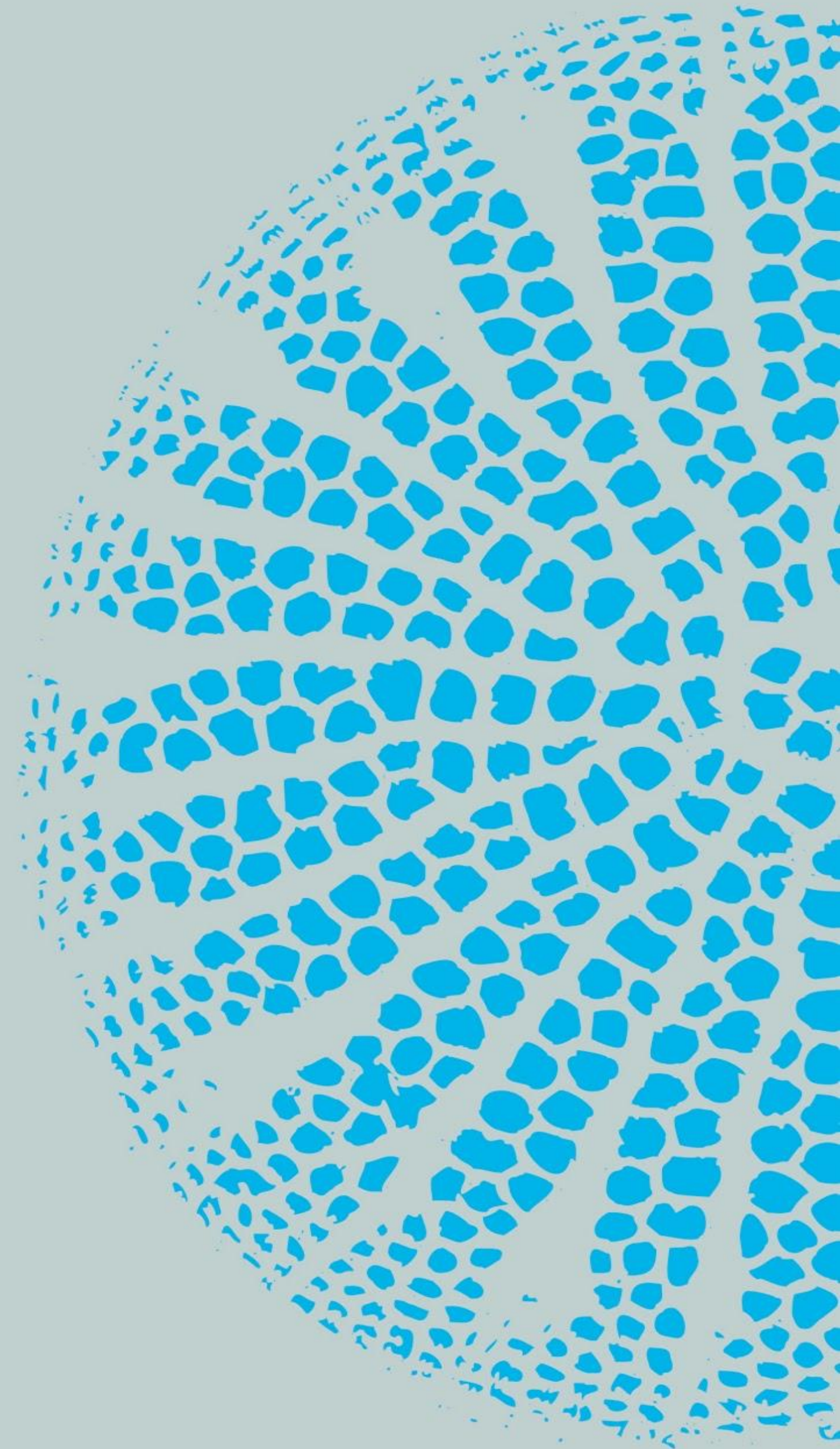


BIOBUS

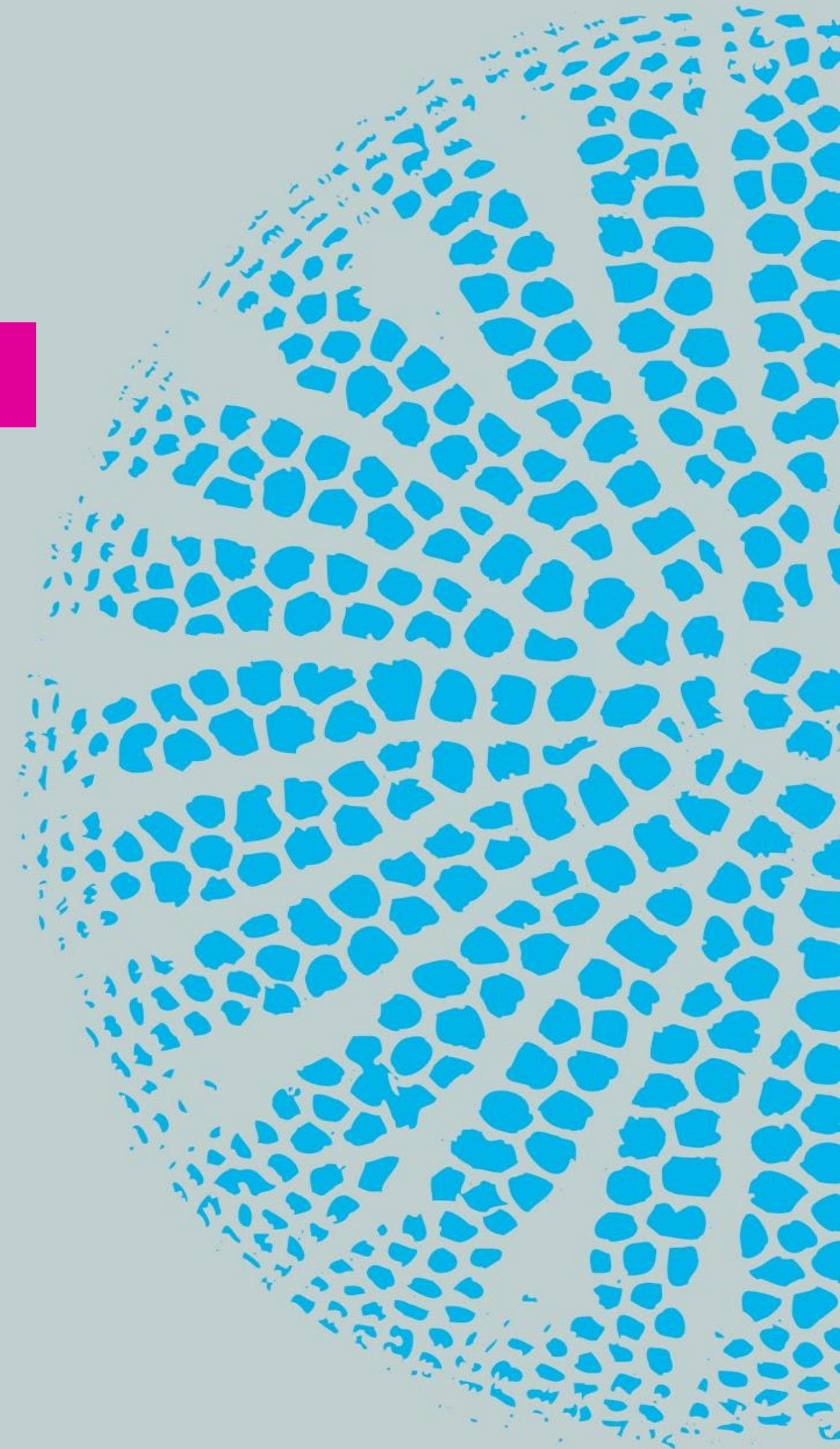
**a grassroots approach to
building a scientific
community**

Latasha Wright, PhD
Chief Scientific Officer
BioBus, Inc.
latasha@biobus.org



Vision: All people achieve their full scientific potential

Focus on communities marginalized based on race, gender, and socio-economic background



