can be applied to connect youth with each other, science center staff, community partners, and members of the public to facilitate evidence-based understanding and collaboration to address climate impacts.

By leveraging constructs from empowerment theory (Maton, 2008; Zimmerman, 2000) and competencies from the Informal STEM Learning Professional Competency Framework (Morrissey, 2020), the Youth Lead the Way research team identified evidence-based factors that supported youth empowerment (Figure 1) to create innovative climate impact education products, engage the public in activities around climate impact, and advise museum professionals. This local model and its factors can be used to guide other institutions in the development of programming to support youth empowerment to address similar socio-scientific issues and develop competencies as ISL professionals.

Youth-reported factors of empowerment

To create the model, youth-reported, experience-based factors of empowerment were merged with adaptations of four organizational characteristics supporting member empowerment that

were identified in prior research (Maton, 2008): Belief Systems, Relational Environments, Core Activities, and Opportunity Role Structure.

In this model (see Figure 1), each of the nine outer blocks include youth-identified factors (e.g. leading project group) and are labeled with the associated organizational characteristics (e.g. Opportunity Role Structure) and psychological construct (e.g. Meaningful roles). Each block is connected with the center block (which signifies YARB member empowerment) illustrating the influence of the factors and YARB member empowerment on one another.

Examples below illustrate youth-identified empowering factors of the OMSI YARB that are specific to collective climate action, in each of the four categories:

- Belief System
 - Having the agency to direct the program for community action for climate impact (identified as the key premise of the OMSI YARB)
- Relational Environments
 - Making connections with others invested in climate action
- Opportunity Role Structure
 - Strengthening youth capacities to educate close community members, like family and friends, on climate change
- Core Activities
 - Increasing youth confidence engaging with the public as changemaker and ISL professional.

Team activity: Imagining empowering settings

We have provided these specific examples above so you can see that supporting a YARB for collective climate action (or another socio-scientific theme) is within reach for science center staff members. Now, think about the aforementioned empowering factors. Which can you see in your work currently? Brainstorm ways that you might incorporate more empowering factors in your youth programming.

Factors that affect youth engagement

While advocating for youth to have agency to direct their programming and participate in decision-making, we recognize that integrating youth into a working environment that is novel to them will inevitably require careful preparation. The following two sections are drawing from a youth-authored guide (OMSI YouthCARE team, 2023) that was created to provide future/potential youth colleagues with some practical tips on how to connect with youth working in central or support roles on a project.

Sustaining youth engagement can be a challenge, but it is vital to the success of a project. At a first glance, it may not be possible to tell if a youth is engaged in a project or situation (with engagement defined as effectively involving oneself in a project without external pressure.) They may not directly communicate their enthusiasm, or may not allude to the difficulties they are having.

One way to navigate the ambiguity of youth's engagement is to use a combination of communicating via surveys or check-ins and reviewing their progress on work. A simple yet useful way to check-in is to provide the youth with a set of questions that are answered weekly, such as What progress have you made this week? What have you struggled with? What will you continue to work on? and What support do you need? These questions allow teens to reflect on the work they have completed and seek help when needed.

Several factors dictate a teen or youth's engagement with a project, including expectations, commitment, presentation, and the format of the project. Mentors and advisors should focus on these aspects to maximize youth engagement:

- Ensure balance between providing youth with enough guidance to complete work effectively and micromanaging a project
- Train youth as any newly-hired entry level employees: provide necessary background information, define acronyms and jargon
- Figure out the amount of workload to which youth can realistically commit to. Youth should have a say in the amount and type of work they partake in

- Figure out the amount of input and support each individual needs. Some youth may prefer to have projects with room to make decisions on their own, while others need a specific path to follow or help finding a place to start
- When possible, use interactive demonstrations and conversations to communicate the project and workload to the youth and draw on past experiences that did or didn't work to inform and make youth feel involved
- Limit the amount of school-like types of work
- Youth want to know how their work will be utilized. It is inspiring for many teens to see that their mentors and coworkers will have something to gain from their work. Making the work that youth do feel relevant to completing the final goals is something that mentors should strive for.

Youth are constantly in contact with their mentors, advisors, or coworkers so effective communication and having good relationships are key to engagement in the workplace.

Tips on communication practices and methods of communication

Issues with communication are a common workplace struggle, but extra attention is needed in environments that host both youth and adult voices. In order to create the best working relationships between youth and adults, clear communication is needed.

