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Abstract

The University of Maryland Baltimore Continuing Umbrella of Research Experiences (UMB CURE) Scholars program provides STEM enrichment for middle school (MS) students from severely disadvantaged West Baltimore communities. A holistic approach leverages the resources of UMB professional schools to integrate robust mentoring, family support, STEM curricula and community outreach components. To foster the scholars' continued engagement in science through high school (HS) and college, UMB CURE Connections (C2) was developed to provide HS curricula that connects MS with college programs in a minority STEM education pipeline. C2 goals, components, outcomes and lessons learned in six months of implementation are presented.

Program Overview

- **West Baltimore Demographics**
 - Median family incomes among the lowest in the nation (\$18,000)
 - 26% unemployment rate
 - Underperforming schools with 40% dropout rate
- **Participants**
 - **Scholars:** UMB CURE middle school scholars provide a strong applicant pool for C2.
 - **Mentors:** Mentors are primarily students from UMB professional schools. Scholars are matched with mentoring teams comprised of 5 mentors/scholar.
 - **Families:** C2 engages families, schools, and community leaders to address the complex factors that pose barriers to scholars' success.

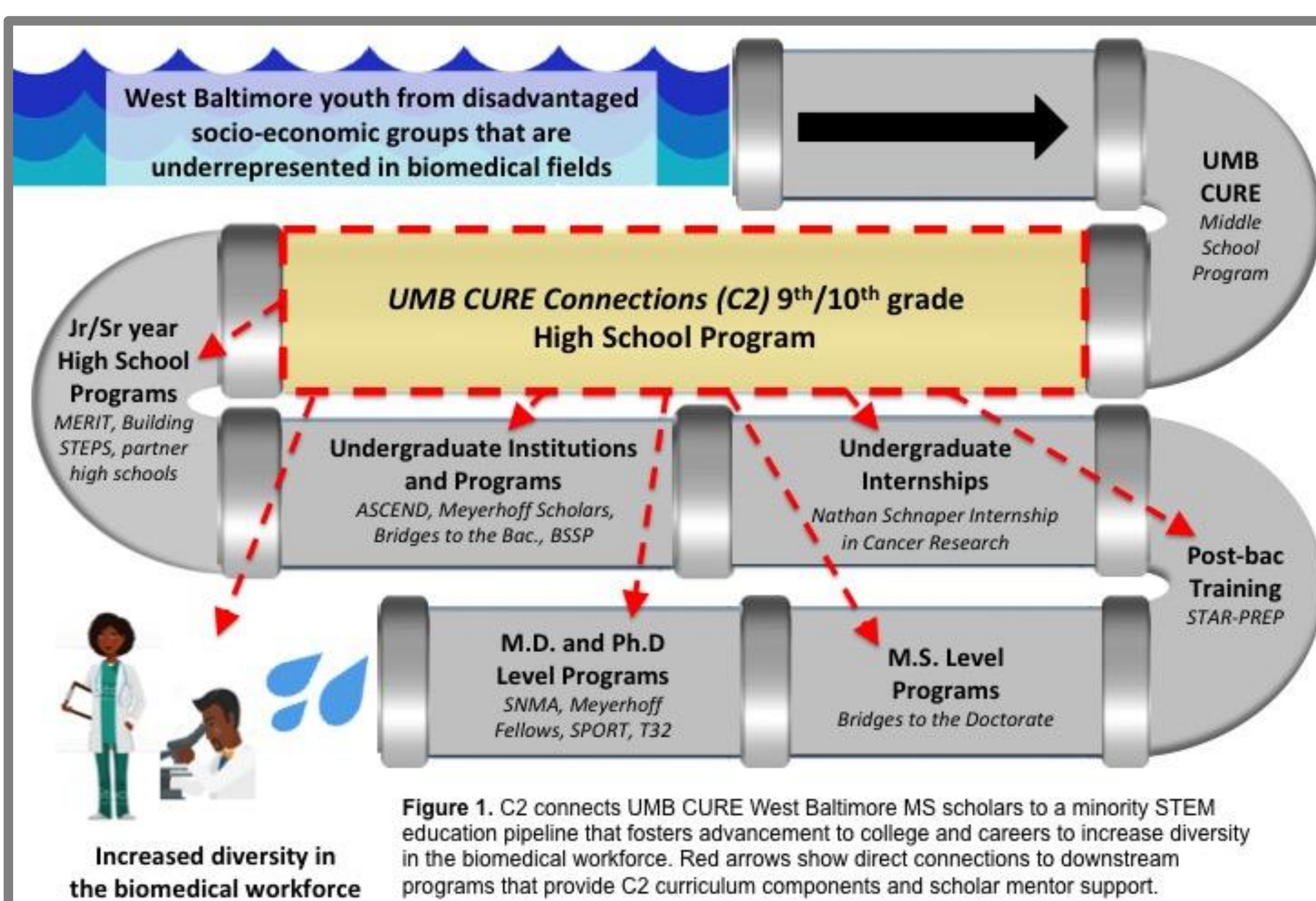


Figure 1. C2 connects UMB CURE West Baltimore MS scholars to a minority STEM education pipeline that fosters advancement to college and careers to increase diversity in the biomedical workforce. Red arrows show direct connections to downstream programs that provide C2 curriculum components and scholar mentor support.

Curriculum

Programming Overview (School Year)

- Sessions every Saturday from 9a-3p led by two UMB CURE C2 Program Coordinators
- Mentors play important roles in program implementation and as scholar role models

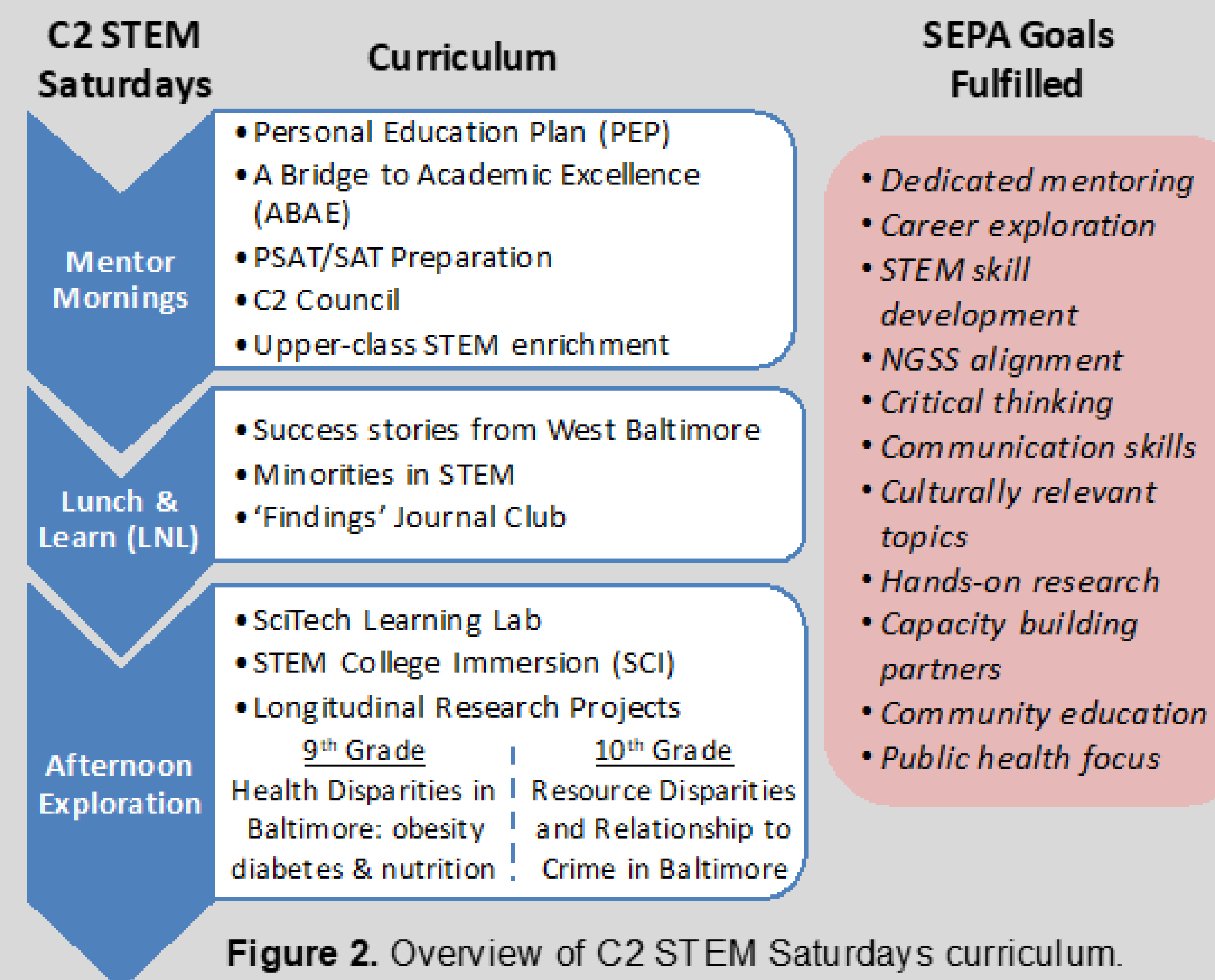


Figure 2. Overview of C2 STEM Saturdays curriculum.

