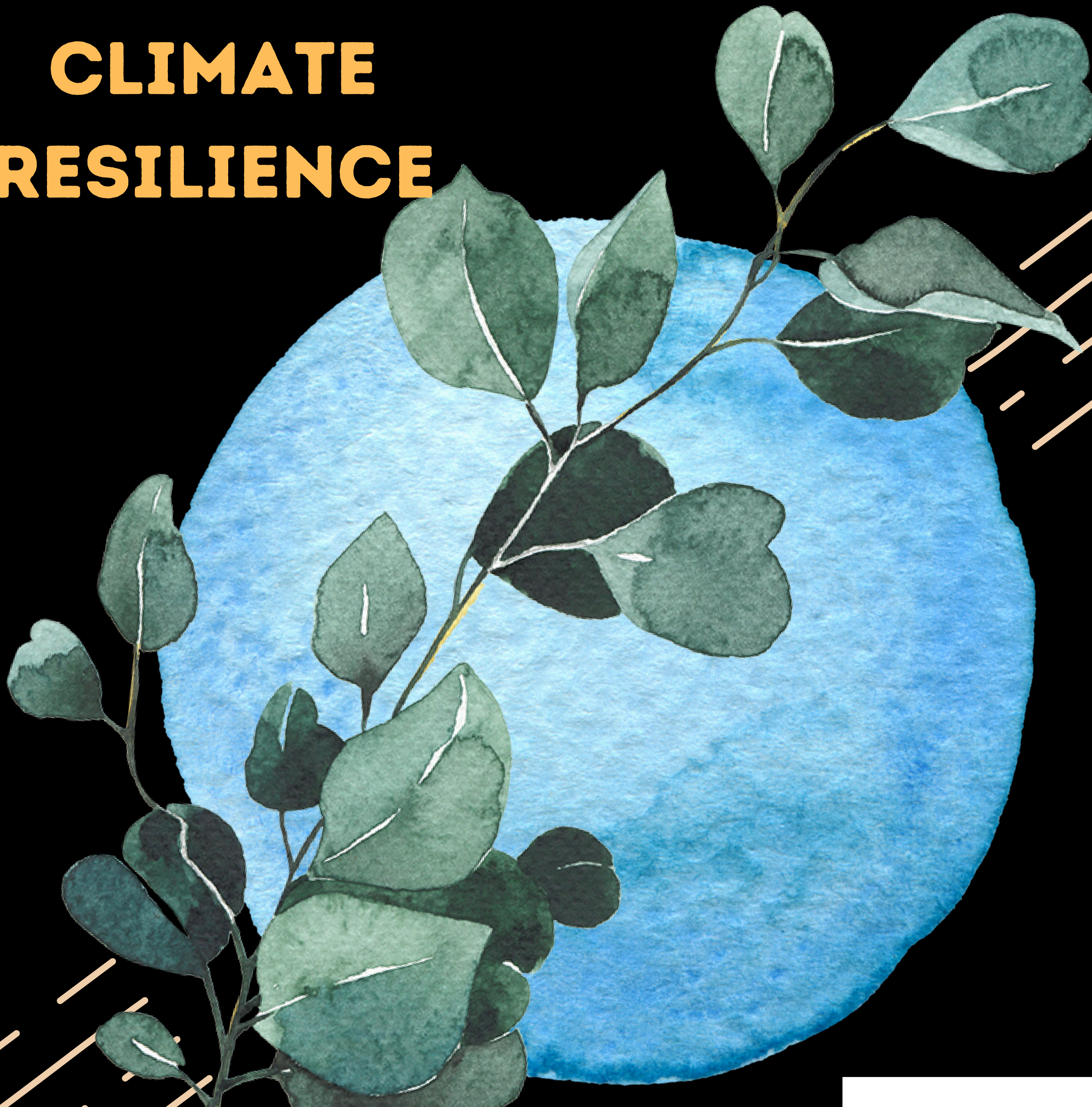


**YOUTH
DESIGNING
CLIMATE
RESILIENCE**

HANDBOOK



**RESILIENCE
BY DESIGN**



OUR 'WHY':

MANY (3 OUT OF 4) YOUNG PEOPLE DREAD THE FUTURE.



"DESIGN THINKING IS HELPING US TO BELIEVE WE HAVE A FUTURE"

