

REAL LEARNING WITH REAL PEOPLE: COMMUNITY PARTNERSHIP AT PROJECT INVENT

Hello! We are [Project Invent \(projectinvent.org\)](https://projectinvent.org), a nonprofit organization dedicated to empowering young people to embrace their identities as changemakers and problem-solvers.

Project Invent is an invention education program. Throughout the school year, Project Invent students explore design thinking, engineering, coding, prototyping and more. They work together on teams to invent novel technologies, and eventually have an opportunity to showcase their inventions to industry experts and investors — similar to Shark Tank!

Invention is hard. Really hard. To “invent” means to imagine something that has never existed before, and then bring it into existence. The process almost always involves failure along the way, and requires a lot of resilience, passion, and motivation. **As students get into the messy and frustrating phases of prototyping and iterating, a tempting question often rears its head “Why does this matter?!”**

For Project Invent students, the answer to that question might be, “This matters because Jimmy is counting on me.”

Project Invent’s approach to invention education is rooted in the concept of **community partnership**. When we say “community partnership,” we mean that every student invention blossoms from a connection that students have built with individuals in their community.

For example, Jimmy is a 30-year-old, blind airplane mechanic from the San Francisco Bay Area. In 2018, Jimmy became a “Community Partner” for a team of Project Invent students in San Mateo, CA. Throughout the school year, Jimmy shared stories, insights, and experiences with the students to elevate their design process. Over the course of these meetings, the students learned that, as someone who became blind later in life, Jimmy sometimes experiences difficulty walking in straight lines. Working closely with Jimmy, the students set out to build a safety mechanism to prevent him from dangerously veering off of the sidewalk while walking. The resulting product, [Stria \(www.stria.org\)](https://www.stria.org), received funding from investors, and most recently secured a patent.

After working with dozens of student teams like Team Stria, **we steadfastly believe that real-world problem-solving cannot happen without real people.**

Presenting young people with authentic challenges to solve creates concrete, high-stakes environments in which students begin to see how their talents can positively impact their communities. Not only does this embolden students to view themselves as changemakers, it also gives them the courage to persist, even when changemaking gets tough. Even better, community partnership improves the quality of student’s changemaking efforts. Working directly with

Community Partners helps students build empathy while strengthening the way they identify problems and develop solutions.

Since Project Invent was founded in 2018, we have been investigating the influence that community partnership can have on student learning. We've seen students explore communities and life experiences that they've never interacted with before. We've watched good inventions become outstanding inventions as students' empathy for their community partners deepens and inspires. And, in a time when outdated classroom environments are demotivating their young people, we've seen community partnership encourage students to reinvest in their learning.

Though our approach to community partnership was designed to support invention education, our tactics and processes can be applied to classrooms of all kinds. **The value of community partnership is not limited to engineering classrooms, or even to STEM classrooms.** We hope that educators of all kinds can learn from our approach and begin building real-world learning experiences for their students.

COMMUNITY PARTNERSHIP IN YOUR CLASSROOM

No matter where you live, your "community" is probably a complex place. Introducing real elements of your community into your classroom can be overwhelming, especially when your students' experience is at stake. We've codified our approach to securing community partnership into four phases:

- 1. Map Out Your Community**
- 2. Put Yourself Out There**
- 3. Pick A Perfect Match**
- 4. Plan For Success**

In the guide that follows, we outline each phase of the process and offer a couple of templates to get you started. Let's get partner-ing!

**Note: Participating in the community partnership process can be a valuable learning experience for students. Depending on the size and intent of your classroom environment, you may or may not want to include your students in each of the four phases listed below. In general, community partnerships established by educators promote quality, stability, and equity of student experience. Community partnerships identified by students promote student agency, and push students to study their communities on a macro-level.*

MAP OUT YOUR COMMUNITY

Your community is home to hundreds of unique challenges, assets, and perspectives. In our experience, the best way to understand your community is to visualize it.

We encourage educators to think critically about their communities by building resource maps:

Start with a Blank Canvas

Paste a simple map of your community onto a [digital \(mural.com\)](https://mural.com) or physical whiteboard. Create some immediate focus by cropping your map to include just a few square miles — no more than an hour's drive in any direction. Mark down a couple of landmarks to get you started: your school, government buildings, public resources (libraries, parks, etc.).

If your students are building a community resource map, this is a good time to pause and reflect: Are any immediate patterns emerging? Is your school far away from resource hubs, or nearby?

Celebrate Community Assets

By exploring the map in real-time, and reflecting on your own experiences, build a list of all of the positive things that your community has to offer. This might include things like historical sites, theatres, universities, museums, etc. Mark these locations down on your map. Your list should also include community features that cannot be represented on a map, such as traditions, support systems, or shared sources of pride. These assets are important too! Your list represents what *works* in your community. Starting off with an understanding of what works will help you respond to characteristics of your community that need improvement.