Programming Overview (Summer)

- Scholars participate in a 5-week summer internship in partnership with YouthWorks

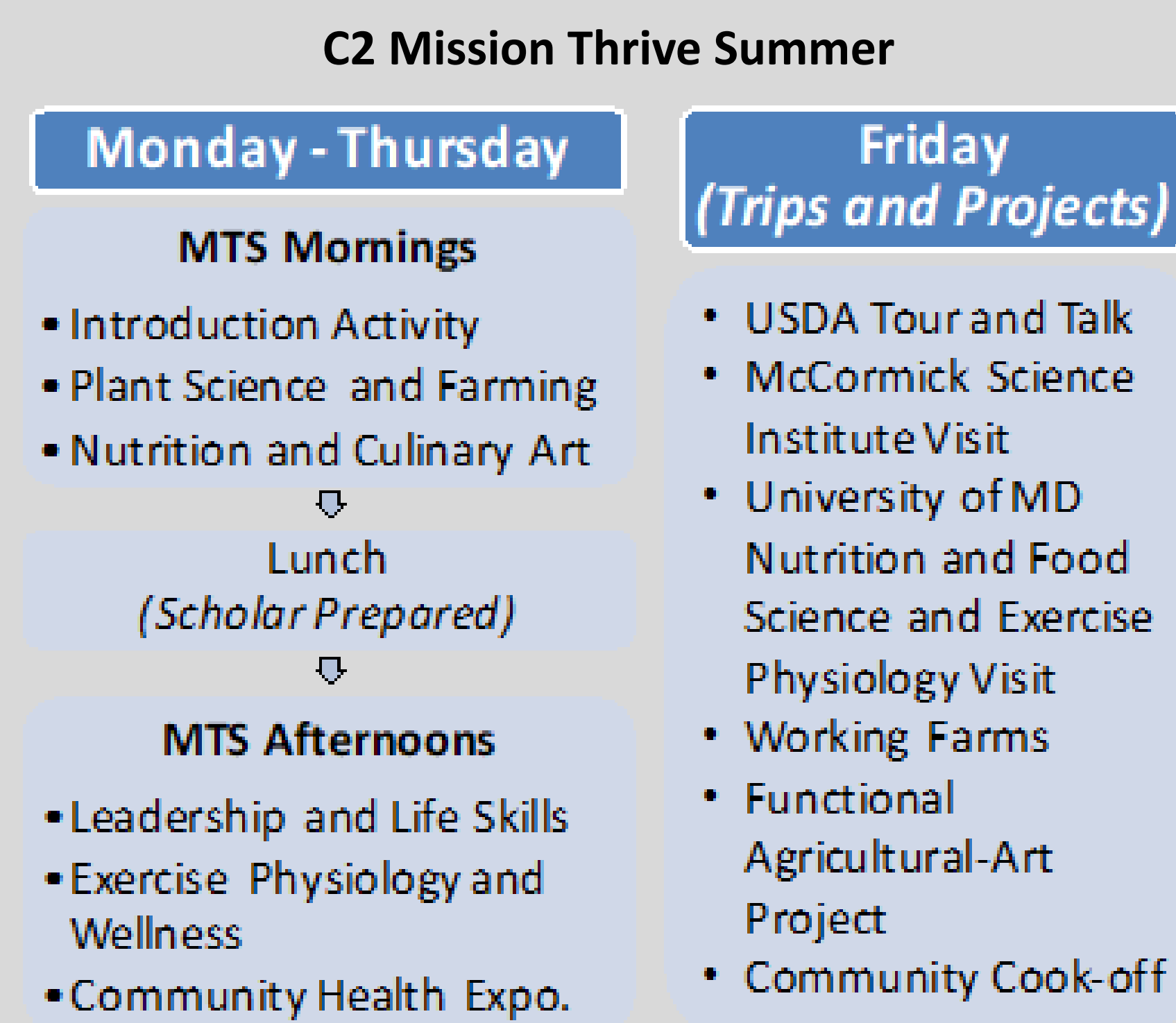


Figure 3. Overview of Mission Thrive Summer (MTS) for rising 9th graders.