--STUDENTS @ ESC. FMC, BAYAMÓN

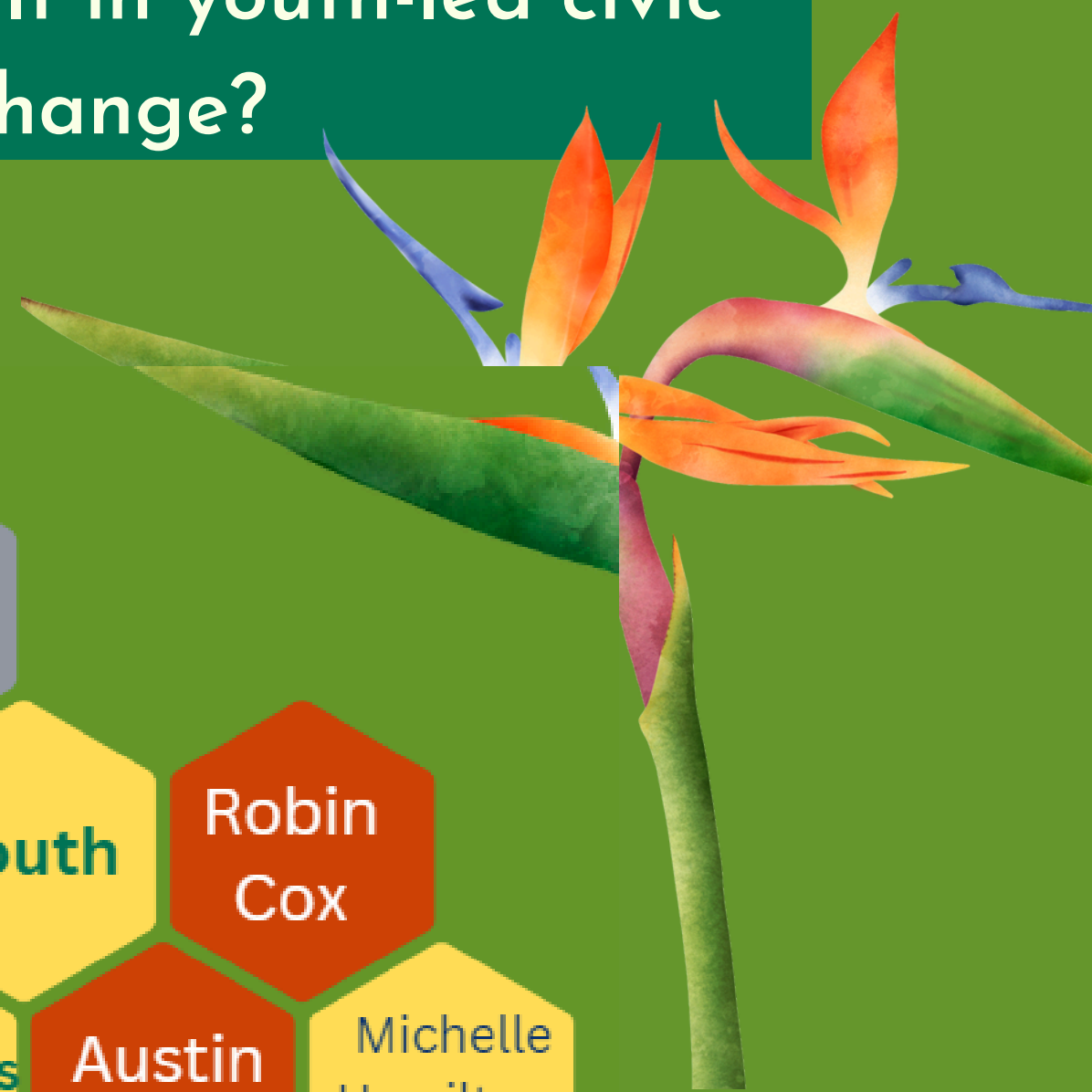
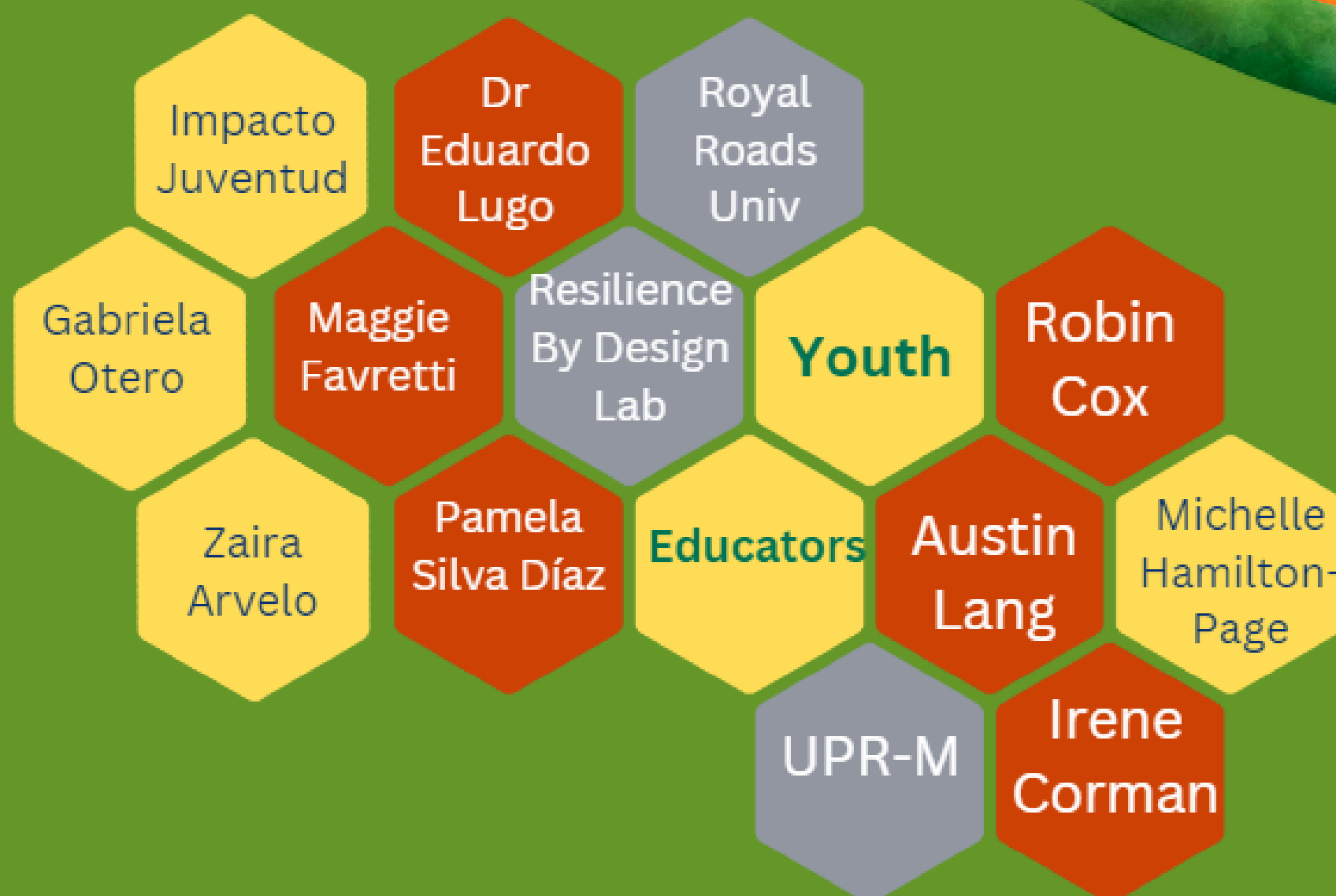
[HTTPS://WWW.DESIGNED4RESILIENCE.ORG/PUERTO-RICO](https://www.designed4resilience.org/puerto-rico)



OUR BIG QUESTION:

Does School + Community-Partnered Co-Design Thinking improve well-being and result in youth-led civic activity against climate change?

WHO WE ARE





OUR CORE

TEAM:



SENIOR RESEARCHER: DR. EDUARDO LUGO, UPR-M

RESEARCH ANALYSIS: DRA. ZAIRA ARVELO

RESEARCH DIRECTOR: LISBETH JIMÉNEZ, UPR-M,
GRAD STUDENT SCHOOL PSYCHOLOGY

PROJECT MANAGER: GABRIELA OTERO ANDINO, UPR-M

DESIGN THINKER, FACILITATOR: PAMELA SILVA, PAMLAB,
ENGINEER FOR JUSTICE

DESIGN THINKER, PROJECT CO-FOUNDER: MAGGIE FAVRETTI

SELF-PORTRAIT DOCUMENTARIST: LLAIMA SANFIORENZO

CANADA TEAM: ROBIN COX, IRENE CORMAN, MICHELLE
HAMILTON-PAGE, AUSTIN LANG, ROYAL ROADS

UNIVERSITY

EDUCATORS:

SILVIA ROSADO Y KAREN CABASSA, ESC. SUP. LRM,
(LAJAS)

MIGUEL CAMACHO, ESC. SUP. ARS, (GUAYANILLA)

MARIA-ELENA VELÁSQUEZ Y JORGE JIMENEZ, THOMAS
ALVA EDISON SCHOOL, (CAGUAS)

KEYLA SOTO HIDALGO Y GINA ORTIZ ANDRADE, UHS (SAN
JUAN)

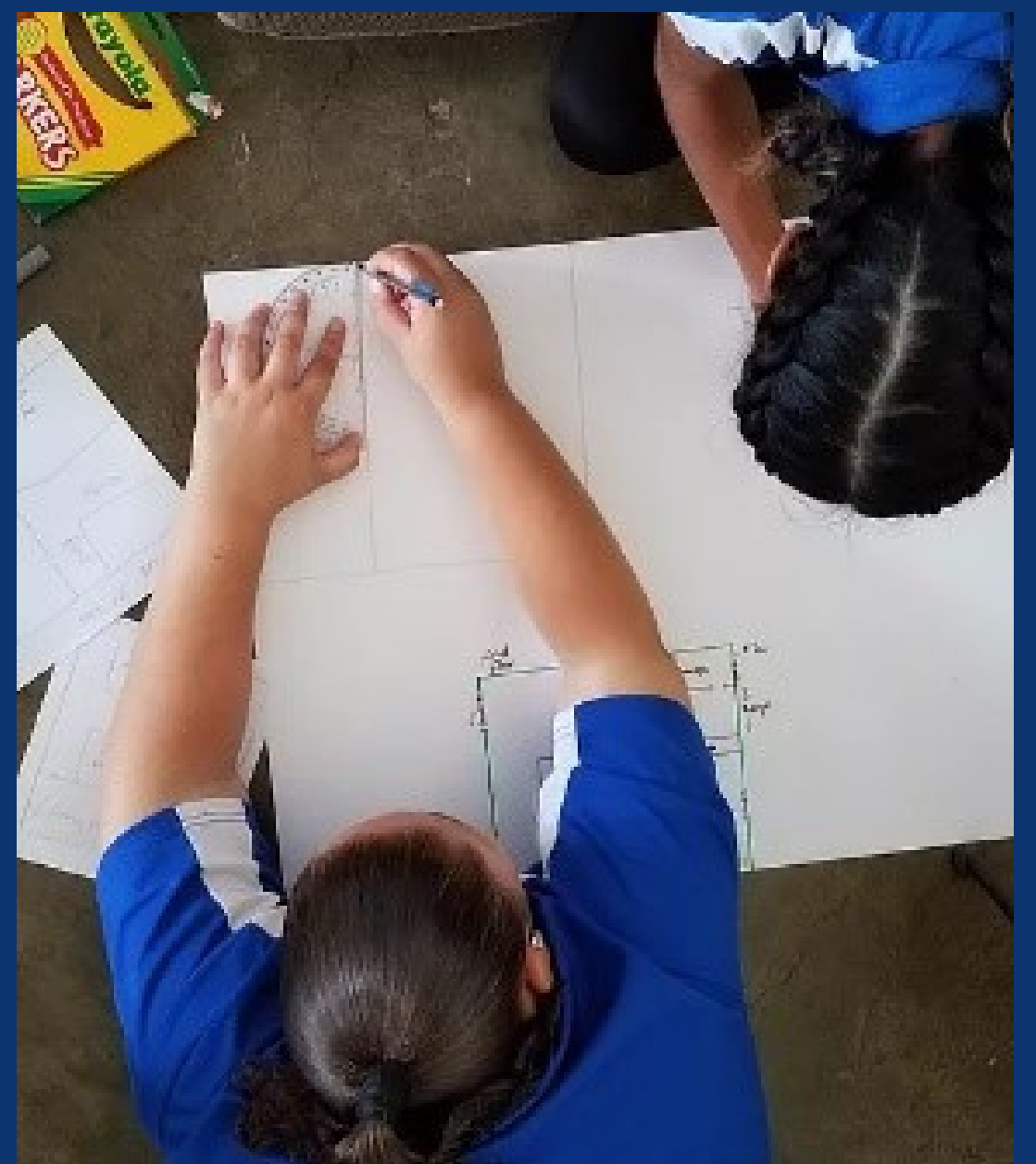
**AND # HIGH SCHOOL STUDENTS AND # UPR-M AND
IMPACTO JUVENTUD YOUTH PARTICIPANTS**