Modular and scalable approach creates research science labs ANYWHERE

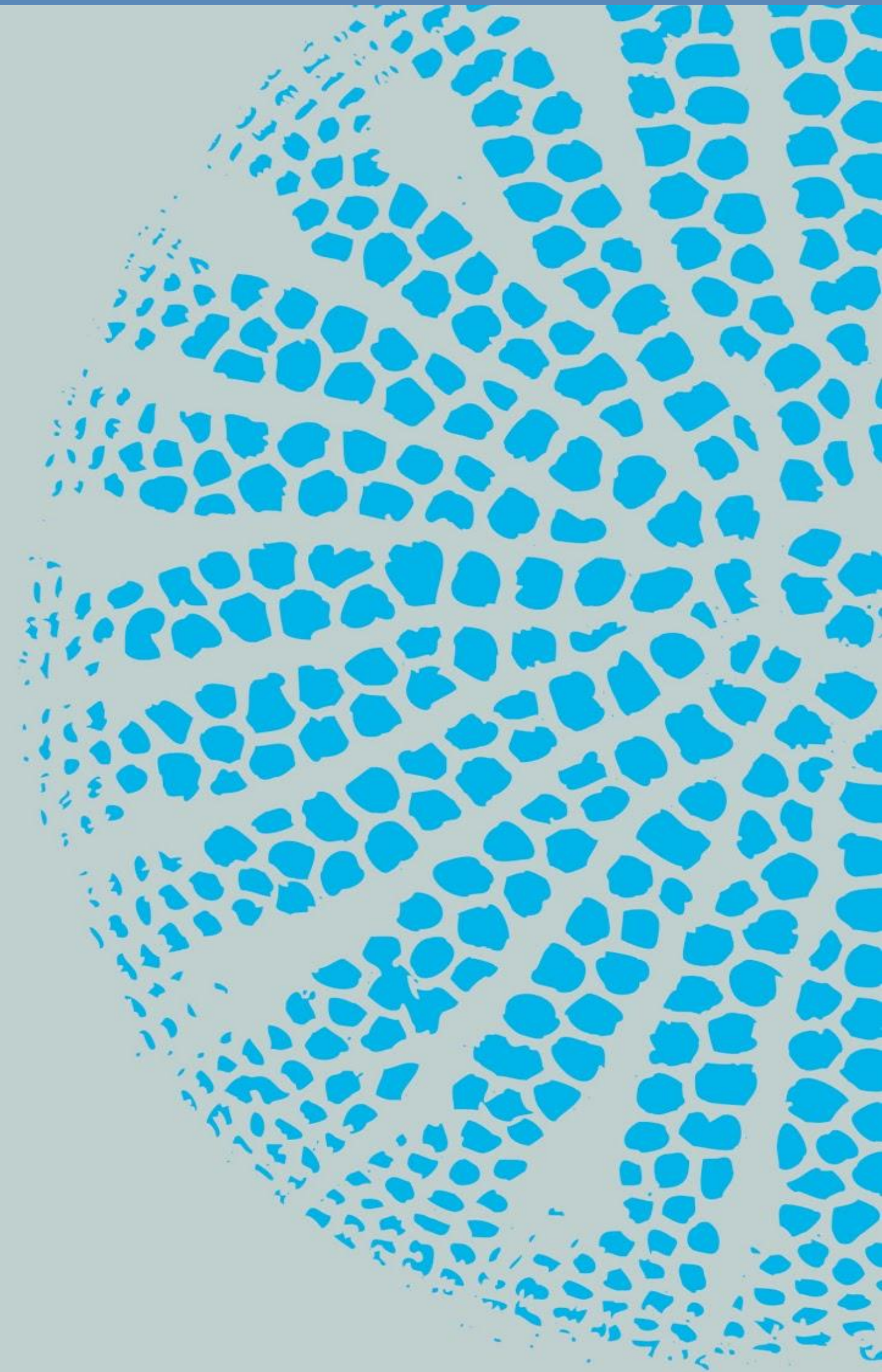


Including self-powered, mobile
Science Station



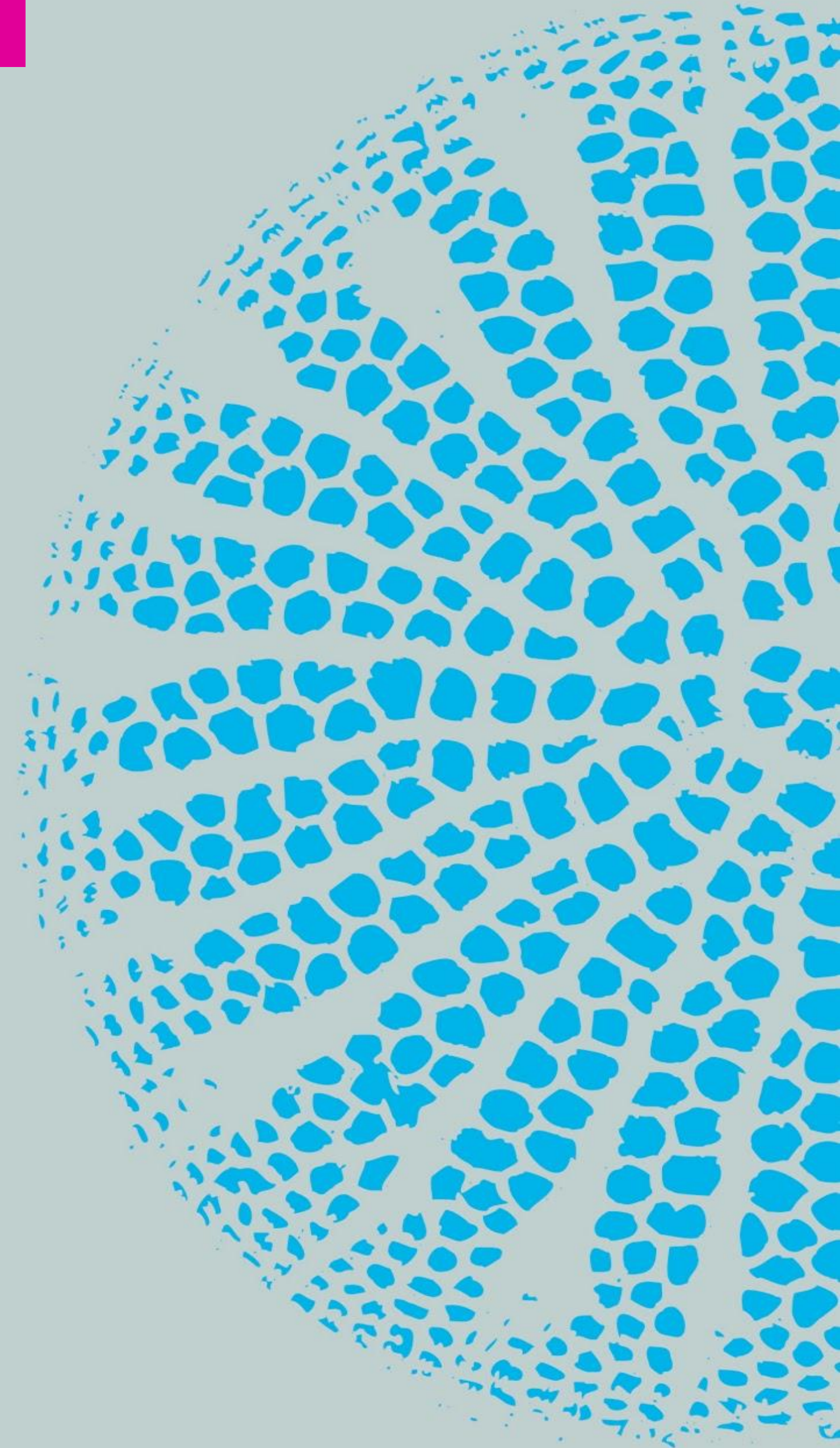
COLUMBIA | Zuckerman Institute

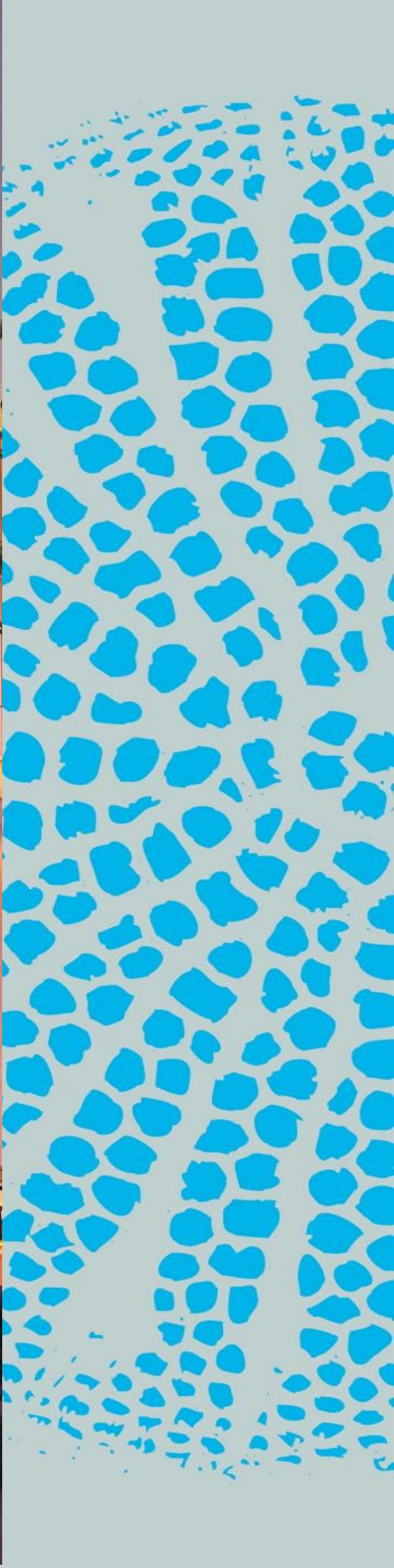
MORTIMER B. ZUCKERMAN MIND BRAIN BEHAVIOR INSTITUTE



Partnerships

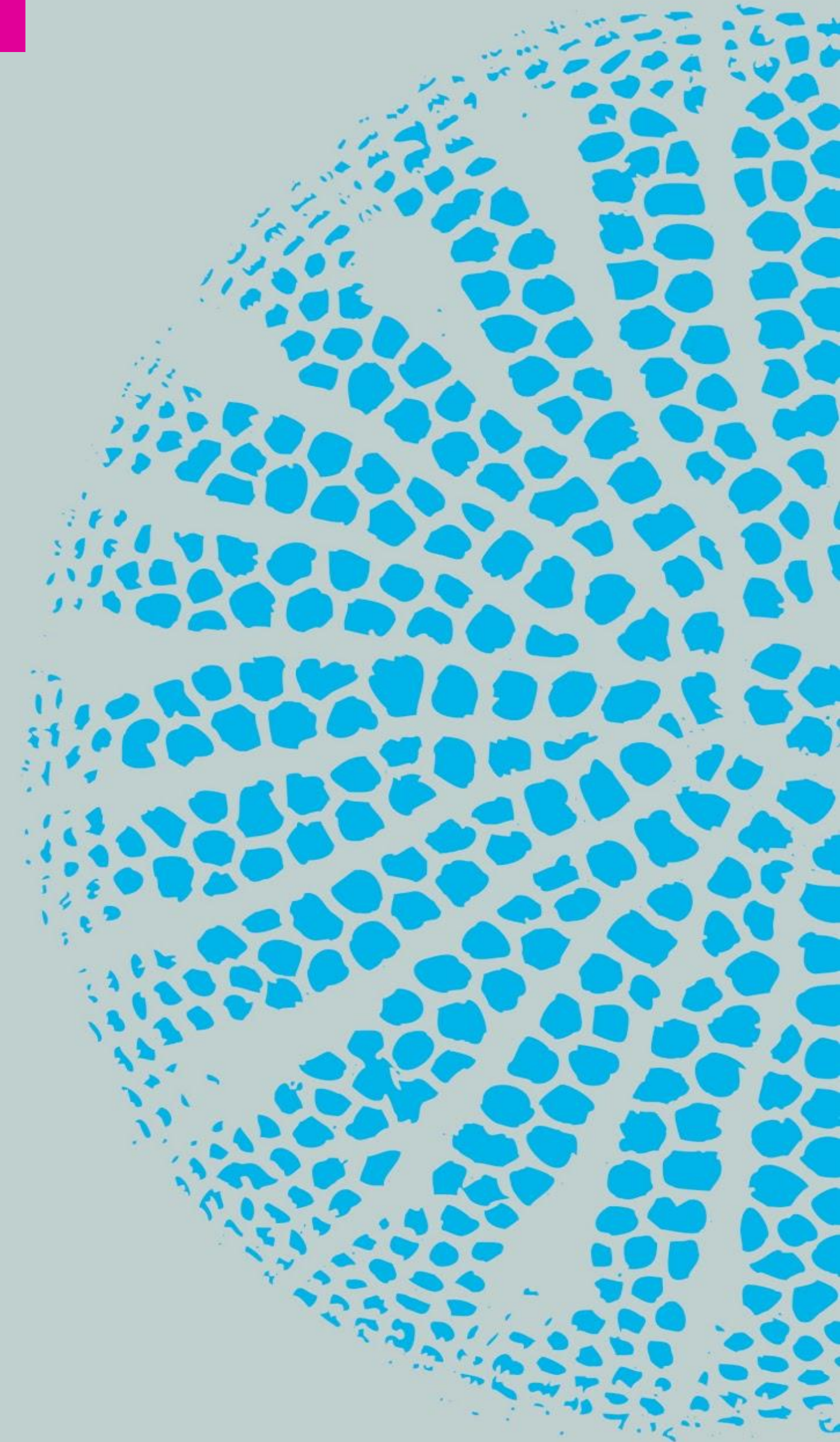
- 1) Mission alignment
- 2) Agreement with mission implementation
- 3) Financially Feasible for your organization
- 4) Comparable programs (synergistic)
- 5) Advocates in Senior Leadership
- 6) Partnership Agreement