Some helpful communication tips include the following:

- Articulate communication expectations from day one
 - Decide on an appropriate form of communication that works for both youth and adults (emails, chats, phone calls, etc.)
 - Provide concise information about the meetings that youth are expected to attend. Make sure to cover both logistics (where, what time, who is attending) and content details (agenda, what needs to be prepared prior to the meeting)
- Set aside enough time for general conversations
 - Use icebreaker activities that incorporate casual conversations
 - After creating a more comfortable environment, provide time for the youth to talk casually amongst themselves. Fostering casual relationships between youth is an important step in overcoming the awkward, stagnant energy that halts thinking

- With every youth, find one thing you have in common. Talk about hobbies, interests, current events, etc. This is integral to relationship building.
- Remember that communication styles you use to collaborate with youth should not be identical to models used in schools
 - \circ Opt for conversation style over lecture to transmit information
 - Helpful School-Like Communication Strategies
 - Calling on participants when a response is needed
 - Delegating different roles to youth according to their preferences
 - School-Like Communication Models to Avoid
 - Daily tasks that are predetermined with no input from youth
 - Use of a rigidly structured calendar
 - Youth have little input of when any work done outside of standard hours should be completed and what the expectation is

When youth play a role in planning responsibilities, there is often more respect and commitment to how the work is being done. Youth may feel more willing to complete their work and be more confident in what they are doing when they are given agency in how they will operate and go about their work. This can look like asking youth to create their own schedules for when they will accomplish tasks, or choose the ways a task will be executed.

Team activity: Recalling valuable feedback

"Teens deal with a lot going into new environments, and they really appreciate when adults give honest constructive criticism and pointers with good intentions", shared one of OMSI YARB members. Giving and receiving feedback is indeed a very important element of daily communications in the workplace. The following questions and activity may be helpful as you reflect on giving feedback to your colleagues: How would you define feedback? What counts as feedback? How do you feel about receiving solicited and unsolicited feedback? When do you provide feedback?

Now, try this quick activity. Hold your hands just above your desk and try to recall the number of times that you have given and received valuable feedback at work during the last 7 days.

- For each occasion that you RECEIVED valuable feedback, place one finger of your left hand on the desk.
- For each occasion that you have GIVEN valuable feedback, place one finger of your right hand on your desk.

Now look at your fingers. Did you run out of fingers or are they still hovering in the air? How would you interpret this?

Including youth as advisors

Museums and their staff have a great deal to gain from including more youth input. Staff can benefit from feeling more confident and prepared to work with youth advisors, and be able to integrate their feedback as well as issues that are of interest to them in ways that can contribute to museum initiatives and projects. Including youth voices in projects and programming can also help make those offerings more relevant and appealing to younger audiences.

Team activity: Imagining youth input

Have each person divide a piece of paper into four sections by drawing one vertical and one horizontal line that cross in the center of the page, or make two folds to create the same effect. Take one minute to write an idea for a project at your institution that could benefit from youth input in one section of your paper. Then repeat for the other three sections. Now, pass your paper to someone else; they have two minutes to comment or build on one of your ideas. Pass three more times until your paper returns to you.

Before positioning youth as advisors, the first step is to identify the needs of your organization and possible projects that could be suitable for youth involvement. To brainstorm ideas for potential projects, it may be helpful to reflect on the following questions and consult a sample logic model template (Appendix A): What areas of your institution, or what programs would benefit from youth voice/input? What would be the expected outcomes for the project? Are there any expected competencies for staff and youth? In what ways do you hope staff can stretch and build their professional capacities? Note if this is tied to professional or organizational goals.

Another important thing to reflect on is the form of youth participation your division/organization would be comfortable with. The image below (Figure 2) demonstrates possible forms of youth-adult partnership that --in very general terms - - can be distinguished by the level of support and guidance that adults provide to youth in a leadership or decision-making process.



Adults decide on the project and children volunteer for it. The Children understand the project, they know who decided to involve them, and why. Adults respect young peoples views.

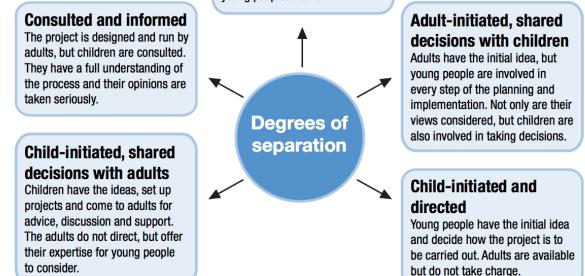


Figure 2. Levels of youth-adult partnership. Image source: Carnegie Young People Initiative, 2008. Original source: Treseder, P. (1997). Empowering children and young people training manual: promoting involvement in decision-making. Save the Children Fund.