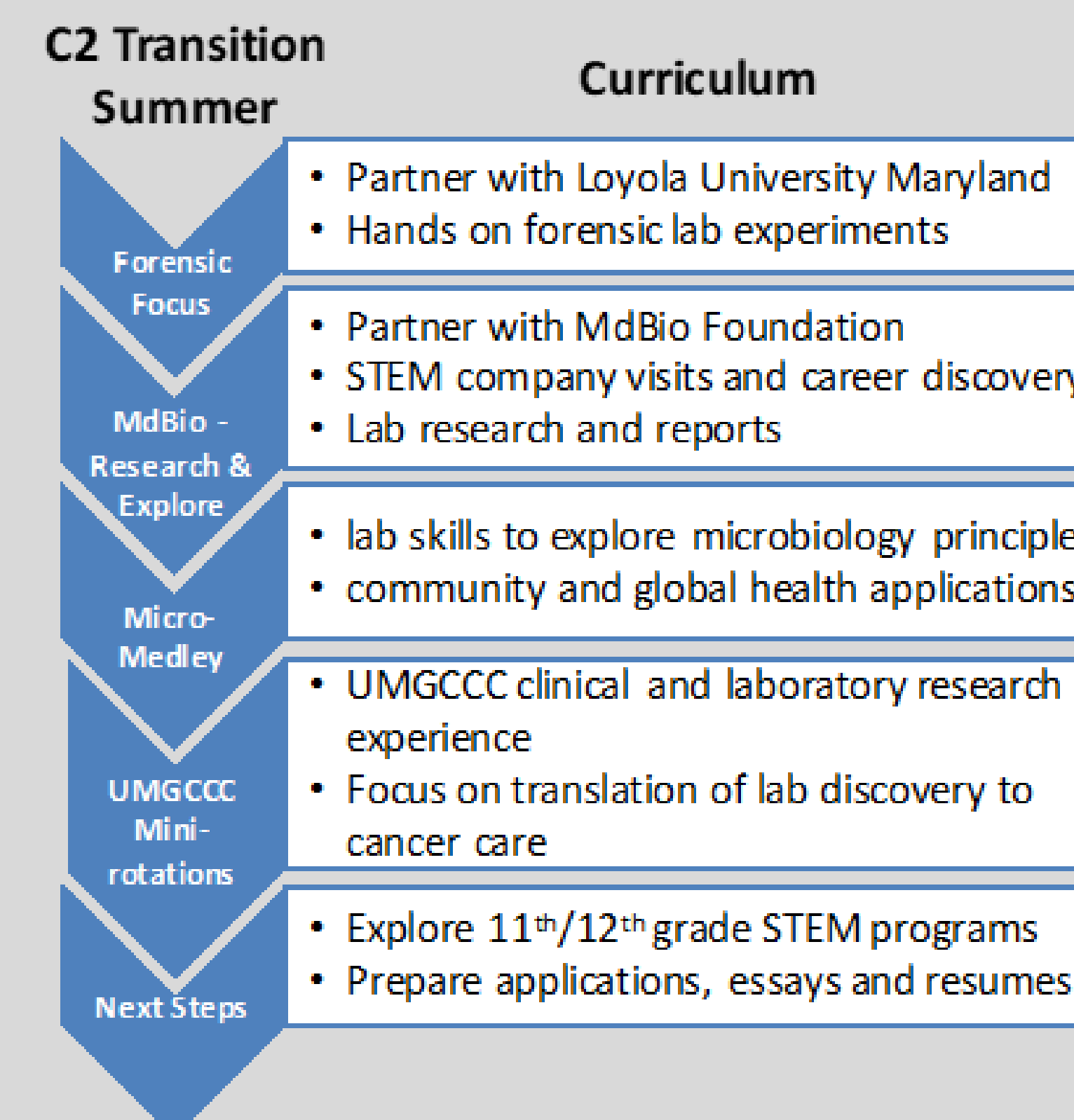


Figure 4. Overview of C2 Transition Summer for rising 10th graders.