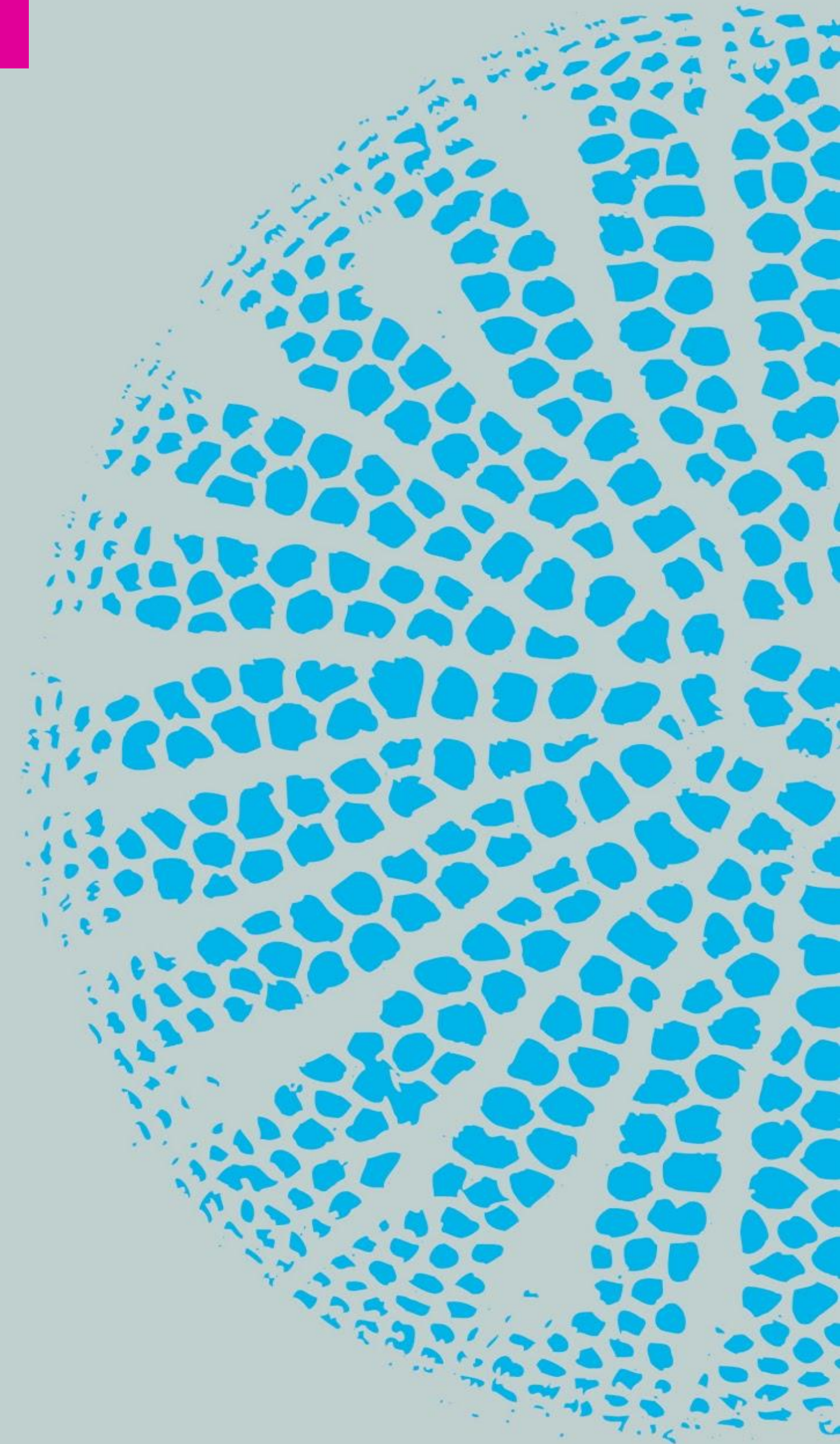
Community Needs Assessment

- 1) Determine if the community is interested or is likely to participate in programs offered by your organization.
- 2) Build partnerships with KOL in the neighborhood
- 3) To determine how best to activate the untapped potential in the neighborhood
- 4) Create avenues for honest and open communication between your organization and the community
- 5) Allows co-creation of programs that benefit the community in meaningful and impactful ways



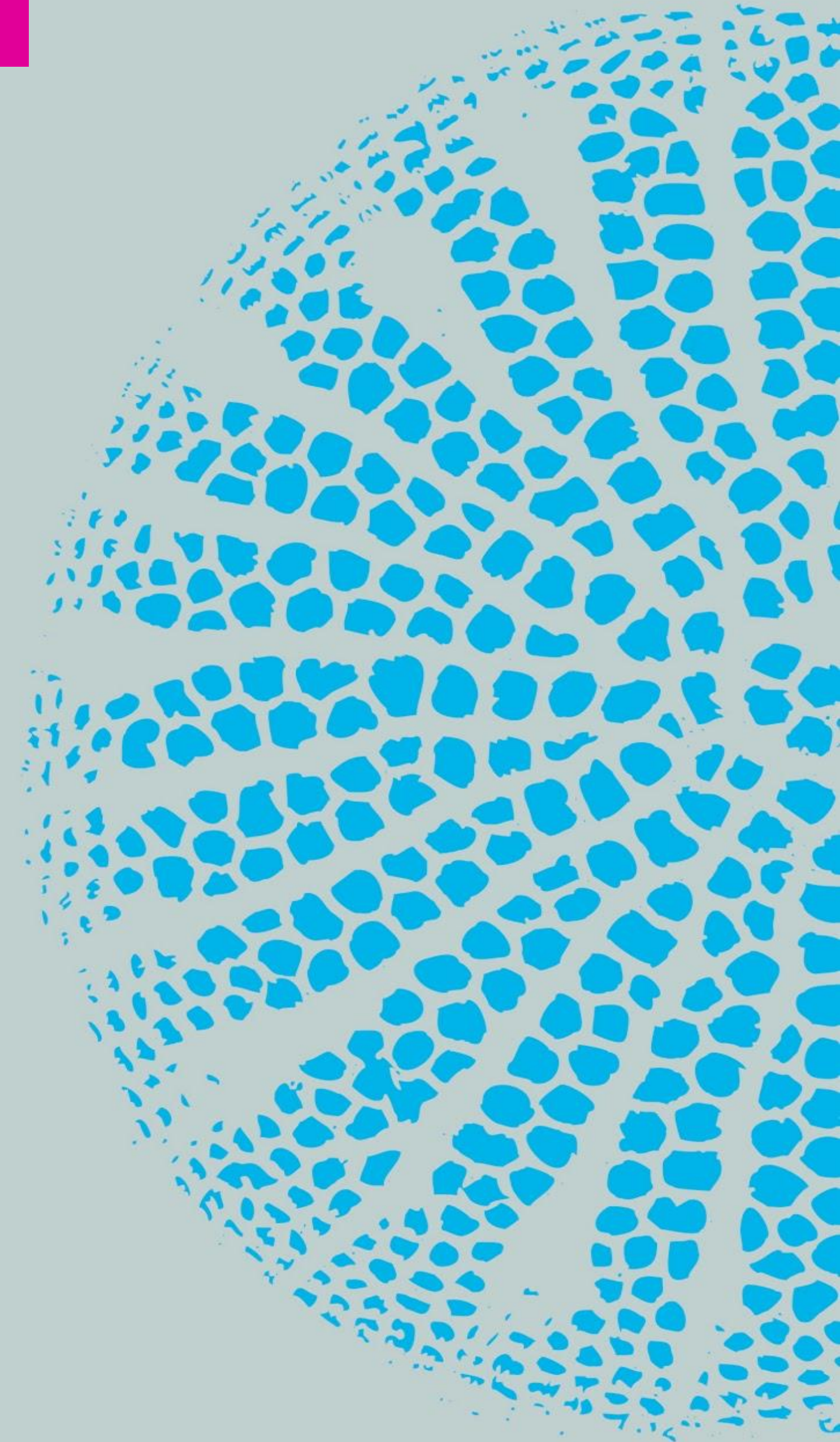
Key Findings from Community Needs Assessment

- 1) Classroom visits were important to all participants
- 2) High interest in community events featuring neuroscience
- 3) There was a need for hands-on practical activities
- 4) Students need to develop critical thinking skills
- 5) There is a need for experiential learning recognizing Harlem's unique cultural context
- 6) There is a need for internships for high performers and average performers
- 7) Trust is a large issue for this community, substantial effort must be placed in building relationships