Explore Issue Areas

This time, build a list based solely on research. Dig into community reports, newspapers, and strategic plans to identify challenges that your community is facing. Issue areas might include topics like pollution, transportation, access to services and resources, etc. Consider primary research too: Take a notebook on a walk and write down observations about your neighborhood!

**Note: In [this digital whiteboard](#), find an example of a community map completed for Galveston, Texas.*

After creating your list, try to narrow it down to 3-4 issue areas. If you have not included your students in the process yet, you may want to involve them for this decision-making point: Which issue areas are your students most passionate about addressing? Which issues necessitate solutions relevant to your classroom environment? For example, at Project Invent, we find that certain issues (e.g. visual impairment, wheelchair accessibility) are more suitable for invention education than others (e.g. affordable housing). However, if you are teaching a humanities course, a topic like affordable housing could be a good candidate for research, policy proposals, surveys, etc.

Identify Resource Hubs

Continue investigating your community by researching resource hubs relevant to the short list of issue areas you created in the previous step. "Resource hubs" should include organizations or locations with a high concentration of resources, but can also include well-connected individuals in

your community. For example, if you have identified habitat preservation as a priority issue, a potential resource hub could be a US Fish and Wildlife Service office, or a city council member passionate about preservation.

Mark resource hubs on your map. But more importantly, begin documenting your research in a contact tracker of some sort (example available [here](#)). For each resource hub, try to pinpoint an email address or phone number to contact once you are ready to begin the next phase — Put Yourself Out There!

**Note: Digital tools like [hunter.io](#) are helpful for building contact trackers.*

PUT YOURSELF OUT THERE

After you've filled your contact tracker with names, email addresses, and phone numbers, the outreach phase begins!

Searching for the perfect Community Partner can be uncomfortable at times. **The process requires a balance of boldness and patience.** If you are able to include your students in the outreach portion of the process, it's a great opportunity for them to practice "networking" with unfamiliar faces.

Start With Your Friends

If you have time on your side, we suggest that you start with the people you know. Your co-workers, school administration, students' parents and other family members — if any personal connections have made their way into your contact tracker, those connections are a good place to start.

If you come up empty after your first round of outreach, quickly expand your efforts to include cold outreach. When contacting people and/or organizations who aren't familiar with you, quantity is important. Try to send a generous quantity of cold emails — you never know who will reply and you don't want to burn valuable learning time. In our experience, cold outreach also requires persistence. Don't be afraid to follow-up with potential partners multiple times; sincere, personalized follow-up messages can demonstrate authenticity.

Personalize and Humanize

At the end of the day, requesting a Community Partner means requesting time and energy from another person. People are not likely to volunteer their time nor energy to a cause that they can't empathize with and/or visualize.

Craft your cold outreach emails (or phone call scripts) with a human touch. Share (appropriate) details about your classroom, your students, and your vision for the journey ahead. If possible, student quotes and photos are great tools for soliciting responses. Take a look at [this](#) template that we encourage Project Invent educators to attach to their outreach messages.

PICK A PERFECT MATCH

Hopefully, your outreach efforts will generate interest and excitement throughout your community! As you look to convert interested community members into full-blown Community Partners, keep an open mind; cold outreach can lead you in unexpected directions, and you may have developed connections to issue areas you hadn't previously prioritized or considered. At Project Invent, we've found that the *quality* of a Community Partner is more important than the issue area they are exploring with your students. **Students invest in projects when they've developed meaningful relationships along the way; an awesome Community Partner gives students problems that they can't refuse to solve.** So, how can you spot an awesome Community Partner? We recommend screening interested Community Partners through short phone conversations. Be on the lookout for the traits listed below:

**Note: If your students are collaborating on independent teams, we recommend that each student team works with their own Community Partner. As stated above: personal relationships with Community Partners serve as powerful motivators for students. As much as possible, students should be given opportunities to individually connect with their Community Partners. If you are working with a large number of students or student teams, consider recruiting a handful of Community Partners from the same organization to reduce outreach and communications logistics.*

An Awesome Community Partner Is...

- Excited to collaborate with youth
- Willing to connect students to additional resources/experts in their network
- Able to give honest feedback kindly
- Open about the challenges they face in their personal or professional life
- Open to curating experiences for students, in addition to providing insights and stories (e.g. an EMS professional inviting students to join them for a ride in an ambulance)

Project Invent Examples

Below, find two examples of Community Partners who have built deep, long-lasting relationships with our Project Invent students. Remember, at Project Invent, we seek out Community Partners who can collaborate with students to invent physical technology. Your classroom might need Community Partners with experience with any number of community challenges. Regardless of issue area, prioritize a Community Partner's ability to support, connect, and empower your students.