Once you and your team have a shared understanding of the expected project goals and outcomes, as well as the resources it may require, the next step could include identifying project specifics and opportunities that build and improve on best practices. Consider focusing on the following aspects:

- Assign youth an initial small intro project to establish a working relationship and norms
 - \circ $\,$ $\,$ Then assign a larger project for them to spend the term completing $\,$
- Identify the project size and scope in which youth will advise
 - Consider the project in service of youth interests and strengths
 - Select a project that is small enough to be do-able and big enough to be meaningful for youth and the museum
 - Create a clear scope, with realistic but flexible timeline to ensure any potential contingencies and delays are included (Figure 3)
 - Beware of the project scope creeping and how timeline and deliverables could

change or get updated as the project progresses.

- Give as much freedom as possible within constraints to help build youth ownership of the project and their sense of agency. However, the project should not be completely independent
- Set out clear guidelines for deliverables the youth will produce, provide them with examples and/or templates when possible
- Implement youth feedback whenever possible
- Share and show examples of projects that were created by past youth or in which their contributions were tangible and meaningful for the museum. Let youth know exactly how their work will be used
- Support professional growth and skill development opportunities for youth and museum staff. Informal STEM Learning Professional Competency Framework (Morrissey, 2020) may serve as a helpful tool for this.

	ShakeAlert		Exhibits		Climate Story		Youth Guide		Climate CARE
5	Choose materials	\checkmark	Org outreach	~	Diego - Interviews Editing		Peer Review Chapters	\checkmark	BEO - Rebecca/Cy
	Buy Materials	\checkmark			Confirm Podcasting hosting platforms	\checkmark	Edit chapter using peer reviews	\checkmark	Create Flyer - Kate
	Record Background Info	~			Nathan - Attempt to interview, ready to help		Decide who edits who's (and tell Carla)		Distribute Flyers
					August - Editing	\checkmark			Marketing Request - Rebecca/Cy
									Vendor Outreach
									Secure Speaker
6	Procedures		Comparis ons btw stuff		Kate - Interview		Write Intro		Distribute Flyers- around museum, around town, email out
	Exit Interviews	\checkmark			Diego - Edit	\checkmark	Write Anecdotes+Stories	~	Confirm Speaker
					August - Edit	\checkmark		\checkmark	Vendor Outreach
									Confirm Activities/materials
									Social Media Push
7	Demo Test runs		Write Report		Short Edit Complete ~3 mins		Rough Draft		Confirm Vendors
					Diego	\checkmark	Editing Chapters	\checkmark	Prep Big Screen
					Kate		Creating Transitions	\checkmark	Social Media Push (Tag vendors to repost)
					August		Guidelines for non-text	\checkmark	Gather Materials
									Host Event!

Figure 3. Sample to do list for three weeks. Image source: Youth Lead the Way Program.

If your division/museum does not have an extensive experience of bringing a cohort of youth into a project, consider seeking examples and building on the best practices from other teams within

your own institution or from similar organizations. One of the projects that involved youth as advisors during Youth Lead the Way project at OMSI was collaborating with the Exhibits team on developing sustainable exhibit fabrication practices. These are some of the lessons learned from that collaboration:

- Have opportunities for youth to have real decision-making power
- Ensure that outcomes/deliverables are in line with the skills/experience youth have and/or are specifically developing
- Situate feedback within the context of outcomes/goals. "To get to our shared goal of *x*, you need to accomplish *y*."
- Prepare the staff team in recognizing that youth are an integral part of the team, they are both co-creators and part of the target audience, their expertise is their energy, experiential knowledge, and worldview!

When discussing some project specifics to focus on, we suggested considering a project that would be in service of youth interests and strengths. To be able to do that, it's vital to get to know the youth and assess their strengths and interests. The Johari window technique (Oliver, S. & Duncan, S., 2019) is designed to help people raise self-awareness and enhance communication in a group through a better understanding of themselves and others. Each person is represented through four quadrants that convey personal information, feelings, and motivation. That information is either known or unknown to oneself or others.

	Known to Self	Unknown to Self			
Known to Others	I.Arena .Behavior and motivation known to you and others.	II.Blind Spot. Things others can see in you of which you are unaware.			
Unknown to Others	III.Mask. Things you know but don't reveal to others.	IV.The Unknown. Things neither you nor others know about your certain behaviors or motives. Eventually some of these things become known, and you (and others) realize they were influencing relationships.			

Figure 4. Activity adapted from Oliver, S. & Duncan, S. (2019). "Editorial: Looking through the Johari window".

Team activity: Johari Window

Try this exercise with your team members and use the guiding questions below to debrief your experience. Use the sheet in Appendix B to complete the following activity.