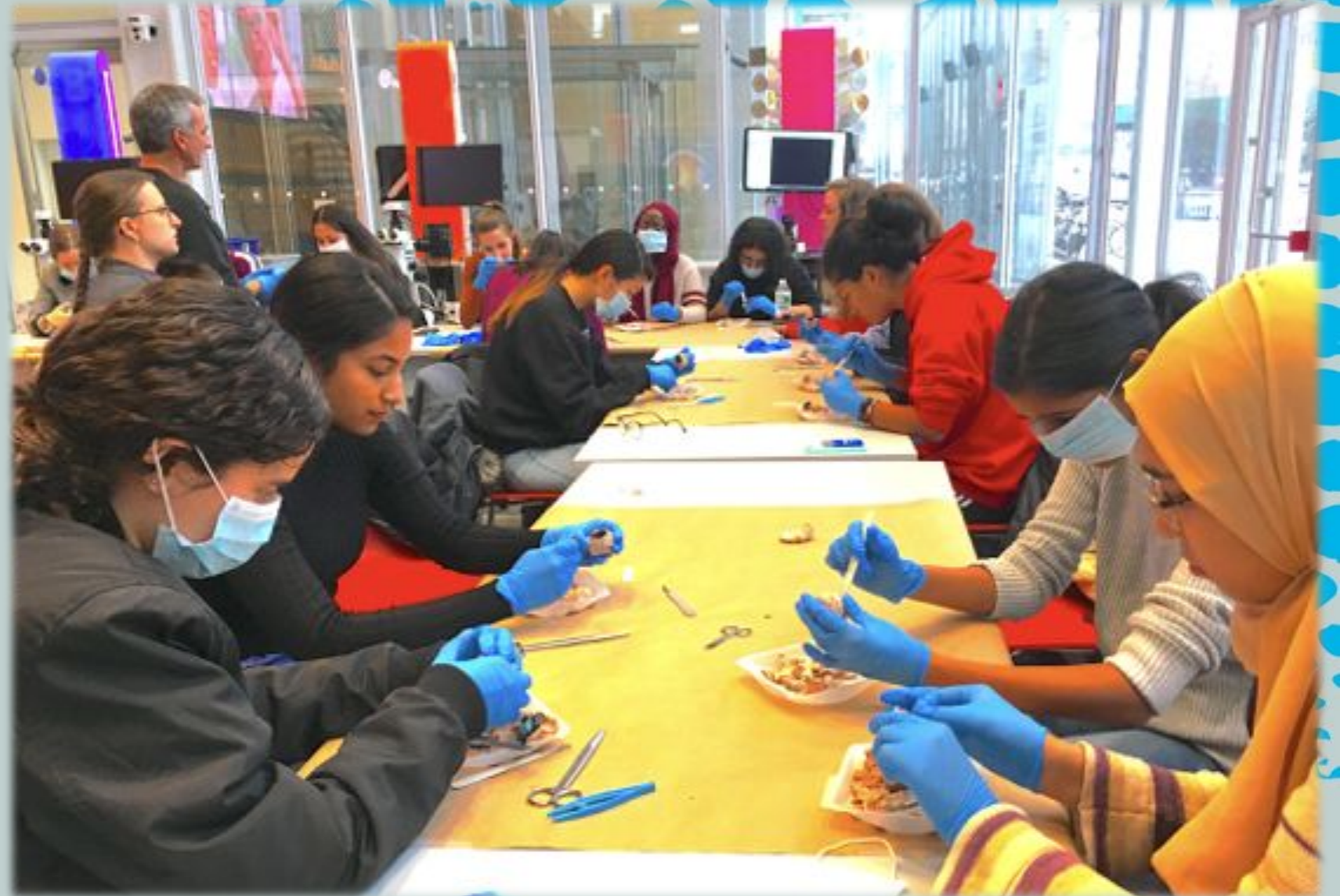
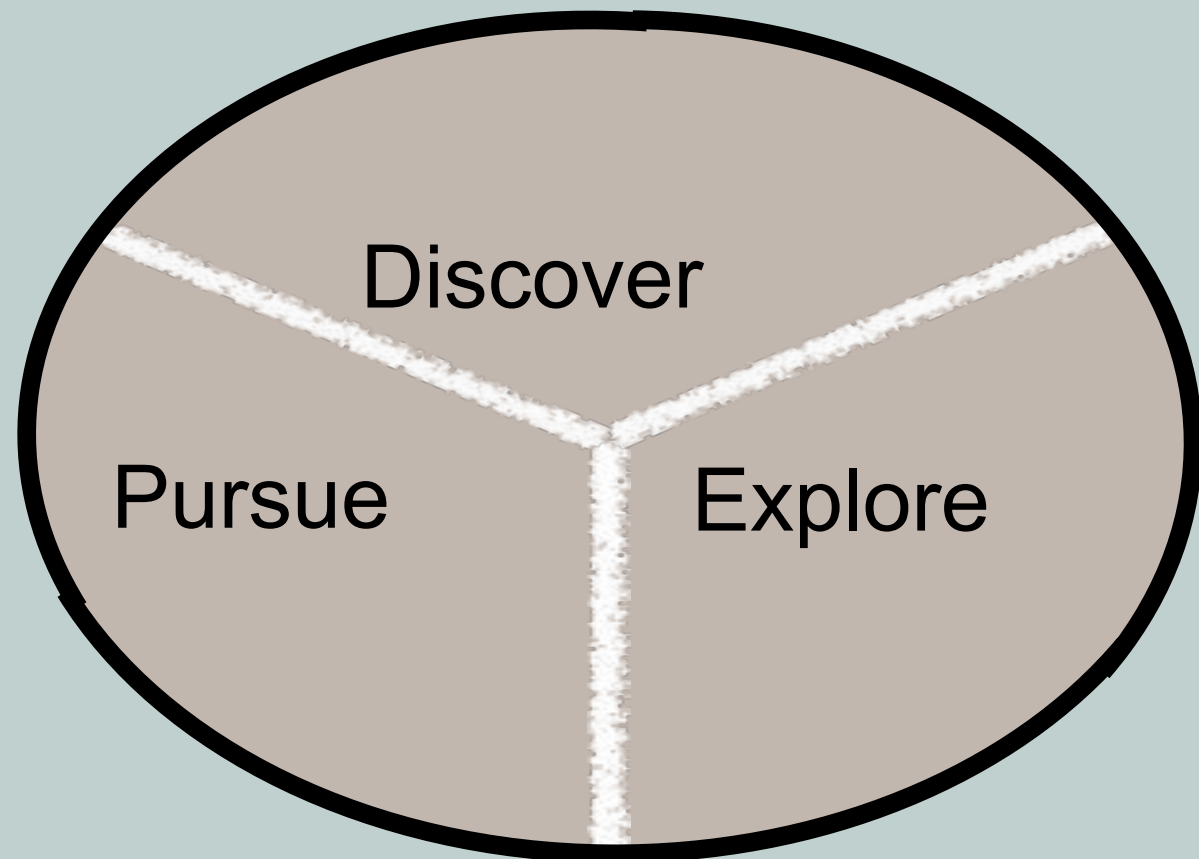
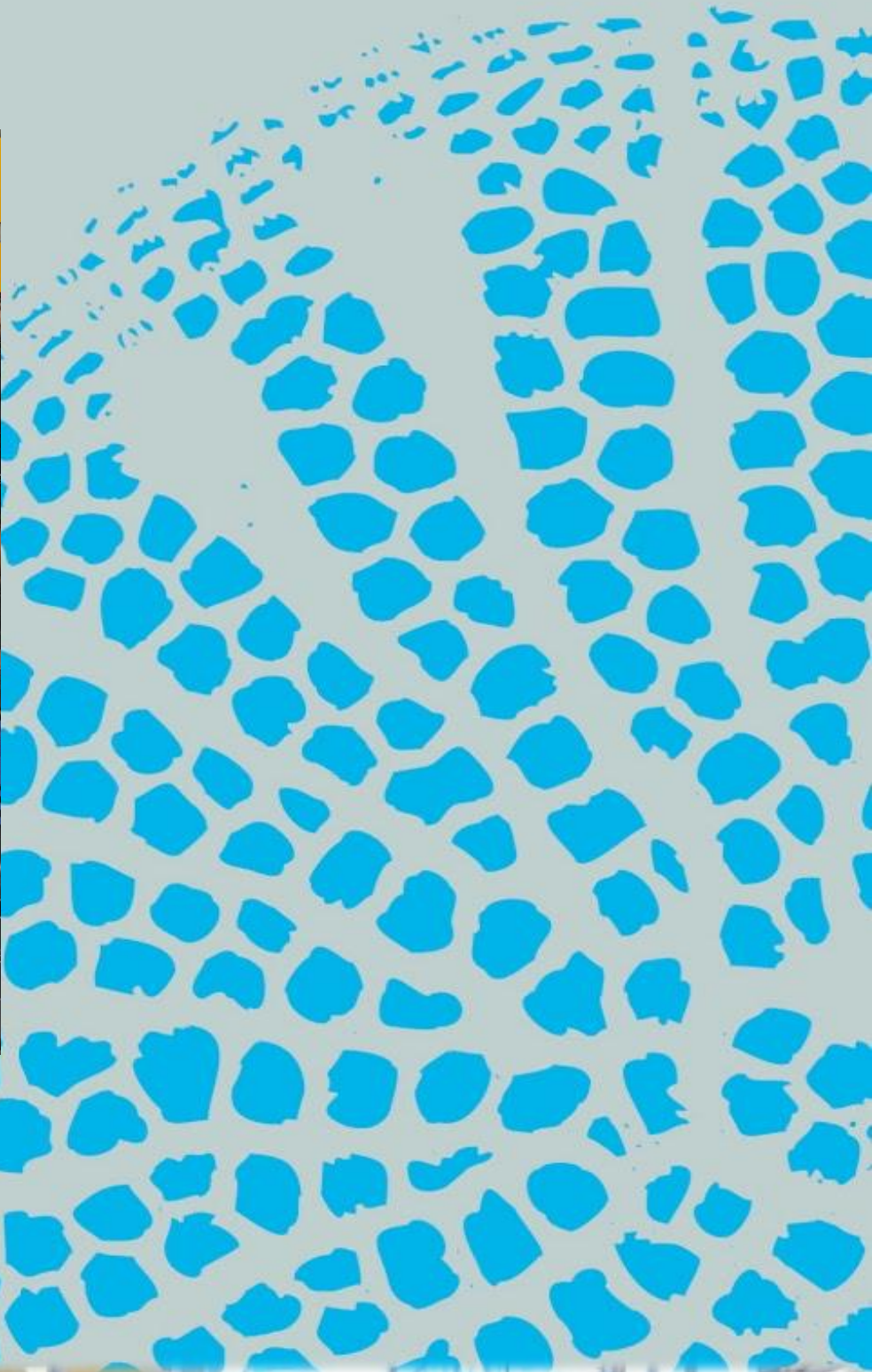