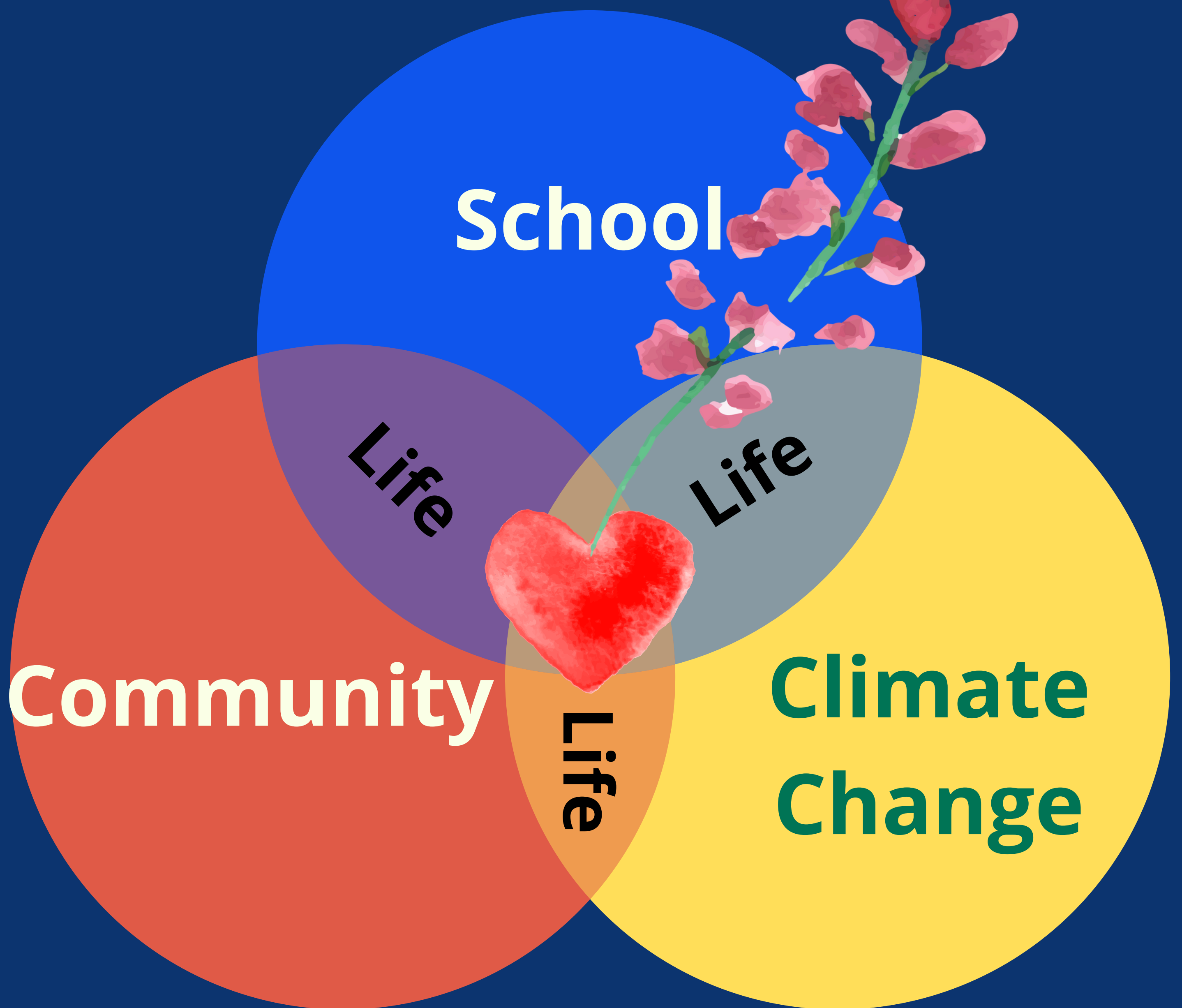
WE BELIEVE:

- *That great ideas can come from anyone
- *That teachers are also learners and learners can teach
- *That unified is powerful; uniform is not
- *That youth-powered teaching is liberating for both teachers and learners
- *That coherence among head, heart, hands and spirit; past, present and future knowing and being is healing

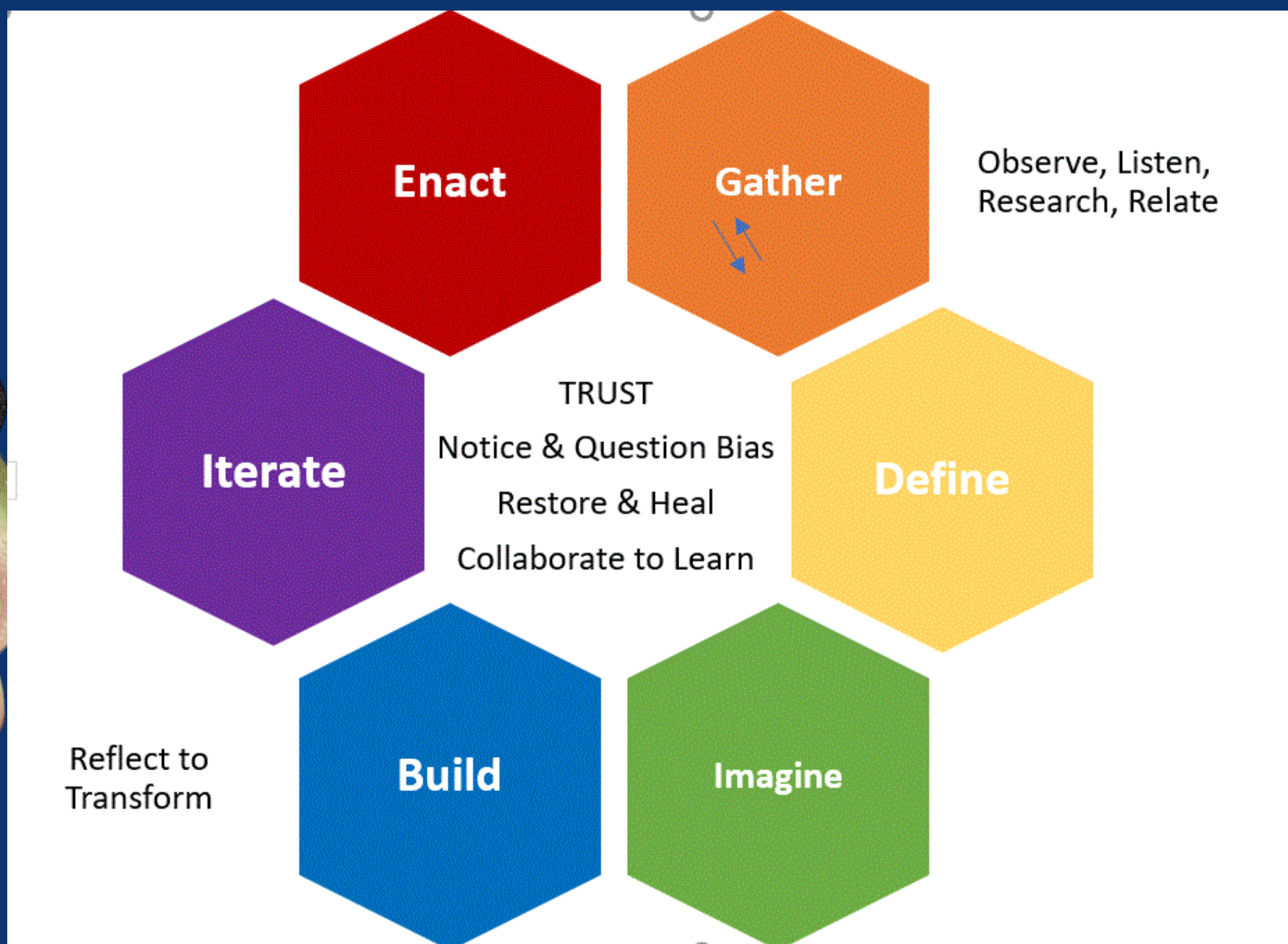
"If we teach today's students as we taught yesterday's, we rob them of tomorrow."--John Dewey