Self Assessment

Write your name in the top corner of the sheet. Using the list of adjectives on the sheet, choose 5 items that best describe yourself by putting a small mark on the left of the word. Be objective and honest.

Team Assessment

Pass your sheet to a colleague.

Using the sheet passed to you, assess your teammate(s) with the same criteria you evaluated yourself, but this time, place a small mark on the right side of the word. Remember to choose only 5 and to be both honest and objective. If there are several people in your group, you can pass sheets again and repeat this step.

Filling out the Johari Window

Once you get your sheet back, look at where marks appear.

- If a word has marks on both sides, write that word in Quadrant I.
- When a word has a mark on the right, but not the left, write it in Quadrant II. If multiple people assed you and there are words with more than one mark on the right, underline those words.
- If a word has a mark only on the left side, write it in Quadrant III.
- Quadrant IV can be left blank, or alternatively, you can write any word that has no marks there.

Debriefing with the Team

- How easy or difficult was it to select the adjectives to describe yourself? Why?
- How easy or difficult was it to select the adjectives to describe your team member? Why?
- After comparing feedback, what were you surprised by?
- What can you do to reduce your Blind Spot, and move those traits into your Arena instead?
- How can you apply what you learned about you and your teammates to improve collaboration?

Including youth as co-creators

Another level of incorporating youth input in science centers and museums is involving youth as co-creators. This means that youth will not only provide input and feedback to specific projects and deliverables, but they would be involved as co-developers. Usually, this role applies to education and learning experience departments that develop learning experiences from conceptualization, to piloting and iteration, to implementation. Before engaging youth as co-creators, it is important for you and your staff to engage in discussions that help the team to ground themselves, and articulate the goals and potential challenges of working with youth in this role.

Team Activity: Identifying benefits and challenges

Work with your staff to develop a shared understanding of the rationale for having youth as co-creators. Why is it important to let youth lead programming development? What are the benefits of having youth as co-creators for the project, for staff? What are the hurdles and why don't we already do this? Consider hurdles such as resources, staff and youth availability. What internal staff capacity do you have (evaluation, fabrication, marketing, etc.) that youth could contribute to and learn from?

Youth-led program development can be daunting when considering how to ideate goals/projects and balancing freedom of thought with realism. In this regard, below are some considerations that could help leaders set expectations with youth and staff:

- Develop and articulate a research theory of action and goals that will guide strategies, outputs and expected outcomes of the project as well as for youth and staff. This can also include the creation of an initial logic model for the projects in which youth will support co-creating content and that will get refined as the project progresses.
- Create and provide timelines and project management support for youth to have a shared understanding and plan ahead. As the project or deliverable timeline is shared, allow youth to co-articulate the milestones and timeline with staff.
- Consider how to incorporate youth input as researchers into youth programming and the project in which they would be co-creators. This could mean allowing youth to support inquiry and research questions, conduct primary and secondary research, brainstorm data collection methods, and analyze the data.

- Develop topics and timelines for research and content development opportunities for youth and staff. These are some examples that could guide you on this area:
 - Asking Research Questions
 - Deductive or Inductive
 - Primary or Secondary research
 - Literature Reviews
 - How to find trustworthy resources
 - Annotating as you go

Remember to have your staff consider what would be best practices as youth step into their roles as researchers and co-creators of programming and learning experiences:

- Center empathy for others-start with their intended audience
 - This could be museum visitors, community members, themselves, youth program members, etc.
- Cast a wide net and invite all goals initially, then work through those goals with a "strategy screen"—a list of criteria a goal must meet to move forward
 - Is this feasible financially, time-wise, etc?
 - \circ $\$ Does this expand access and inclusion for underrepresented people?
 - Does this further the institution's mission?
 - \circ $\$ Does this support respect and skill building for teen participants?
- If you know the program has multiple parts/components, create goals separately for each of those.

Conclusion

ISL institutions, such as science centers and museums, need to play a larger role in promoting collective action on socioscientific issues that influence local and global communities (e.g. climate change). To explore an approach to filling this need, the OMSI-based Youth Lead the Way program developed and implemented a Youth Advisory Research Board (YARB), where the youth led climate impact education and advising, and OMSI supported them in building skills for success in both of these roles. Centering the aspirations and intentions of the youth and following their lead was critical for this project, but something OMSI staff needed to better understand and practice.

Building on lessons learned through implementing and studying the YARB, this guide is intended to both provide some general information and tips on incorporating youth input in an ISL setting, as well as to serve as a framework for convening group discussions and activities around the

topic. The authors sincerely hope that museum professionals interested in working with youth broadly will find this information helpful.

As has often been said, youth are the experts in their own lives. We need their perspectives and partnership to achieve our shared goals for positive changes in our local and global communities. And young people can change us, too, in positive ways.