Building Relationships

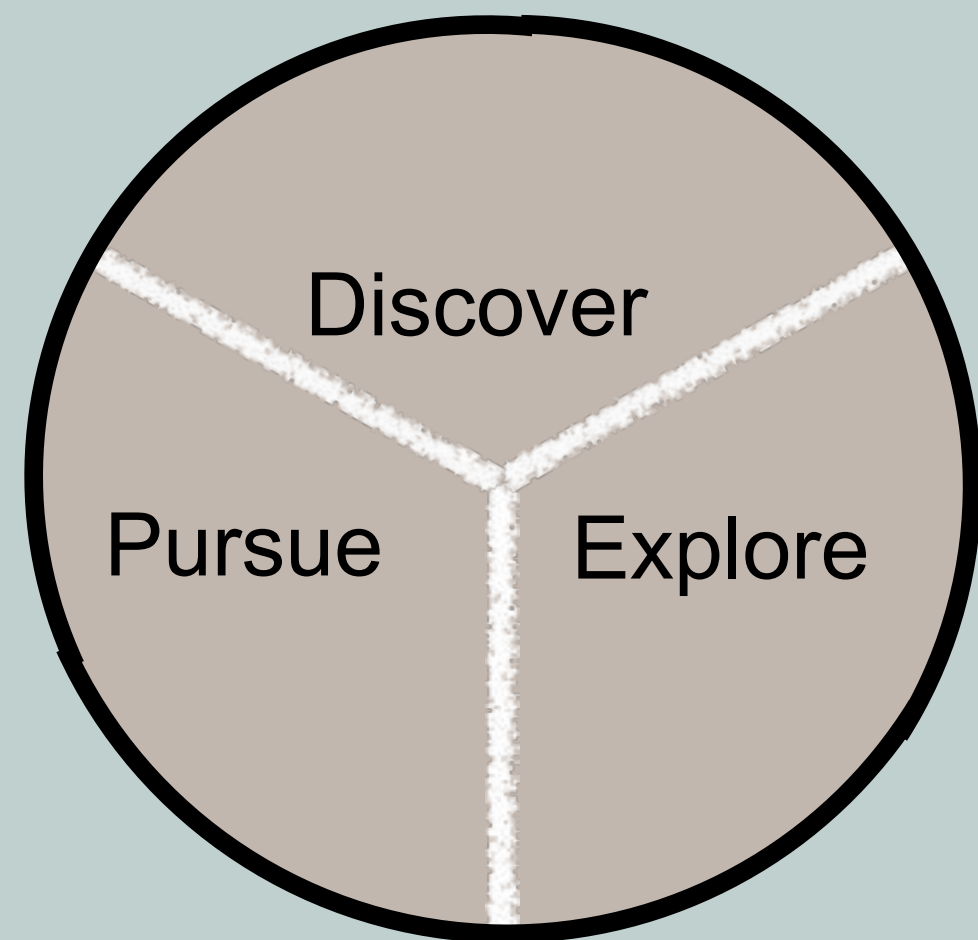
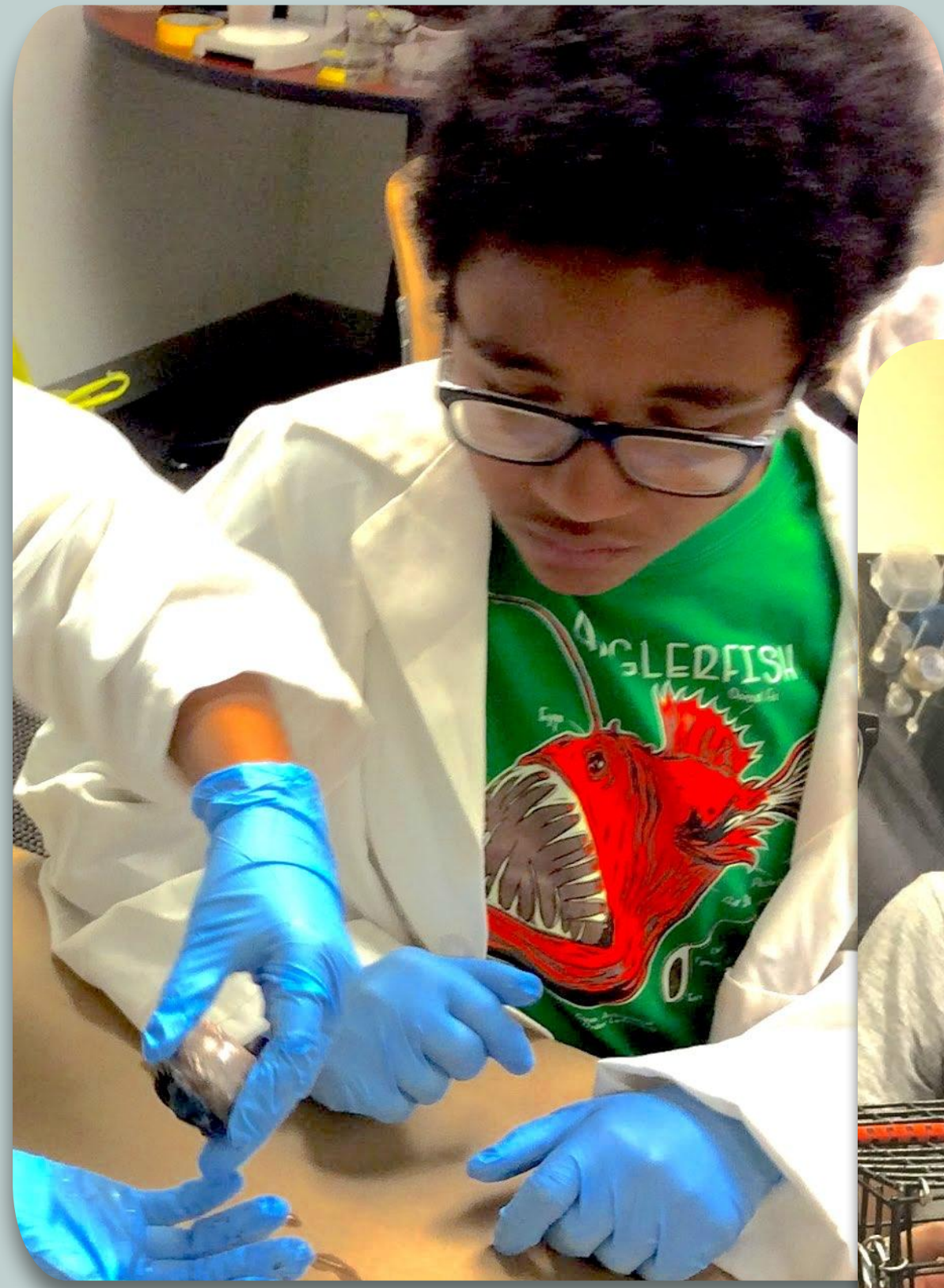
- 1) Seek out established, trusted non-profits who are serving the population that you want to serve and build a partnership.
- 2) Consult with local faith-based organization about the community needs
- 3) Form connections with the superintendent of the schools/ local teachers and parent coordinators
- 4) Be visible in the community



Program Design



Science Research Pathway



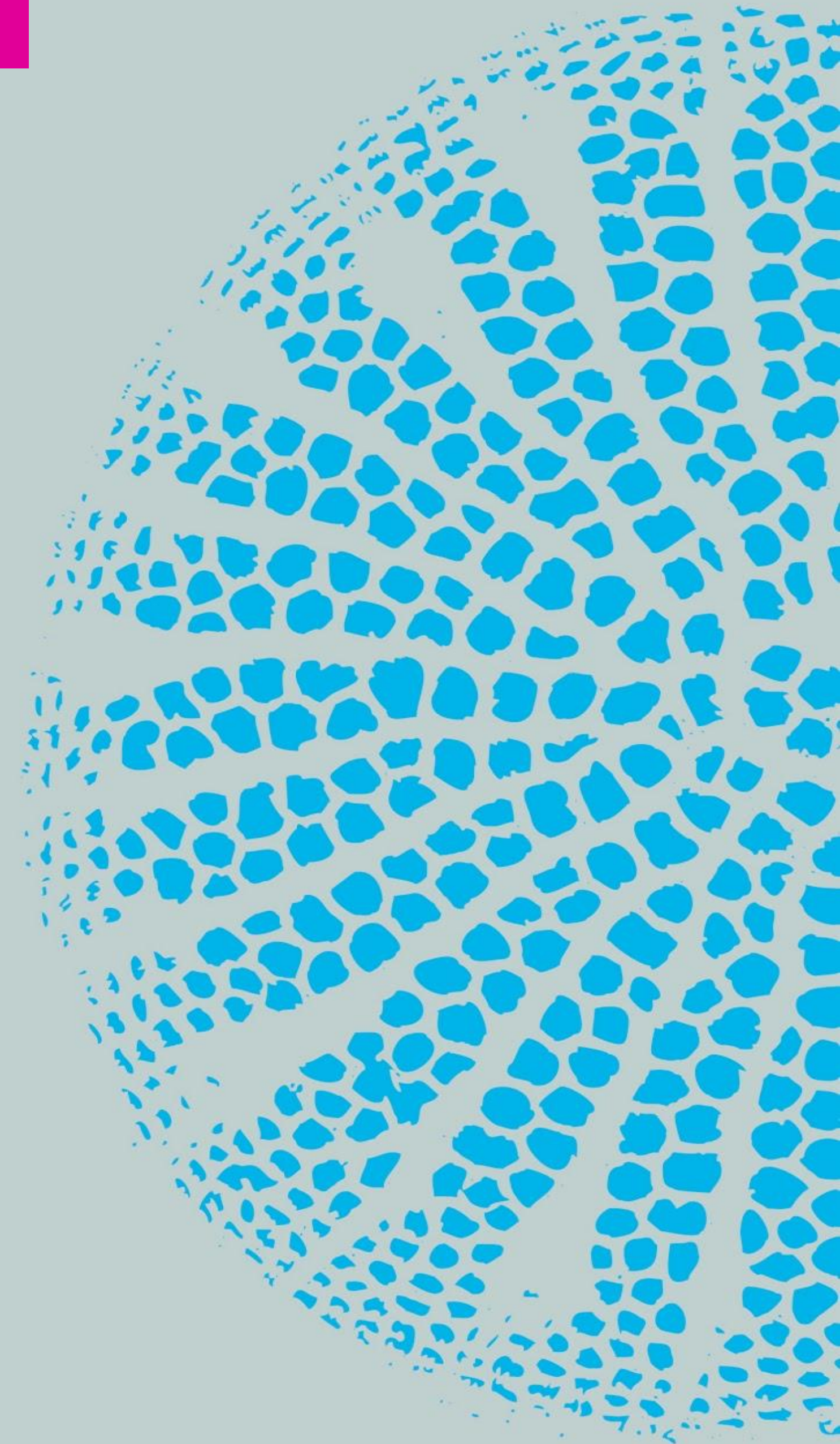
“BioBus gives me the opportunity to learn about something relevant to my life like the biodiversity of the River...BioBus allows us to partake in projects that will impact something bigger and more important.”

Program Operations: Why this works

- 1) **Environment:** Safe space that allow students to explore science
- 2) **Self-Development:** Students develop self-awareness, self-direction, and self-confidence and student voice is central to all programs.
- 3) **Mentorship:** Students work side-by-side with relatable scientists

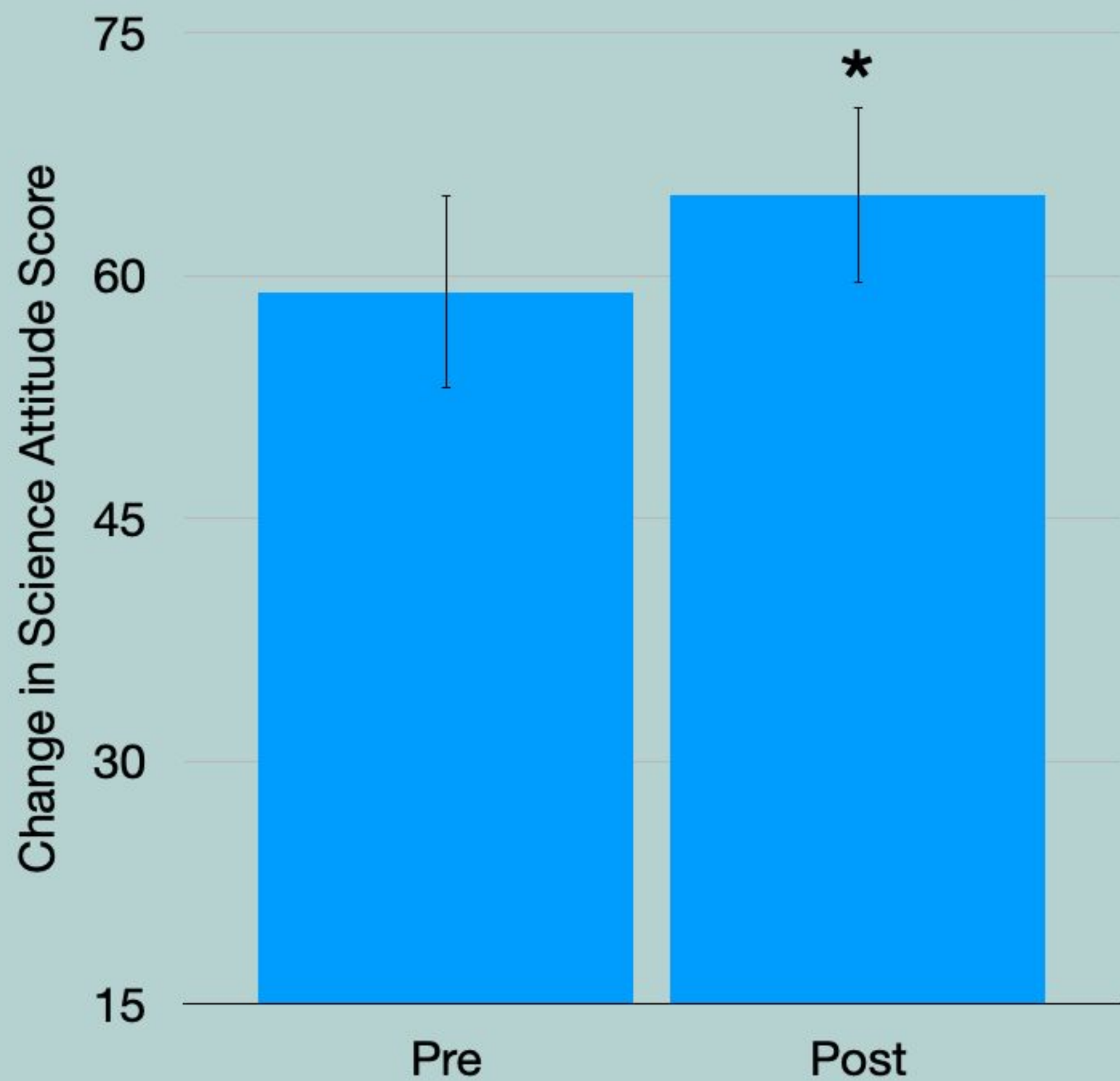
“Coming to the BioBase every weekend is what immediately uplifted my spirits and made me feel like I had a community to belong to where I could be viewed as a scientist, and felt validated as someone who knew what they were doing, and not be discredited because I was young or female.”