A source of well-being for youth and the planet



HOW IT WORKS:



People are motivated by compassion and purpose, which drives learning deeper.

A shared process enables healing, trust and safety.

When young people work together with their adult allies to drive change, they redefine success and expand what is possible.

When people know that together they can effect change, their power(full) sense of agency enables them to tackle complex community challenges.

PROJECT IN ACTION:

In a school-community design thinking approach, each circle expands the community of learners and uses youth-led design thinking to improve community well-being and address climate challenges and opportunities.



First Circle

1. Form teams.
2. Study/analyze contexts.
3. Learn and use 'design thinking' to co-create the "second circle."
4. Obtain IRB approval among other approvals.
5. Recruit participants for the "second circle."

Second Circle

1. Learn about 'design thinking' and start with investigation
2. Co-create a curriculum plan for the "third circle" that incorporate well-being, climate learning and 'community design thinking'.

Third Circle

1. Implement and repeat both the curriculum and the projects community.
2. Co-create a curriculum plan for the "fourth circle", a group led by youth that incorporate well-being, climate learning and community design thinking.

Fourth Circle

11. The climate design community increases.
2. Complete and synthesize the research and share the results.
3. They share what they've learned



A CLOSE LOOK AT THE FIRST CIRCLE



Coffees

Sharing Puerto Rican histories and reflecting on contexts

Videos in SSHRC First Circle folder:

Meeting Recordings Cafe Uno

See Powerpoint : Gathering for Coffee I

See Document : Café Uno, Puerto Rico and Coloniality

Listen to *La Brega* podcast

Colonialities

Reflecting on the meanings of colonial contexts

Videos in SSHRC First Circle folder: Meeting Recordings Cafe Dos y Tres y Research Discussion

See Document : Key Terms

See article: Working Paper 2



Design

Learning about and using design thinking to co-create elements of Circle Two : harmonizing and planning

See Powerpoint : Youth

Designing Climate Resilience

[https://docs.google.com/presentation/d/1OiYyDYV7If1Opz5hifn37TXkVzTzHXZyp8sCKjQA20/edit?](https://docs.google.com/presentation/d/1OiYyDYV7If1Opz5hifn37TXkVzTzHXZyp8sCKjQA20/edit?usp=sharing)

[usp=sharing](https://docs.google.com/presentation/d/1OiYyDYV7If1Opz5hifn37TXkVzTzHXZyp8sCKjQA20/edit?usp=sharing)

WHY "CIRCLES?"

Circles are the most democratic shape. They also signify unity and wholeness and regenerative continuity.





SECOND CIRCLE AND THIRD

SECOND CIRCLE

Learn about and use design thinking to co-create curriculum, partnerships and climate learning actions.

Begin the research with the Core +2 Extended Team

THIRD CIRCLE

Apply and iterate the ideas and prototypes generated in Second. They overlap so that new lessons can be shared and iterated in el Batey. Research extends to full classes.

WHY 'EL BATEY?'

El Batey is a Taíno word describing the gathering place where community is built and shared, which empowers collective understanding. Connected to Indigenous and cimarronaje practices, they embody unity and wholeness and regenerative continuity.



FOURTH CIRCLE

Youth work with mentors
and community
organizations to develop
and facilitate community
co-design climate
forward activities in a
Youth-led 'Acción
Climatica' community co-
design event.

WHY 'REGENERATIVE LEARNING?'

Life is regenerative in the sense that it grows and changes independently. Regenerative learning is rooted in principles of life and vitality.

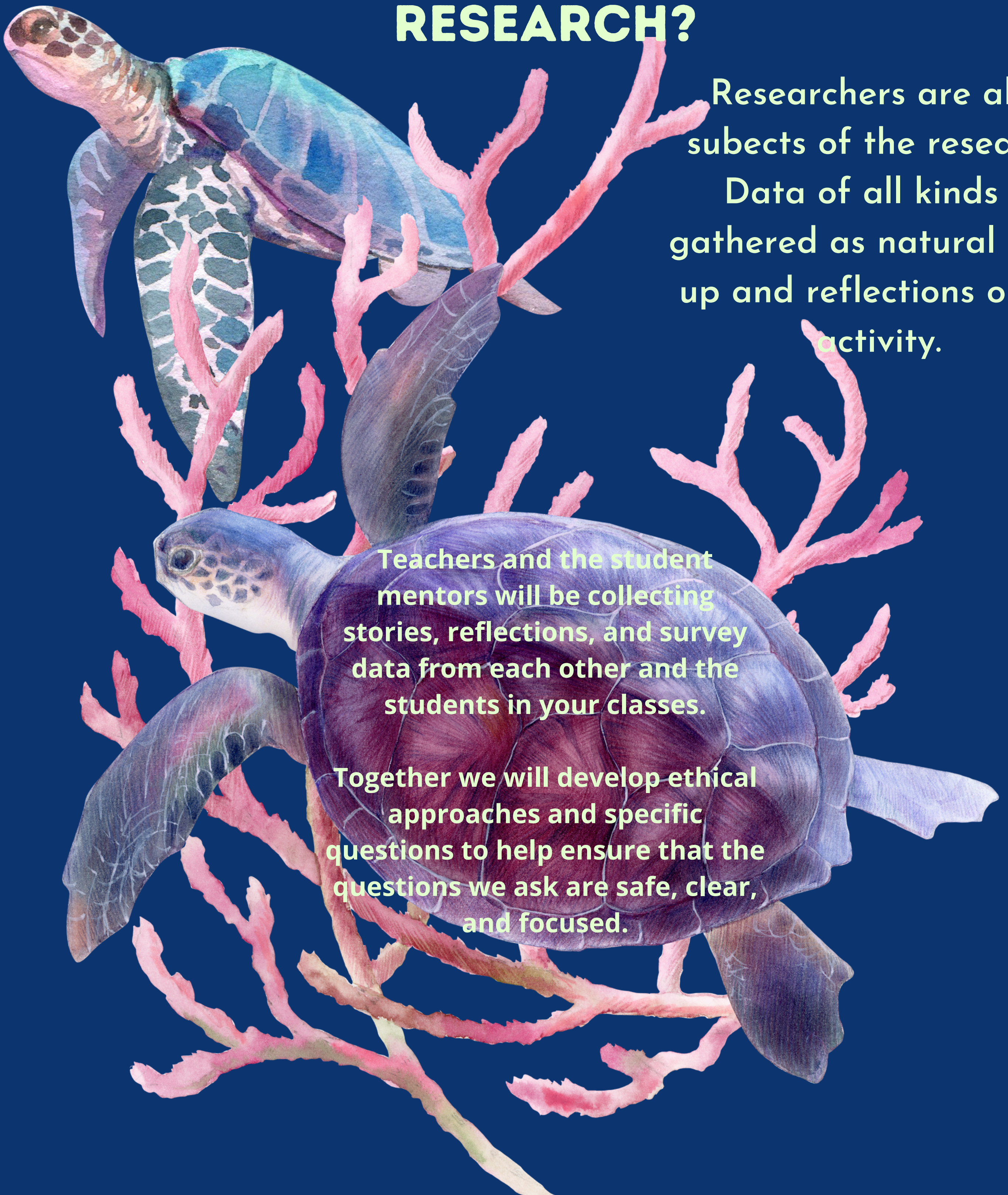
WHAT IS PARTICIPATORY ACTION RESEARCH?