Jimmy is a 30-year-old, blind airplane mechanic who has been working with Project Invent students since 2018.

What makes Jimmy great?

- He connects students with other blind users
- He gives honest feedback, using “I” statements instead of “you” statements (e.g. “I prefer not to wear anything on my head.”)
- He asks students about themselves
- He comes in with an open mind to new ideas



Abigayil is a 75-year-old practicing artist who uses a wheelchair.

What makes Abigayil great?

- She actively engages students, encouraging them to try her wheelchair, work with her service dog, etc.
- She is very open about her condition
- She asks good questions

Listen to Abigayil's interview on the Project Invent podcast [here](#).

PLAN FOR SUCCESS

You've identified your perfect match! Hooray! You want Community Partners to stay engaged for the long-haul — to invest in your students — so it's important to set clear expectations from the get-go. In the early stages of a partnership, you will want to clearly communicate a Community Partner's role in your classroom and align on logistical expectations, e.g. a meeting schedule.

Provide a “Job Description”

For some Community Partners, a classroom environment may feel unfamiliar or uncomfortable. Before Community Partners begin meeting with your students, try to provide them with a “job description.” Include as much detail as you can:

- How often will students need to meet with their Community Partner? For how many weeks/months?
- How should a Community Partner interact with students outside of formal meeting times?
- How would you like Community Partners to deliver feedback to students?
- What role should Community Partners play in challenging students to push their work to the next level? (Tip: It might be useful to share examples of your students' work with Community Partners. Examples will help them set appropriate expectations.)
- If students ask their Community Partner to connect them with additional resources — people, places, or things! — how should they approach such a task?
- If a student's behavior makes their Community Partner uncomfortable, how should the situation be addressed?
- Do you expect your students' work to be shared publicly? If so, you should seek consent from Community Partners via a Media Release form.

You can communicate expectations with your Community Partner in writing, via live discussion, or both! At Project Invent, we host a virtual orientation for Community Partners, and then follow up with this [welcome letter](#), which reiterates key messages.

Schedule Time, Then Maximize It

Regardless of the expectations you establish, your students' time with their Community Partner will be limited. **Students can maximize their Community Partner meetings by utilizing the time to complete concrete activities.** Some examples include:

- Conduct well-designed interviews that will unlock project progress
- Present prototypes/drafts and solicit specific feedback
- Request opinions that will enable final decisions to be made
- Gather new stakeholders together in one place; prepare stakeholders and Community Partners to engage in productive dialogue

**Note: Sometimes, virtual tools can make your students' relationship with their Community Partner feel less time-restricted. Consider experimenting with tools like [MURAL \(mural.com\)](#), [FlipGrid \(flipgrid.com\)](#), etc. to create space for students and community members to collaborate outside of formal meeting times.*

COMMUNITY PARTNERSHIP AS LIBERATORY COLLABORATION

Here at Project Invent, we are on a mission to empower a generation of fearless, compassionate problem-solvers. We believe that *everyone* has the capacity to improve the world around them — and that the most brilliant ideas are rooted in collaboration.

As much as possible, we encourage students to view their Community Partners as their *teammates* rather than “clients” or “interviewees.”

We’ve recently been inspired by the *Liberatory Design* (www.liberatorydesign.com) approach, published in collaboration with the National Equity Project. The mindsets and modes identified by the creators of *Liberatory Design* are helpful for any educator seeking to create real-world problem-solving experiences for their students. In general, *Liberatory Design* challenges us to **design for belonging — to design *with* our Community Partners, rather than *for*.**

To encourage a truly collaborative approach to community partnership, prompt your students to reflect throughout their project. Here are some sample reflection topics:

- Are we making unspoken assumptions about our Community Partner's experience? Are we avoiding certain questions, because we are nervous about their answers?
- Are we making assumptions instead of conducting additional research? Might we need to seek out additional perspectives to explore our Community Partner's hypotheses?
- Can all of our decisions be tied back to input we received from our Community Partner?
- How does our Community Partner's story fit into larger systems? Are we failing to explore crucial aspects of our Partner's identity and experience?

You'll know you've hit the sweet spot of community partnership in your classroom when students and community members begin to view themselves as equals in their problem-solving ambitions — empowering and inspiring one another along the way. As a result, students' mindsets will grow organically. Through the community relationships developed within Project Invent, we've seen young people's capacity for empathy, curiosity, and resilience bloom and flourish.

Imagine: How might solving real problems for real people empower students in your classroom?

We love hearing from other educators turning their communities into classrooms. Feel free to connect with our team by sending a message to hello@projectinvent.org!

Liberatory Design (<http://www.liberatorydesign.com>) is the result of a collaboration between Tania Anaissie, David Clifford, Susie Wise, and the National Equity Project [Victor Cary and Tom Malarkey].