Reference list

- Carnegie Young People Initiative (2008). Empowering Young People. Retrieved from: https://dlssu070pg2v9i.cloudfront.net/pex/pex_carnegie2021/2008/01/09220228/publ 455011710.pdf
- Garlick, J., & Levine, P. (2017). Where civics meets science: Building science for the public good through Civic Science. Oral Diseases, 23(6), 692–696. <u>https://doi.org/10.1111/odi.12534</u>
- Maton, K. I. (2008). Empowering Community Settings: Agents of Individual Development, Community Betterment, and Positive Social Change. *American Journal of Community Psychology*, 41(1–2), 4–21. <u>https://doi.org/10.1007/s10464–007–9148–6</u>
- Morrissey, K. (2020). A Guide to the ISL Professional Competency Framework. Retrieved from:<u>https://www.astc.org/wp-content/uploads/2023/08/A-Guide-to-the-ISL-Framewo</u> <u>rk.pdf</u>
- Oliver, S., & Duncan, S. (2019) Editorial: Looking through the Johari window. *Research for All*, 3 (1): <u>https://doi.org/10.18546/RFA.03.1.01</u>

OMSI YouthCARE team (2023). Youth Lead the Way: A guide for working with youth. Oregon Museum of Science and Industry. <u>https://omsi.edu/resources/youth-lead-the-way-a-guide-for-working-with-youth/youth-guide-final/</u>

Oregon Museum of Science and Industry. (2023a). Guide to supporting a science center-based Youth Advisory Research Board (YARB). <u>https://omsi.edu/resources/guide-to-supporting-a-science-center-based-youth-adviso</u> <u>ry-research-board/guide-to-supporting-a-yarb/</u>

Oregon Museum of Science and Industry (2023b). Youth Lead the Way. <u>https://omsi.edu/for-museum-professionals/youth-lead-the-way/</u>

- Perkins, D. D., & Zimmerman, M. A. (1995). Empowerment theory, research, and application. American Journal of Community Psychology, 23(5), 569–579. <u>https://doi.org/10.1007/BF02506982</u>
- Prince, K. (2019). Museums Can Take a Lead in Cultivating Vibrant Learning Ecosystems. In M. L. Semmel (Ed.), Partnership power: Essential museum strategies for today's networked world (pp. 119–129). Rowman & Littlefield.

Rappaport, J. (1987). Terms of empowerment/exemplars of prevention: Toward a theory for community psychology. American Journal of Community Psychology, 15(2), 121–148. https://doi.org/10.1007/BF00919275

Shagott, T., Zybina, M., Benne, M>, Hüttmann, I. & Crayne, J. (2023). A Youth Advisory Research Board in a science center: an empowering setting for collective action. Oregon Museum of Science and Industry.

https://omsi.edu/resources/a-youth-advisory-research-board-in-a-science-center-an-emp owering-setting-for-collective-action/research-paper/

Zimmerman, M. A. (2000). Empowerment Theory. In J. Rappaport & E. Seidman (Eds.), Handbook of Community Psychology (pp. 43–63). Springer US. <u>https://doi.org/10.1007/978–1–4615–4193–6_2</u>

Appendix A

Context				
What is the program name?				
Where is it located?				
What is the program's focus?				
Audience	Audience Need	Goals	Strategies	Activities/Deliverables
What communities or groups of	What community challenges will the		• What will you do to ensure the	• What will happen during the project?
ndividuals will the project serve	project address?	the project?	project achieves its goals?	 What are the primary activities and
e.g., location, demographics, psychographics)?	 What needs or assets have audience members expressed? 	 Who (or what) will change? In what way? 	 What educational approaches will you use? 	deliverables, aligned with the project strategies?
osychographics):	members expressed:	way:	will you use:	• How will the audience be engaged?
		Participants will		
		Participants will		
		Participants will		

Appendix B

Johari Window

Name: _____

	Known to Self	Unknown to Self
Known to Others	I.Arena	II.Blind Spot
Unknown to Others	III.Mask	IV.The Unknown

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Able Accepting Adaptable Bold Brave Calm Caring Cheerful Clever Complex Confident Dependable Dignified Energetic Extroverted Friendly Giving Happy Helpful Idealistic Independent Ingenious Intelligent Introverted Kind Knowledgeable Logical Loving Mature Modest Nervous Observant Organized Patient Powerful Proud Quiet Reflective Relaxed Religious Responsive Searching Self-assertive Self-conscious Sensible Sentimental Shy Silly Smart Spontaneous Sympathetic Tense Trustworthy Warm Wise Witty

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