MacISTEP

SPARKING INNOVATION in STEM Outreach!

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Brighter World | McMaster University

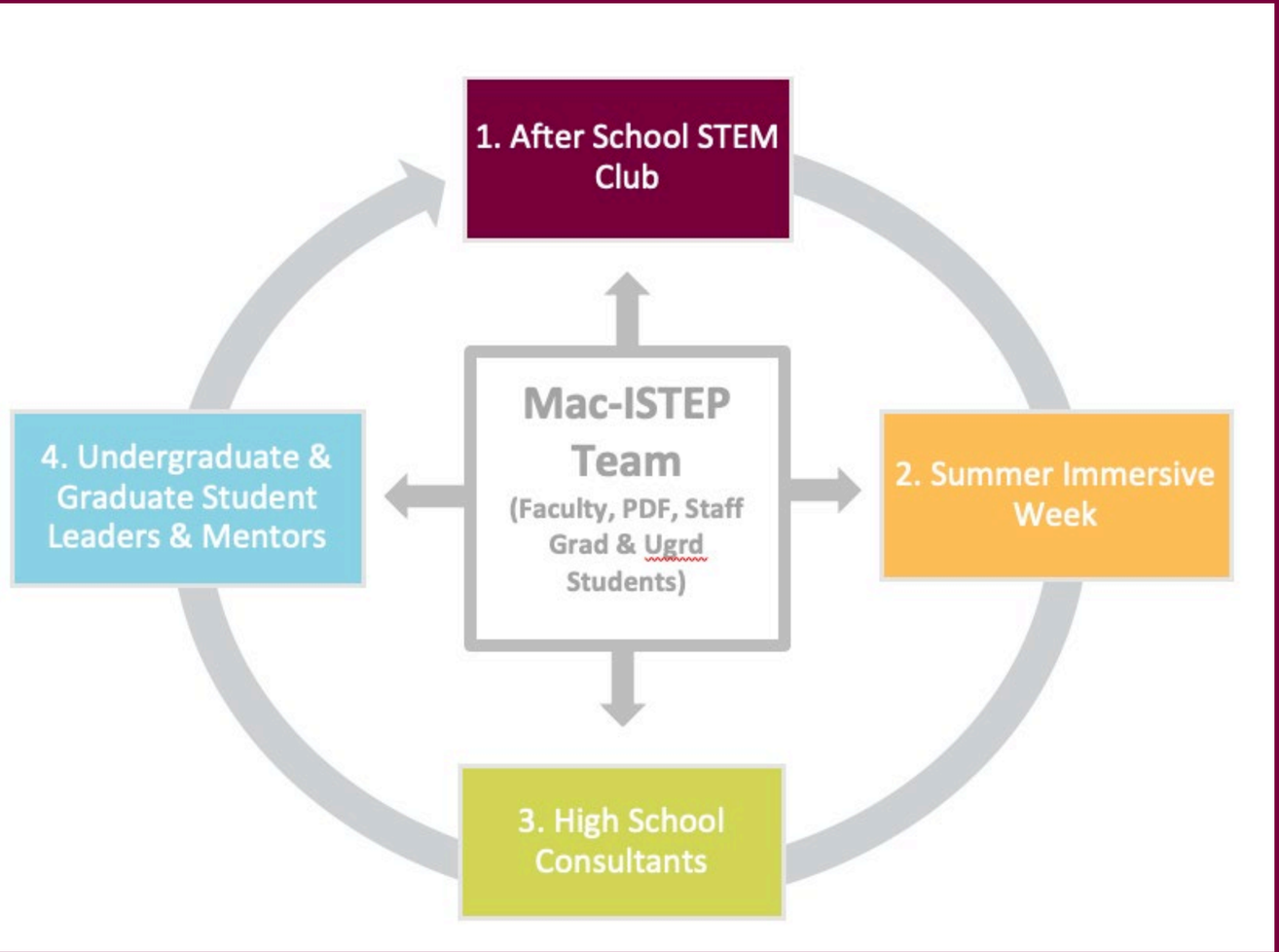
MacISTEP - SPARKING INNOVATION in STEM Outreach!!!