Wamia Siddiqui
BioBus Junior Scientist



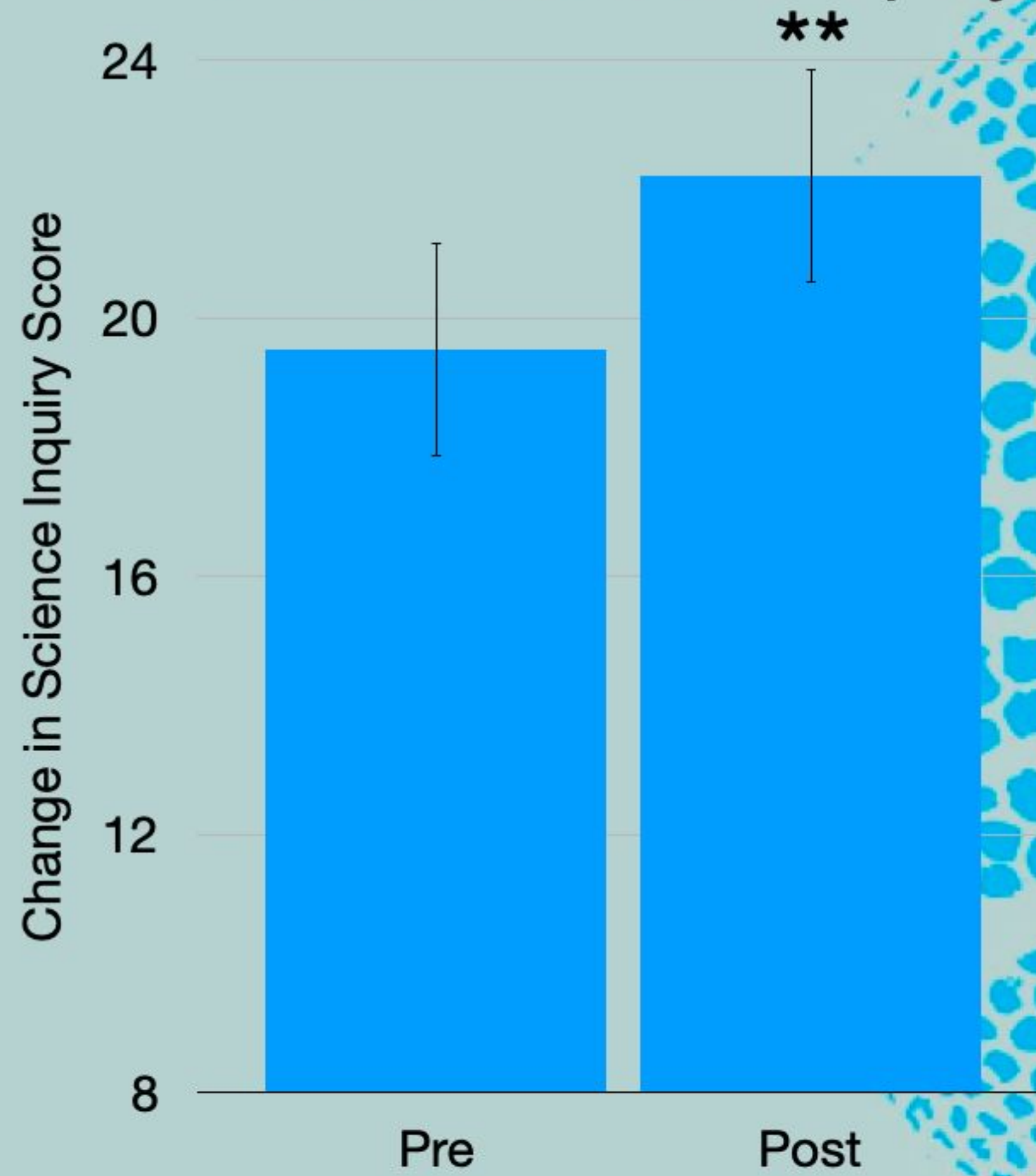
Evaluation Results: quantitative analysis

Pursue Science Identity



n=11

Pursue Science Inquiry



* = $p < 0.05$

** = $p < 0.005$

BioBase Science Career Panel 2019

Tahilia Rebello
a.rebello@ny.columbia.edu

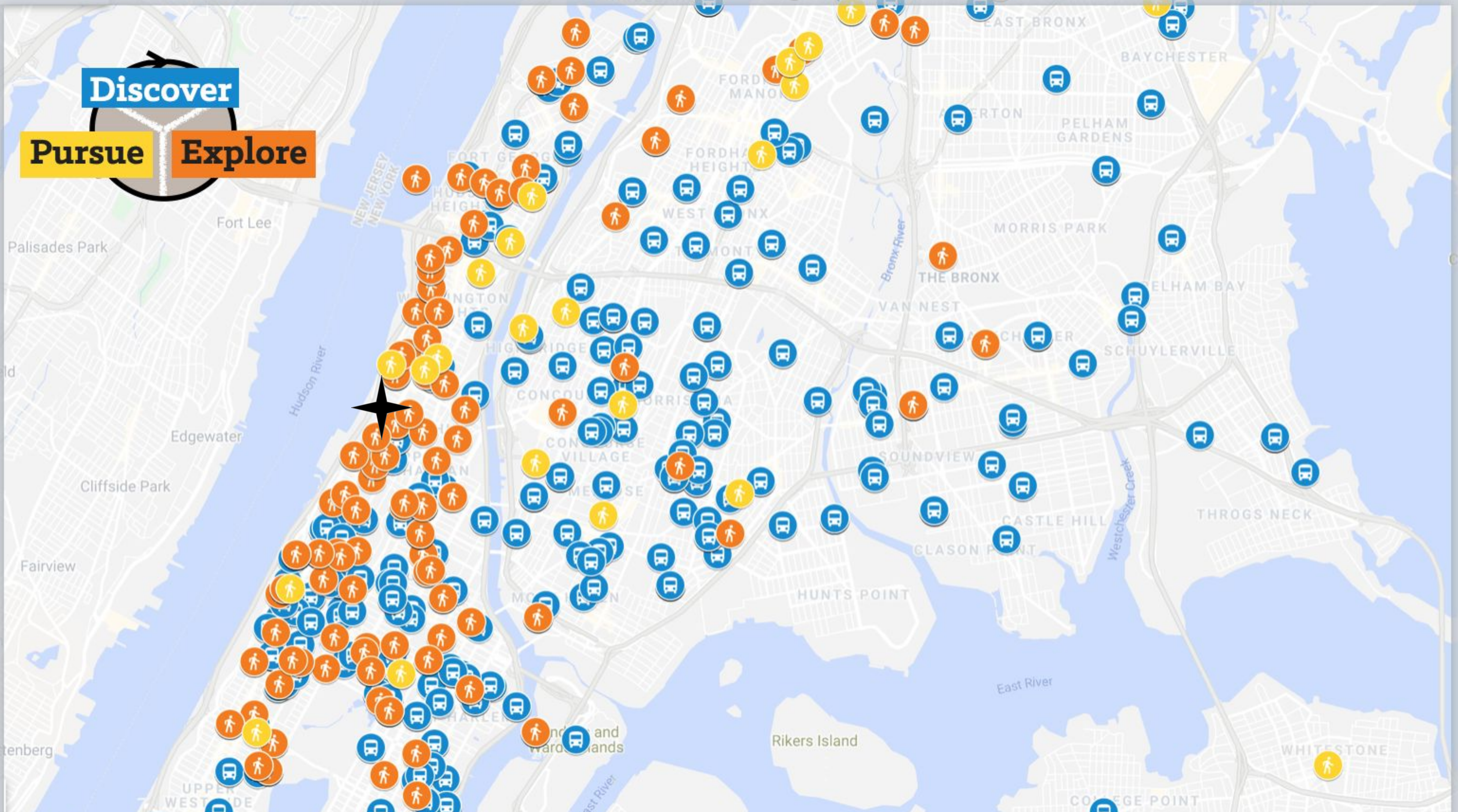
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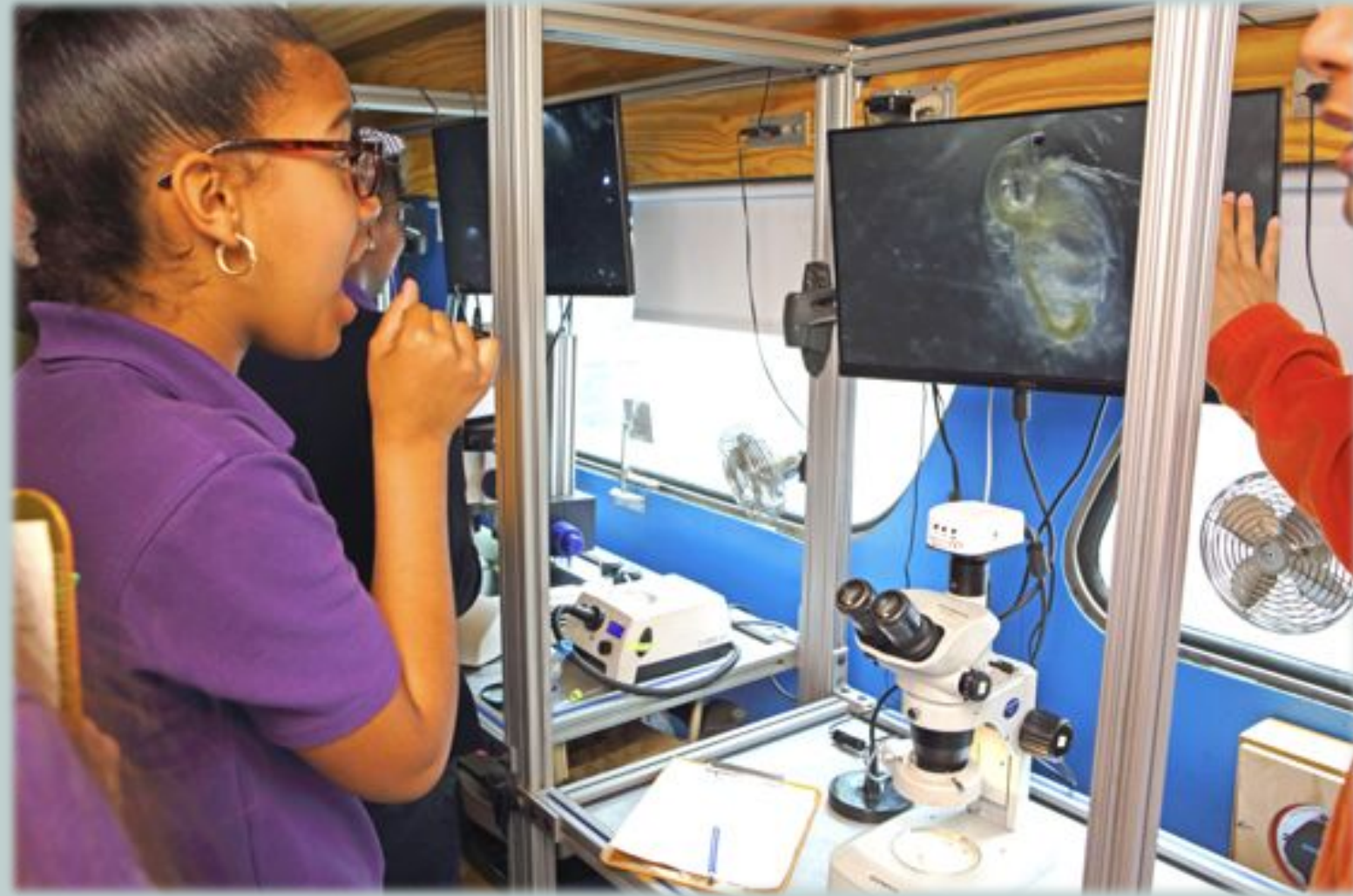
Discover