Outcomes

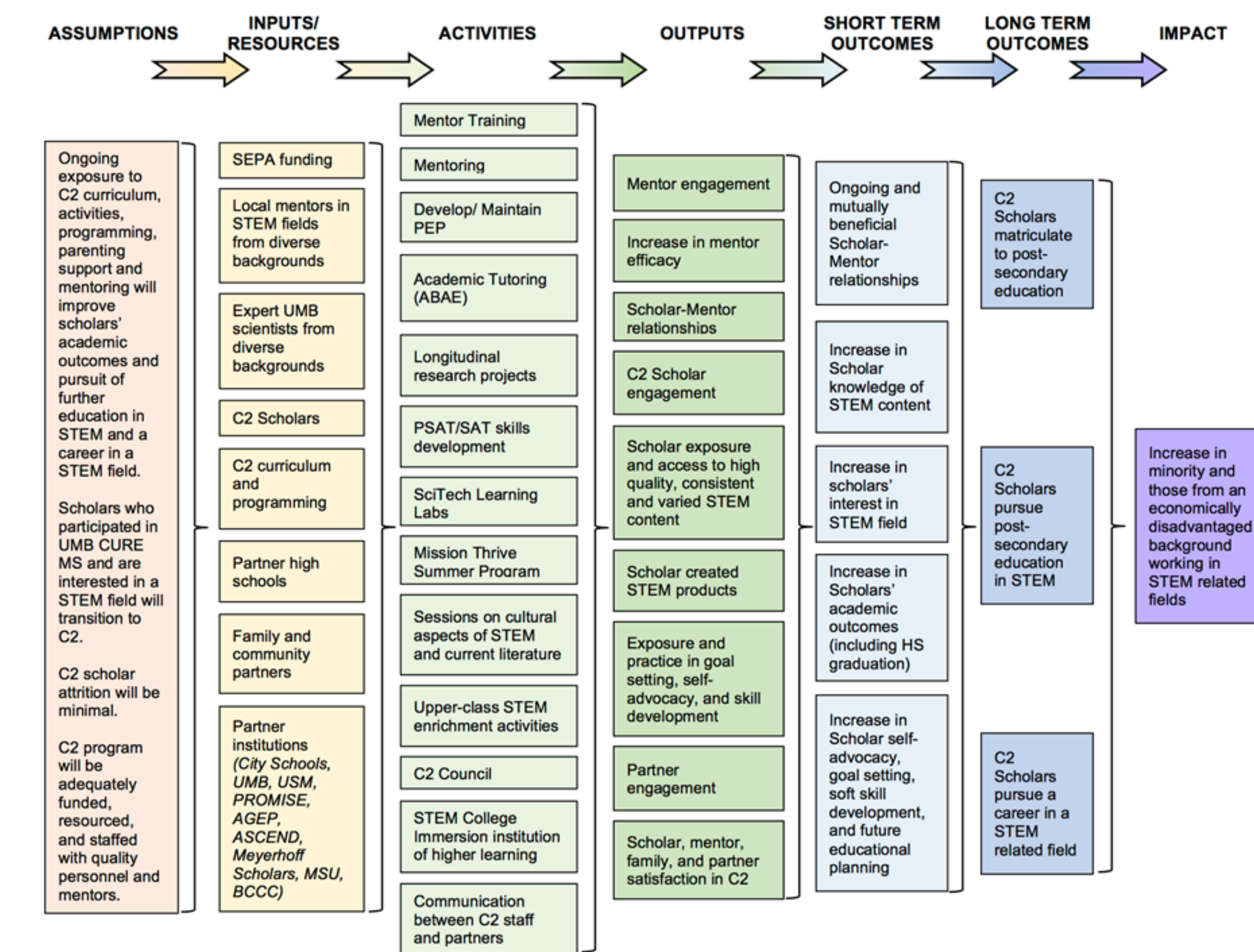


Figure 5. C2 Logic Model.

- 24 of the 29 Scholars remained active in 9th grade
- 21 Scholars expressed continued interest in STEM-focused careers
- The overall GPA for our Scholars is a 2.53

Lessons Learned

- Formal commitment process necessary for entry into C2 will be implemented starting with next cohort
- Social and emotional learning training would be beneficial for staff to better support scholars
- Stronger connections between C2 staff and each scholar's school are needed to ensure scholar progress
- Increased need for academic support outside of Saturday programming
- Expansion of mentor recruitment needed for high schoolers
- Earlier engagement with families is crucial to maintain relationships

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