(McMaster Black Youth IMHOTEP STEM Enrichment Program)

Professor Juliet Daniel
and
Dr. Shaiya Robinson

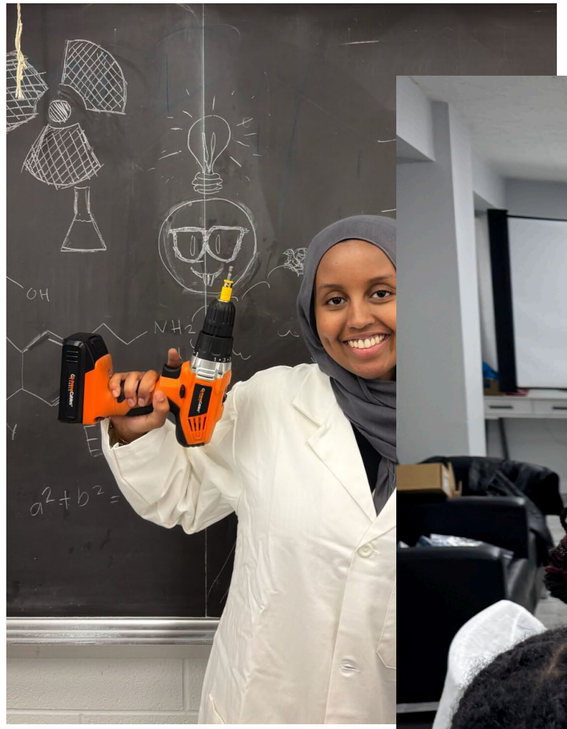
- **Partnership between Science and Engineering to enable innovative outreach initiatives** for Black youth
- A **hands-on STEM enrichment and leadership program for Black** high school students who are mentored by Black STEM undergraduate & graduate students, faculty, and staff to foster a sense of belonging and inclusion in STEM and help minimize negative racial encounters.
- In 2021, Dr. Carl James, York University, was awarded an **RBC Future Launch Grant *"Securing Black Futures"*** and invited McMaster to participate in this 3-year project
- ***MacISTEP*** *enables programming that aligns with* ***four over-arching principles of the Scarborough Charter*** ***– Black Flourishing, Inclusive Excellence, Mutuality and Accountability.***

MacISTEP Student Journey and Outcomes to Date



- **After School STEM Camp (ASC)** ~120 Black HS Students engaged in past 3 years in the 9-week ASC program
- **Summer Immersive Week (SIW):** 5-day, 4-night program offers 8-12 Black HSstudents - opportunity to experience and envision themselves as undergrads (stay in residence, attend lectures, explore campus, leadership development workshops, experiments, shadow Black STEM researchers.
- ***McMaster Engineering Community Outreach (MECO)*** - engaged ~ 100 Black HS students in hands-on learning experiences and mentorship opportunities - ***culturally relevant activities such as The Science of Black Hair (hair oil activity) and content that highlights contributions of Black scientists, engineers and inventors to inspire and spark further interest in STEM***.

Summer Immersive Week & BEST-STEM fun!



Lessons Learned and Best Practices

New collaborations SPARKED! ☺

- Black high school students enjoy ASC activities and love the summer immersive week…the first year offered, they did not want to go home!!

- **Black HS students from low and middle income families seldom attend summer camps or go on family vacations**

- ***Building on MacISTEP success and novelty of our SIW, Dalhousie University's Imhotep Legacy Academy (ILA) invited us to engage in a larger national initiative***

BEST-STEM (**B**uilding **E**xcellence in **S**tudents for **T**oday and **T**omorrow in **S**cience, **T**echnology, **E**ngineering & **M**athematics) ***specifically designed for ALL elementary school children***