Pursue

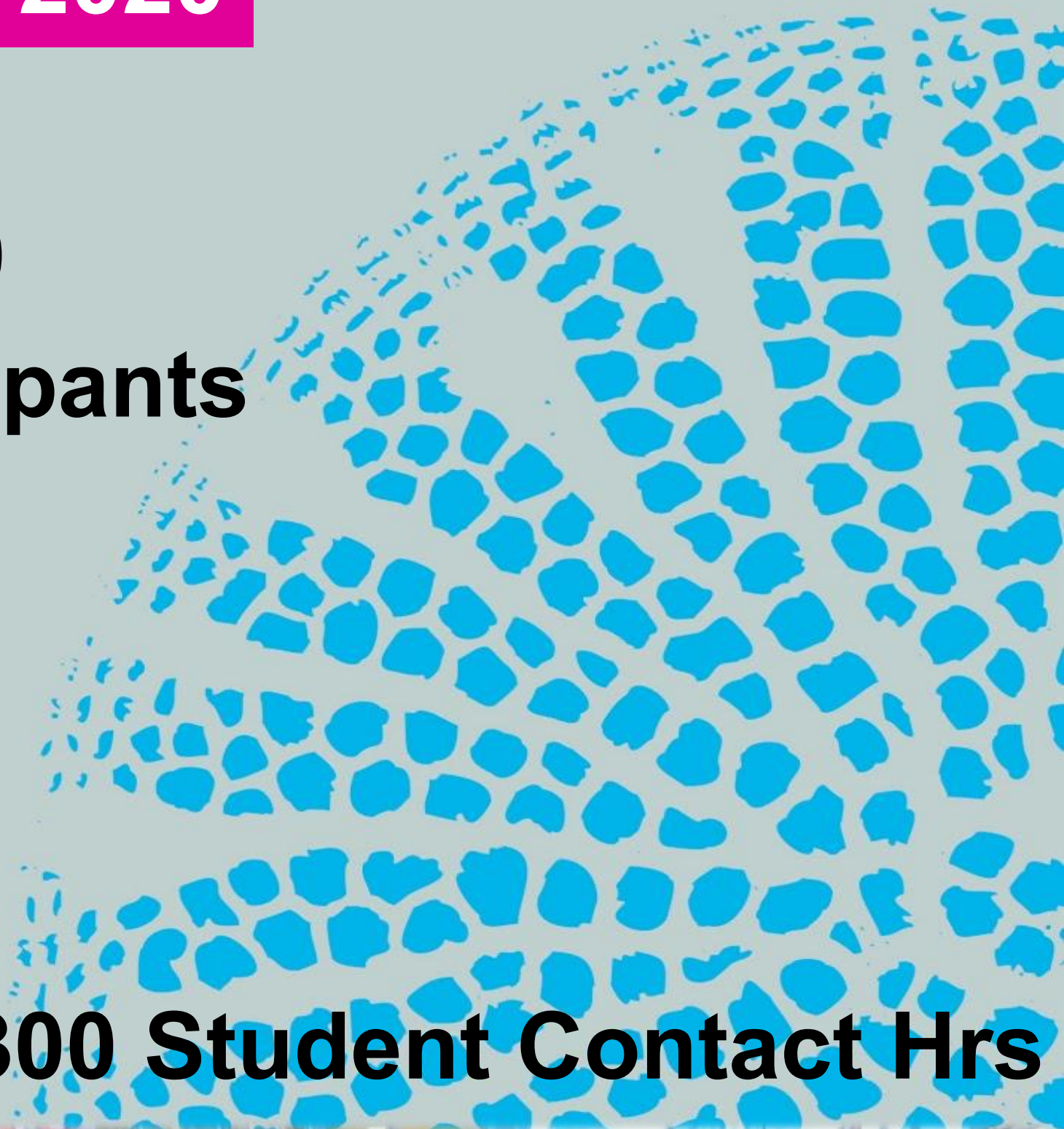
Explore



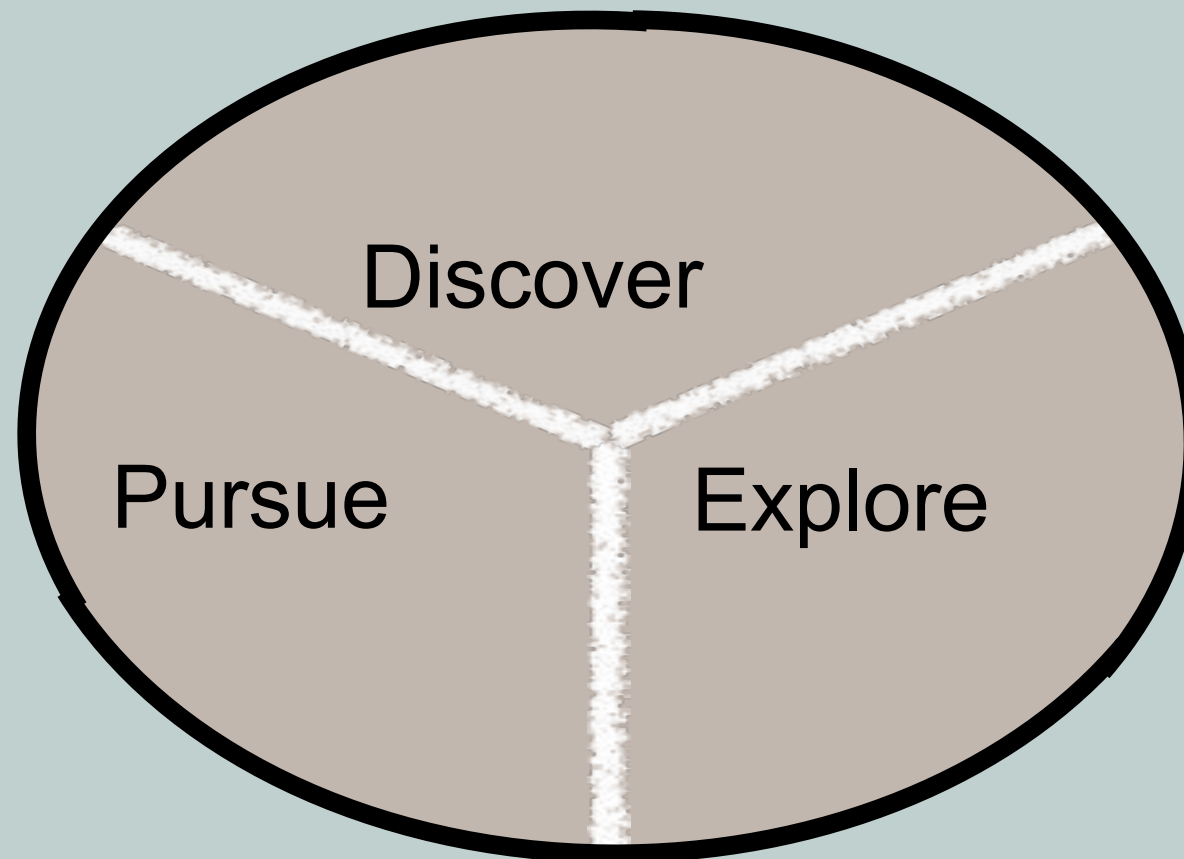
BioBus Impact in the Harlem Community 2017-2020