Researchers are also subjects of the research.

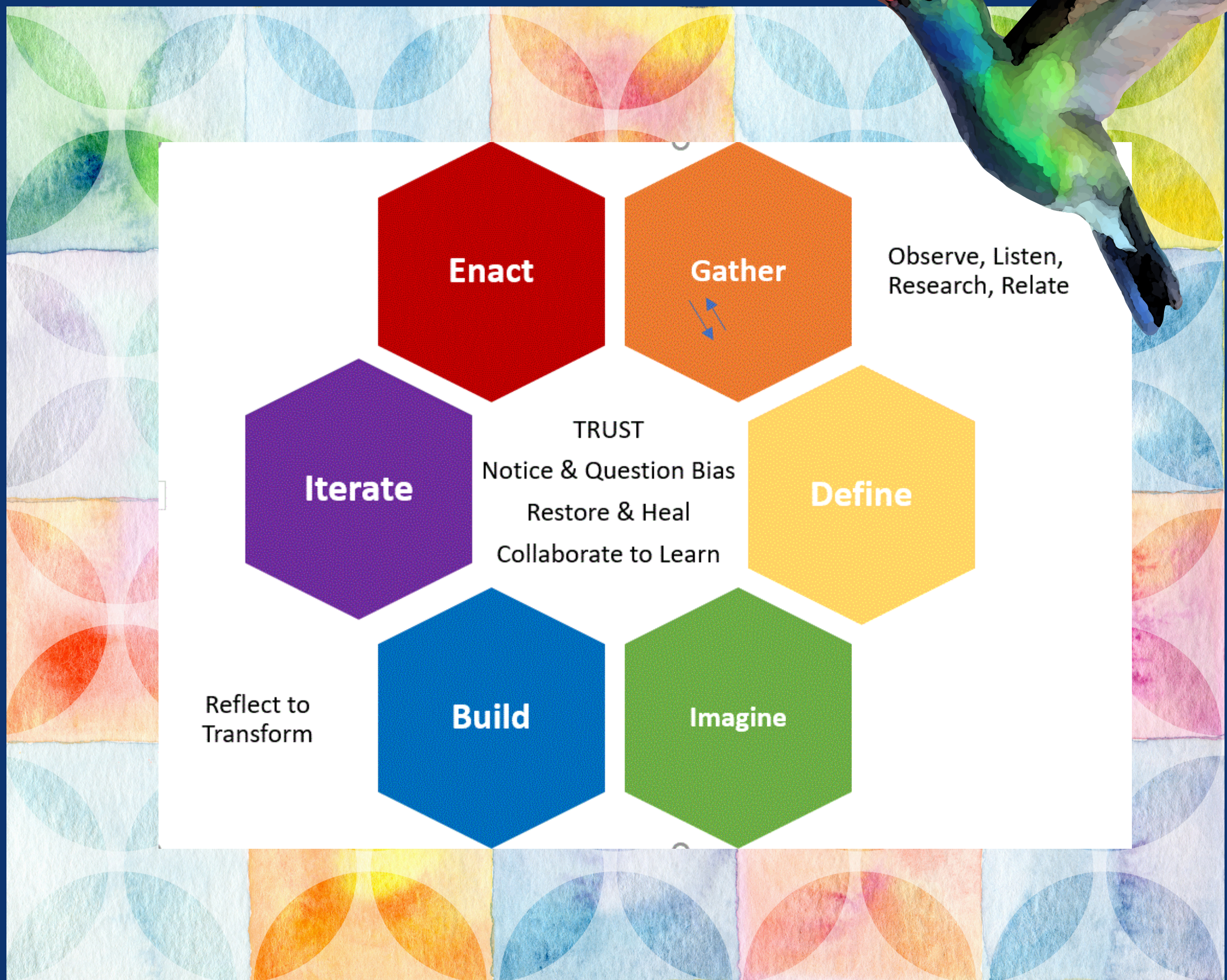
Data of all kinds is gathered as natural lead-up and reflections on an activity.

Teachers and the student mentors will be collecting stories, reflections, and survey data from each other and the students in your classes.

Together we will develop ethical approaches and specific questions to help ensure that the questions we ask are safe, clear, and focused.



A CLOSE LOOK AT CO-DESIGN THINKING



Design Thinking is an empathy-based complex problem-solving and innovation process that has been used by organizations around the world, including the UN and giant corporations. Within the last 20 years, its potential for facilitating collaborative co-design, subverting hierarchies and bringing together academic disciplines and various perspectives has brought it into schools and communities as a powerful set of change-making tools and mindsets. It is a good way to motivate deeper learning and community cohesion.

WHY 'CO-DESIGN' THINKING?

Top-Down	Designed FOR	Designed WITH	Designed BY
'Old-School' Government & NGO's	User-centered Design thinking	Co-Design Thinking	Community Designers
We know what's best for you Constrained by disciplinarity	We design for you based on your stated needs	Community design partners invited into the process	Community teams invite facilitators and outside experts into their multi-disciplinary process
One size fits all is most efficient	Needs-based design is more contextual	Greater contextual and cultural accountability	Place-based and regenerative
Community feedback	Community Input	More Community engagement	Community-led

Co-design, especially community-led co-design, puts the power of change in the hands of youth, educators, and community leaders who may have been frustrated by hierarchical efficiencies and mechanisms in the past.

Everywhere we use co-design thinking, it changes a little bit. Younger children might make the phases, "Feel, Imagine, Do, Share." (Design For Change). Communities might already have shared practices for gathering varying perspectives and building consensus. We validate those changemaking processes, because the important thing is to have a process people can *trust and one that builds relationships*. When a process for facing challenges together is present and 'owned' by a community (which could be a teacher and her class), it is much easier to stay focused on the challenges and collaborative solutions.

CO-DESIGN THINKING: TRUST IS AT THE CENTER



Trust comes with Safety: physical, emotional, social, cultural, environmental

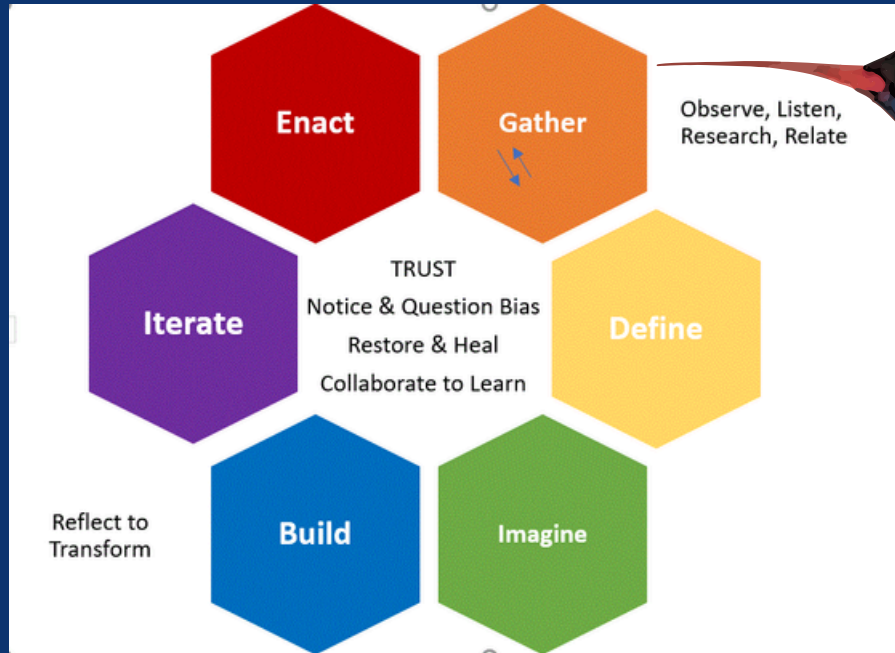
Trust comes with ego-distant listening, careful observation, and understanding (being known and heard/seen/valued)

Trust comes with the feeling of belonging that leads to agency: holding the system you are in accountable or changing it.

Restorative justice and healing is an important way to begin co-design thinking. Students and teachers may not ever have felt safe, that they belonged or that they were trusted. Start small and build up to more student agency. What are our assumptions/biases about the power in the room and outside of it? What are all the ways that power can exist in school? Reflect. How can we build on our own power within, the power of our relationships, the power of purpose and process to co-create new pathways and choices? How can we harmonize with each other and come to see more of our internal strengths and the strengths in converging different perspectives? Reflect. How can we create rituals and practices that heal? Try out many and reflect.

I learned that I had been avoiding thinking about my future because I did not really believe a future was possible under the circumstances. Designing Our Lives helped me to see that I am strong and that there are paths for me to be successful given what I know about myself and my community." --Elías, 17 Guayanilla

CO-DESIGN THINKING: GATHER



GATHER: OBSERVE, ASK, LISTEN, RELATE

1. What is your community? The class? School?

Neighborhood? City? Bioregion? How many people are involved? What are the power structures within the community? Who usually gets left out?

2. What are the challenges facing us today, especially relating to global warming and the environment?

3. Observe how members of the community relate to those issues, noticing your own assumptions and biases. How will you keep those in check as you begin to inquire more deeply?

4. Map out where there are organizations that are also focused on those issues, or on the community as you have defined it. Chart how the issues are related to your school classes and learning goals.

5. Work out how to safely observe the living community and visit (in person or virtual) with a variety of people connected to the issue. Seek out perspectives not usually included.



CO-DESIGN THINKING: GATHER PART II



**OBSERVE, ASK,
LISTEN, RELATE**

Some teachers and schools might not want to take the time to slow down, build trust, reflect on bias and power, map out the community's strengths, and teach how to observe, ask, and listen. Every moment you spend doing this now accelerates and empowers learning and engagement later on. These foundational skills of challenge-seeking and communication will help you and your students to thrive through collaboration, leadership, and engagement with life. Their motivation will be rooted in empathy and compassion and purpose, rather than getting a grade, and this will deepen their content learning, too.

TOOLS:

1. Harmonizing Activities
2. Observation Games & Maps
3. Journalling & Storytelling
4. Photovoice
5. Conversation Ladder
6. Interview Arc
7. Empathy and Ego-distant Listening



CO-DESIGN THINKING: GATHER PART III



Do your background and context research. What do I need to know more about in order to deeply understand this situation?? What skills do I need to expand?

What community or expert organizations can help me to learn more?

How can I connect with my compassion and empathy to motivate me to keep asking why and going deeper?

TOOLS FOR GOING DEEPER:

1. Inside-Out Inquiry Curriculum
2. Youth teaching children
3. Wonder



CO-DESIGN THINKING: DEFINE (CLARIFY)



DEFINE I: PERSPECTIVES

Create an Inference Grid:

Start with:

Infer:

What did they **SAY**

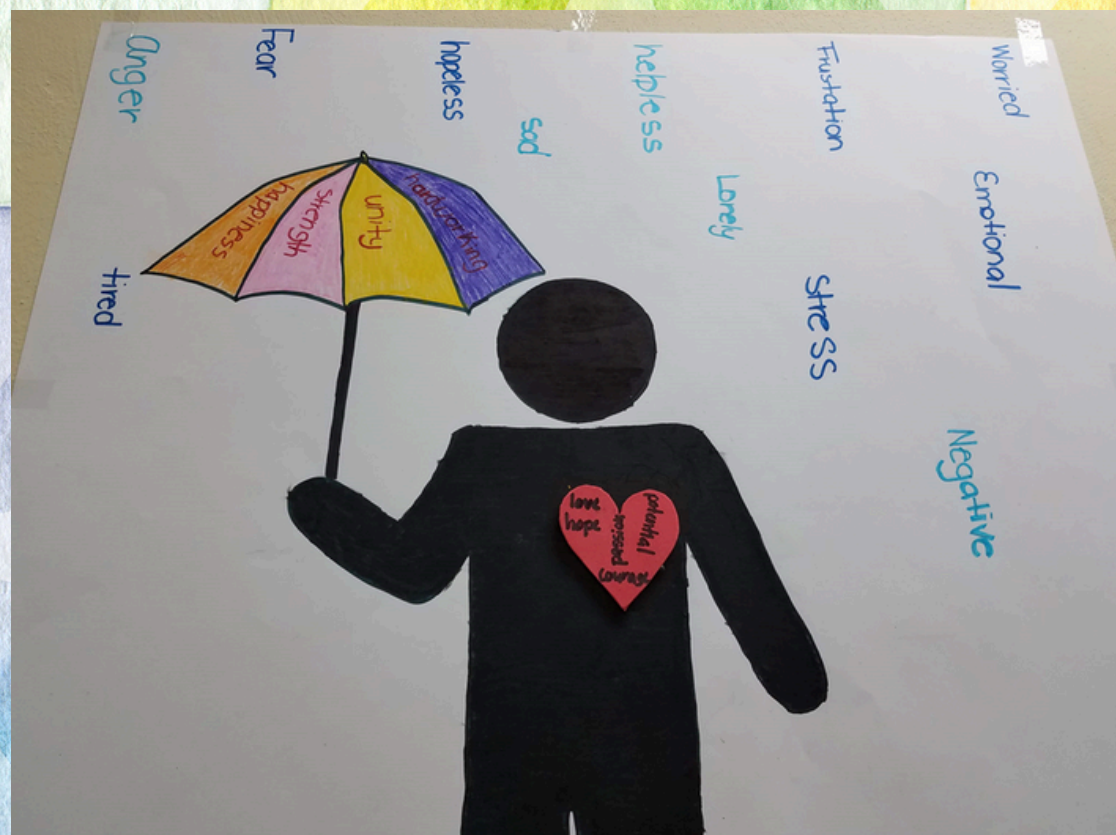
What do they **THINK**

What did they **DO**

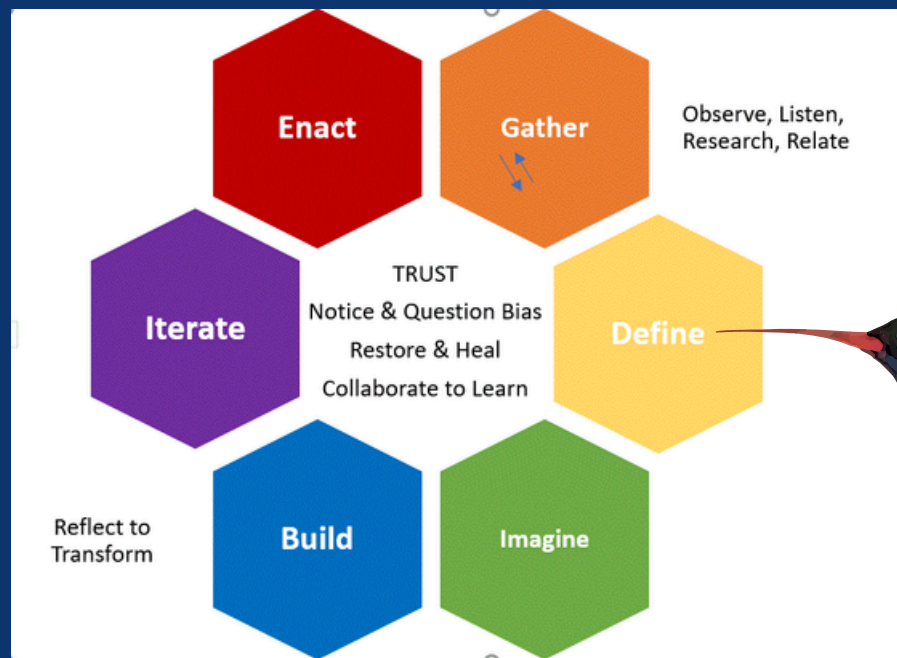
What do they **FEEL**



Make Concerns and Strengths visible:



DEFINE PART II : THE CHALLENGE/OPPORTUNITY



DEFINE II: THE OPPORTUNITY

Together, choose a challenge/opportunity topic that is meaningful and is connected with hoped for content learning. **NOTE:** Teachers can pre-set the topic based on what they need the students to learn...Students can state the challenge like this (below). Include the people/place and what they need, as well as noting their capabilities. Do NOT include solutions (too narrow and prevents new ideas).

Examples: "People in Ingenio need resilience solutions that maximize their safety & health and build on their community cohesion."

"Students and teachers in Esc. FMC need emergency exit strategies that enable cooperation."

"Youth in Caguas need opportunities to reconnect with the land and local knowledge to improve food security."

NOT: Youth in Lajas need farming curricula in school.
OR, too general: Youth need adults to stop global warming.

BE SURE TO CHECK WITH 'DESIGN PARTNERS' ON THIS



IMAGINE!!

ALSO, IDEATE



By yourself first but in group setting

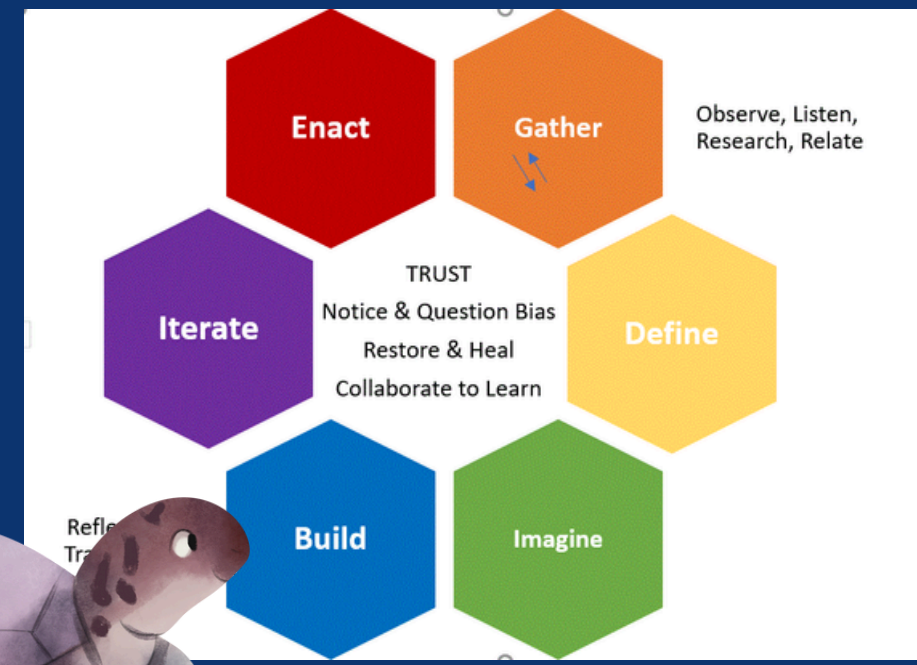
- 25 ideas in 10 minutes
- Turn off all judgment—include magic--all ideas are good
- Go fast so you don't have time to edit yourself
- Optimize by changing one thing about another idea
- "Cheat"

TOOLS:

1. Warm-Up Games to loosen the brain
2. Physical Activity, Laughter, & Time (returning to it the next day)
3. 20 Circles (to teach optimizing)
4. Gentle pressure or team competition
5. Ideating based on another team's challenge
6. Optimizing other people's ideas
7. Sharing and brainstorming together



BUILD II: MAKING IDEAS 3D



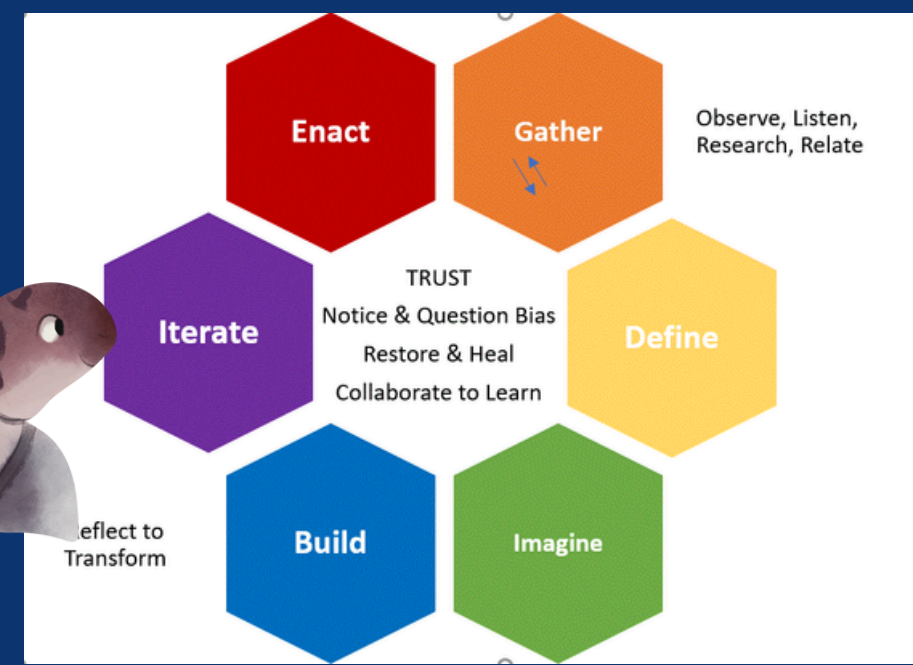
QUICK SKETCH 'PROTOTYPE' (ROUGH DRAFT)

Gather free and used and 'clean garbage' materials
Need scissors and glue/tape
With your design partners, select an idea to prototype
Make it visible with continual reflection:

1. Does this address the challenge?
2. How does it work?
3. Will it work?
4. How will people interact with it?
5. Is it sustainable?