**37,400
participants**



124 Junior Scientist

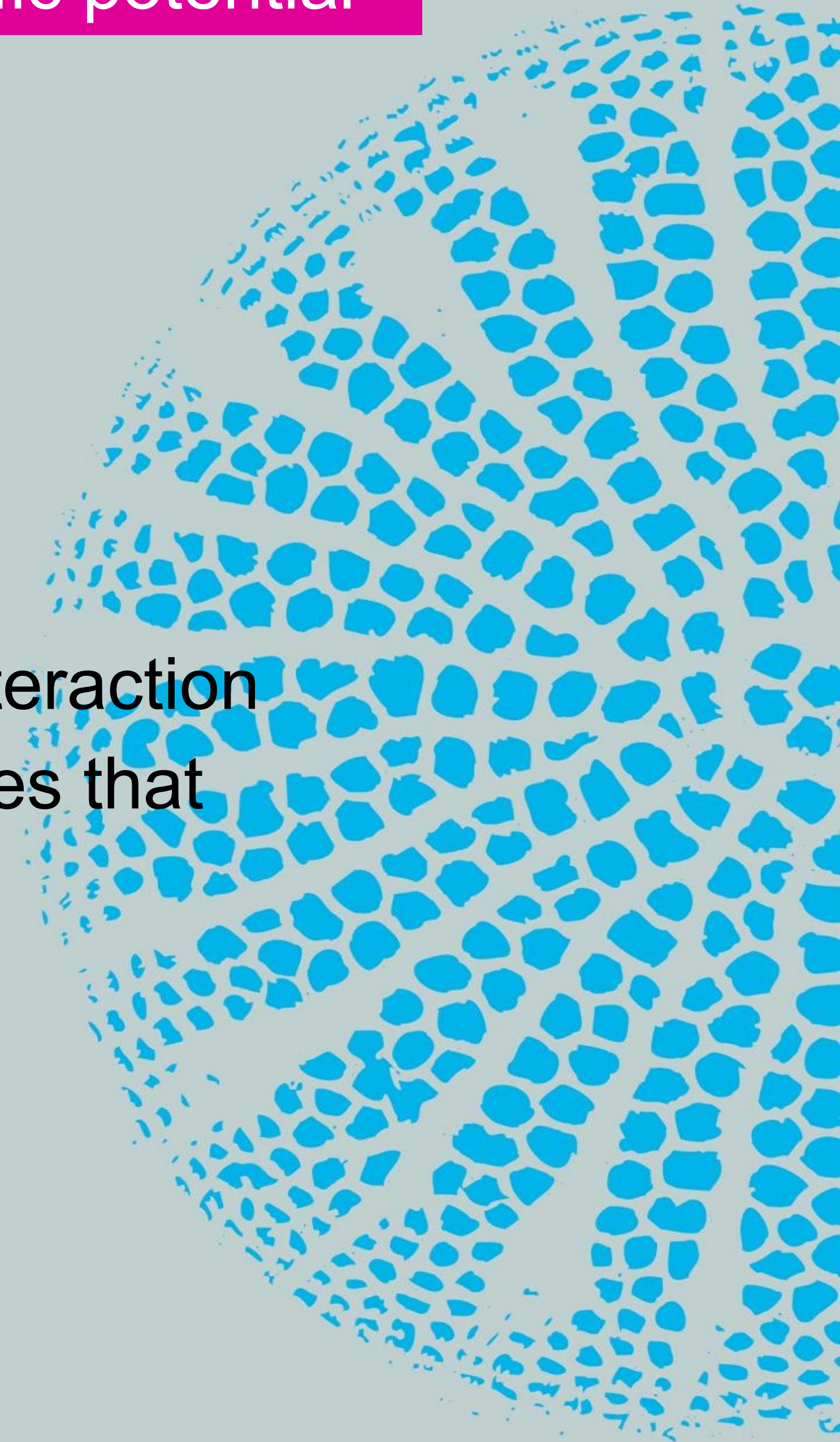


36,300 Student Contact Hrs



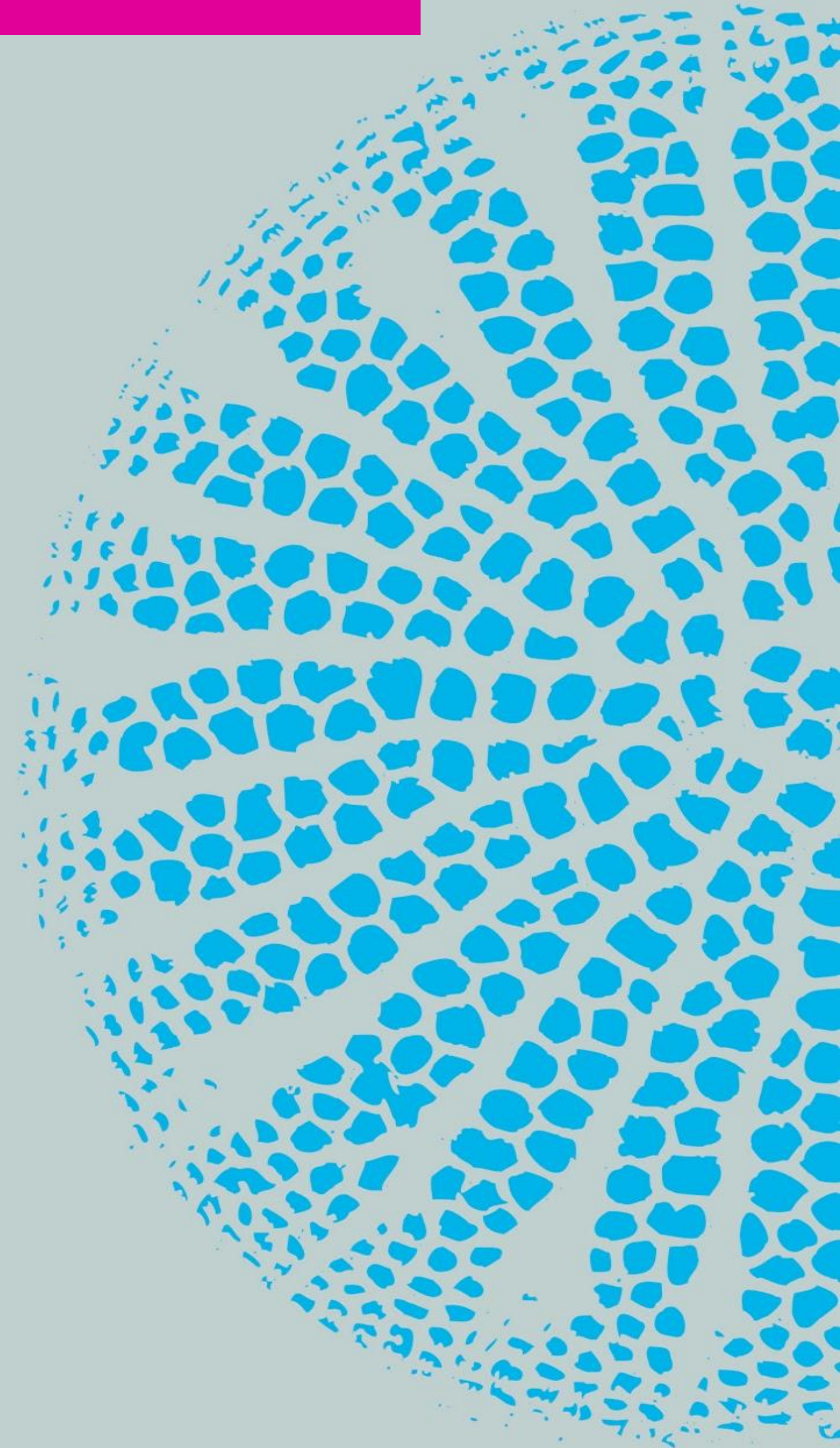
COVID RESPONSE: Vision all students reach their scientific potential

- 1) Sustained high quality of engagement of students
- 2) Building inclusive scientific community
- 3) Student voice is guiding light of curriculum development
- 4) in person vs remote: Same high impact and personal interaction with scientists → Follow up with hands-on engaging activities that students can do alone or in classrooms



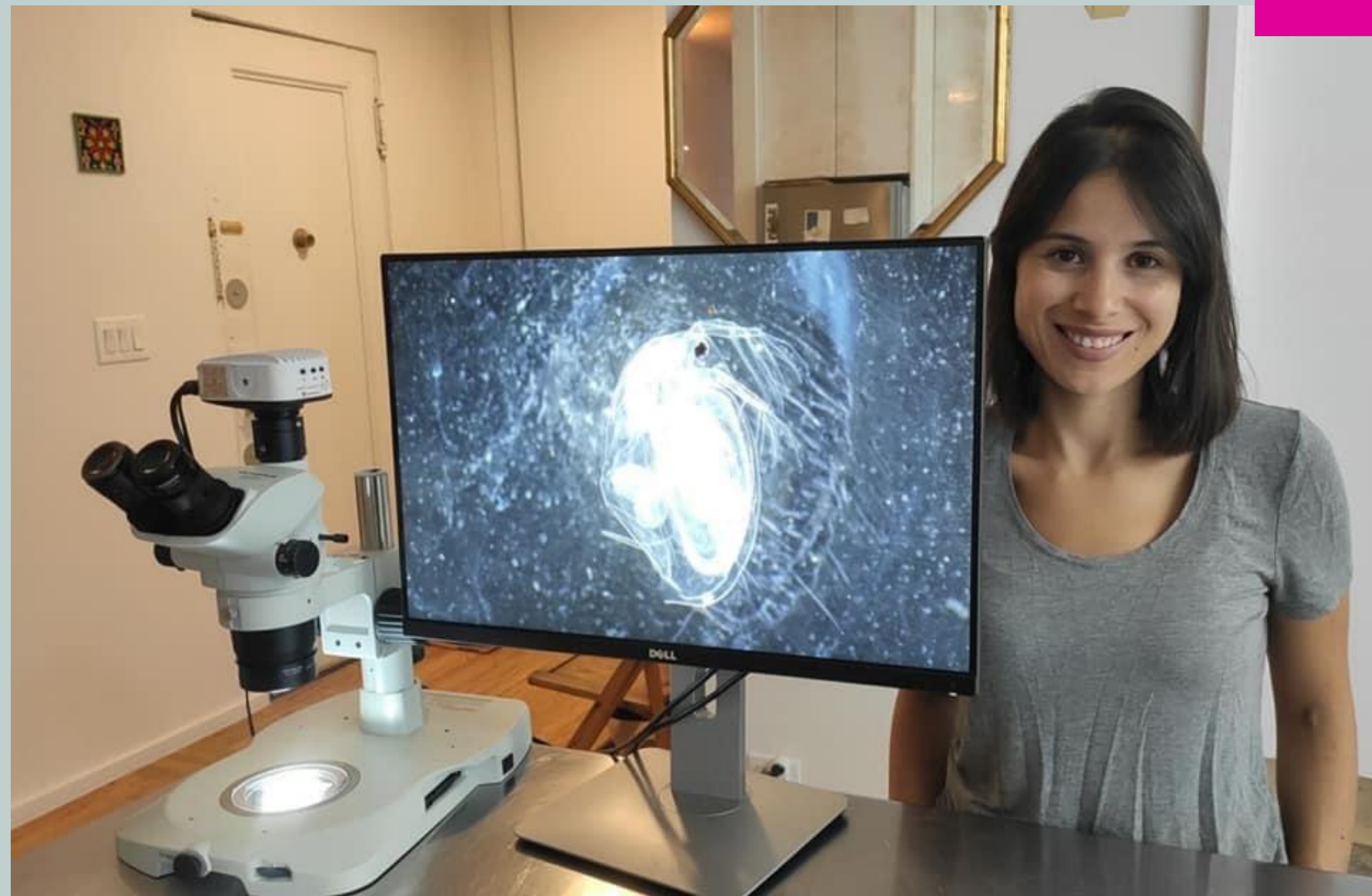
Needs Assessment

- 1) Videos and other materials available for any time use
- 2) Weekly science classes led by BioBus Scientists
- 3) Public, live-stream events
- 4) One-time, interactive sessions
- 5) Scientist Q&A sessions



Program Design

Student Town Halls



Discover
at Home

Explore
at Home



Video: BioBus in Action



Thank You

latasha@biobus.org