ITERATE: TEST AND TRY IT AGAIN



SHOW IT TO COMMUNITY EXPERTS



SHOW IT TO CONTENT EXPERTS

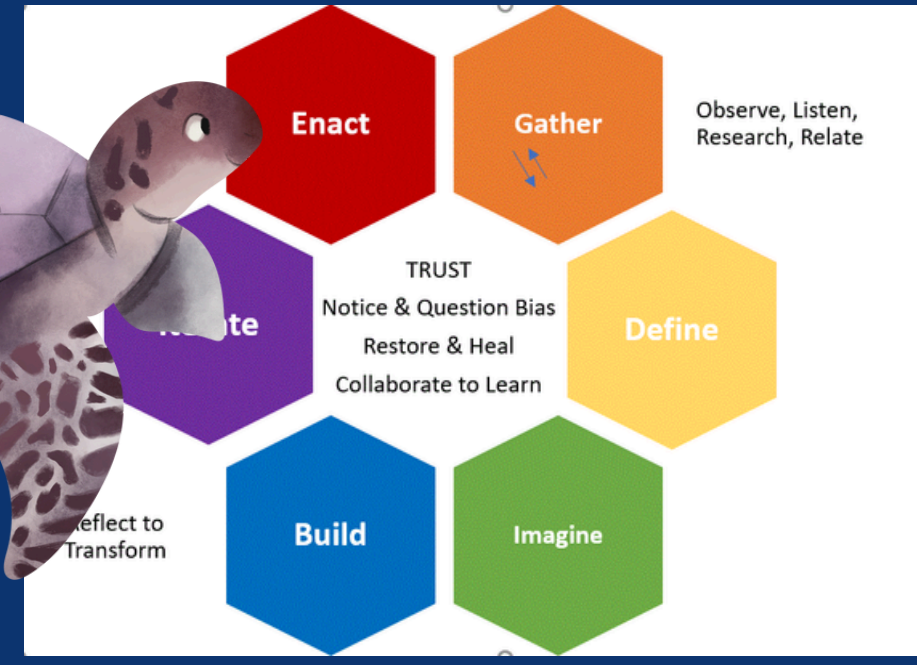
Ask them to reflect with you on the same questions.

1. Does this address the challenge?
2. How does it work?
3. Will it work?
4. How will people interact with it?
5. Is it sustainable?





ENACT IDEAS



**CREATE A PITCH
WITH AN
ACTION PLAN**

**FOLLOW
THROUGH**



Enterprise **REIMAGINA** Puerto Rico **RECONSTRUYE** **COMMUNITIES TOGETHER**
 A GUIDE FOR RESILIENT COMMUNITY CENTER DESIGN IN ISLAND COMMUNITIES

resilientSEE Perkins&Will



Hold yourselves and others accountable to the plan
 Assess outcomes
 Celebrate and Share

WELL-BEING THRU CO-DESIGN



Safety & Trust: I am seen, reflected, accepted, and loved. I feel physically, emotionally, socially, culturally, and environmentally safe, and feel connected to others who are equally kept safe.

Sense of Place & Belonging: This is my/our space, where I feel connected and 'at home.' I am welcomed and invited to participate with my whole self. I/we can dissent safely, can make demands on systems. I/we interrelate and know how social, cultural and ecological systems are nested here and how I/we can contribute to and influence them.

Identities and Values: My identities and values are known and appreciated. We develop shared intentions that prioritize our relationships with people and our home planet ecosystems.

Relevance and Responsibility: I am/we are needed and contribute to something larger than myself/ourselves.

Meaning & Purpose: I/we feel internally motivated by caring, relationships, interests, or other emotional connections and commitments that give me/us a sense of purpose and a reason to engage.

Efficacy and Agency: I/we know I/we can make a difference and influence or drive change and we practice just design and action in our daily lives.

Future & Opportunity: I/we know there are opportunities for me or I/we can create them.

EXAMPLES & IDEAS FROM HERE AND THERE

Create an emotion-words-images wall & develop activities for younger kids

Collaborative Co-creation of stories & poems about the community of nature

Use design thinking to solve environmental or resilience challenges

Connect Generations Storytelling, Listening, Documenting, Persuasion

Make a persuasive or documentary film

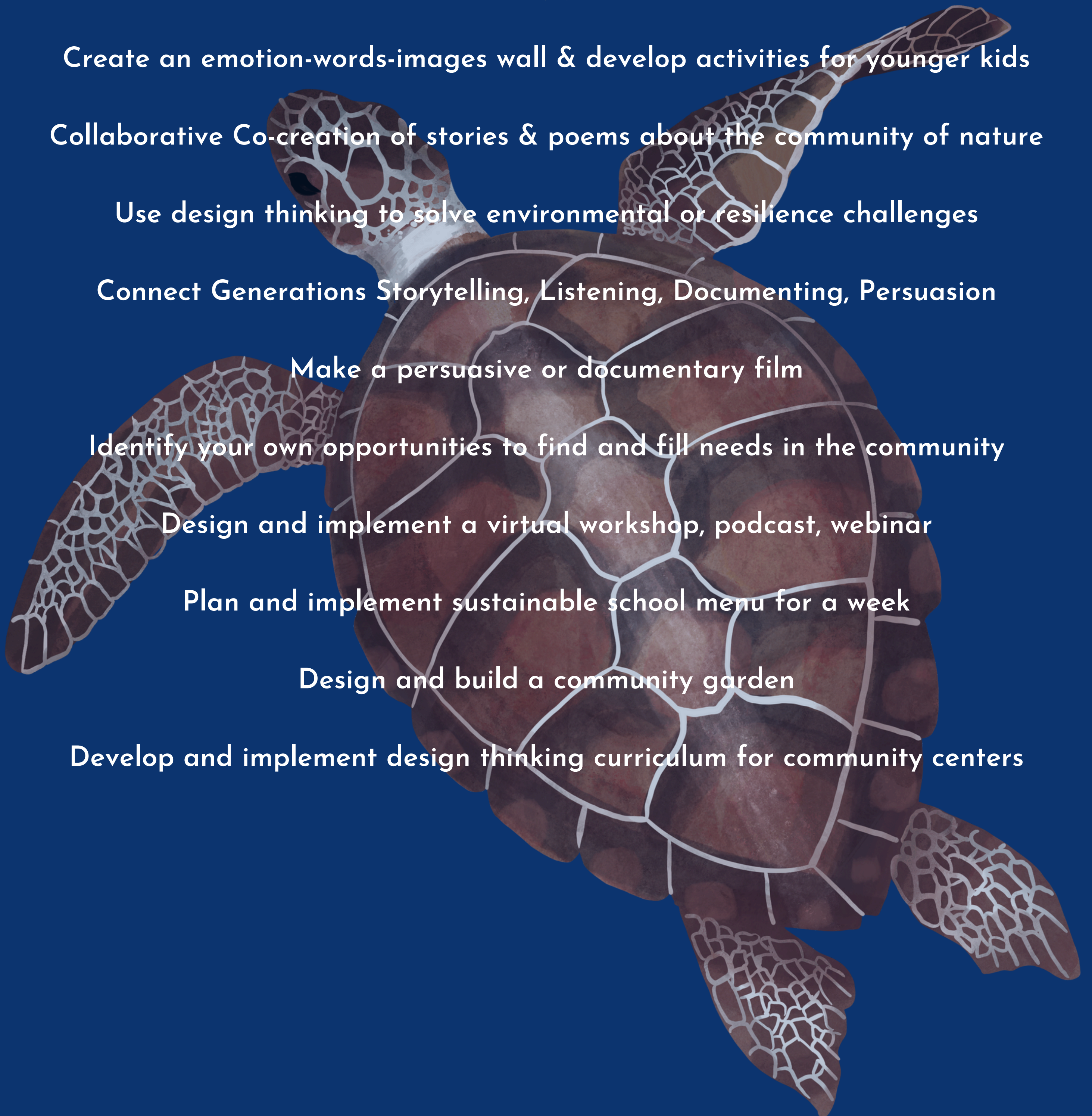
Identify your own opportunities to find and fill needs in the community

Design and implement a virtual workshop, podcast, webinar

Plan and implement sustainable school menu for a week

Design and build a community garden

Develop and implement design thinking curriculum for community centers



OUR LEARNING PROJECTS

Leonides: Identify environmental concerns in neighboring communities and propose solutions. The Mismatched Table

UHS: Use co-design to surface youth concerns and co-create solutions.
Butterfly Garden

Edison: Work with middle grades to use co-design thinking to study community and climate, circular economics. "Slow Fashion" Show, Beach Cleanup

CROEV: Use co-design to create the ultimate sustainable community garden
==> Recycling from Recycled