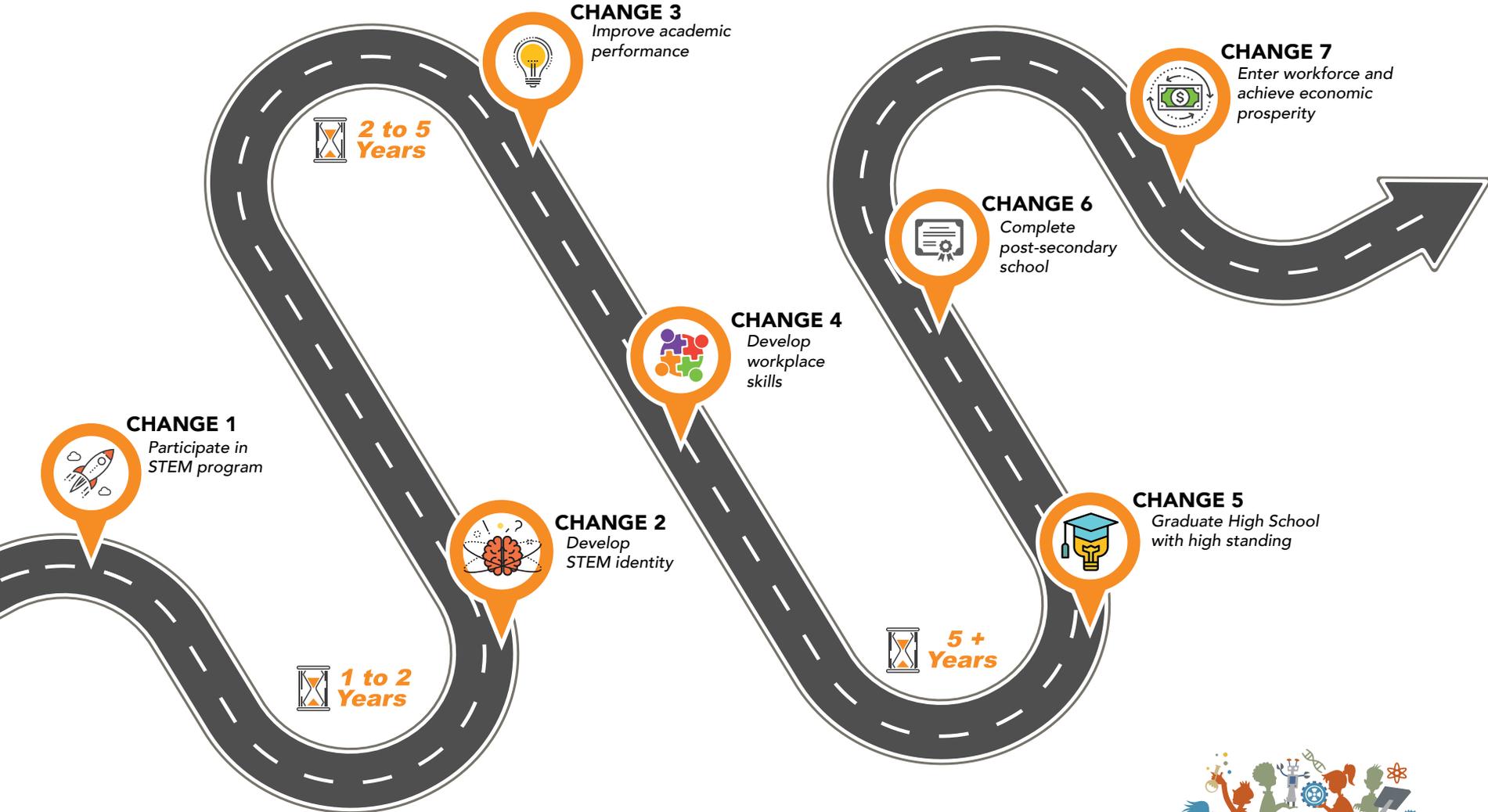7 January 2018

LET'S GO Pathway to Success

The most important elements of our Theory of Change and Logic Model have been simplified and displayed in the attached LET'S GO Pathway to Success infographic. As you can see on the following page, our model focuses on guiding students through seven "changes" in their mindset and behavior that we have found lead to long-term success:

1. Enter the LET'S GO program and participate in STEM enrichment activities.
2. Develop a STEM identity by realizing: "I like STEM," "I can do STEM," and "STEM is important to me." Students who demonstrate persistence in our program are designated as "STEM Scholars."
3. Improve academic performance in school as measured by grades, test scores, attendance, and other school indicators.
4. Develop essential workplace skills, referred to as the 4C's: Communication, Collaboration, Critical Thinking, Creativity.
5. Graduate high school in 4 years with high standing.
6. Complete post-secondary school (certificate program, apprenticeship, 2-year college, or 4-year college).
7. Enter the 21st century workforce in a STEM or a STEM-related field and achieve economic prosperity for self and family.

To demonstrate that our students are making these life changes in our elementary and middle school STEM enrichment programs, we set target benchmarks related to the first four changes. When met, we believe these targets serve as Predictors of Success in high school, post-secondary school and the workforce for each individual child as well as our overall STEM program. We set these targets at the start of each semester and then compare target and actual values at the end of each semester.

# LET'S GO Students on a Pathway to Success

**CHANGE 1**
Participate in STEM program

**CHANGE 2**
Develop STEM identity

1 to 2 Years

**CHANGE 3**
Improve academic performance

2 to 5 Years

**CHANGE 4**
Develop workplace skills

**CHANGE 5**
Graduate High School with high standing

5 + Years

**CHANGE 6**
Complete post-secondary school

**CHANGE 7**
Enter workforce and achieve economic prosperity

**Break the cycle of poverty through STEM education and workforce development.**

Let's Go
Boys & Girls

LET'S GO Predictors of Success

**1. LET'S GO's Mission:**
*Break the cycle of poverty through STEM education and workforce development.*
We design our programs and measure/report our outcomes consistent with this mission.

**2. Why do we establish Predictors of Future success?**
LET'S GO students enter our program as early as Kindergarten. While our programs are developed with a focus on long-term goals, it will take these students 10 to 15 years to enter the workforce and demonstrate their earning capacity. LET'S GO needs early predictors of future success in high school, post-secondary school, and the workforce to design and deliver effective programs aligned with our mission and to raise money to support these programs. These predictors allow us to demonstrate outcomes within the one to three-year focus of our program delivery, the same timeframe that often is of primary interest of our funders.

**3. LET'S GO Theory of Change and Logic Model**
As illustrated in the infographic "LET'S GO Pathway to Success", LET'S GO's Theory of Change & Logic Model uses hands-on STEM programs to inspire and guide low income/high risk students through seven changes in their mindset and behavior: (1) enter the program, (2) develop a STEM identity, (3) improve academic performance, (4) develop 21st century workplace skills, (5) graduate high school with high standing, (6) complete post-secondary school, and (7) enter the workforce in STEM and STEM related jobs. LET'S GO's integrated program primarily focuses on students in elementary and middle school. Our goal is to prepare our elementary and middle school students to be successful in high school, post-secondary school and the workforce.

**4. LET'S GO Predictors of Success**
LET'S GO has established outcomes that elementary and middle school students can reach through the first four Pathway to Success changes. If met, these outcomes serve as predictors of success in high school and beyond. Our goal is to guide and support our students to accomplish the following before they complete Grade 8:
- Provide support to augment support at home and in school.
- Demonstrate excellent school attendance.
- Earn grades of proficient in standard test scores in reading, math, and science.
- Complete Algebra 1 by the end of $8^{th}$ grade.
- Participate in 3 or more STEM enrichment activities.
- Participate in 1 or more robotics team competitions (or equivalent science or math competitions).
- Earn good classroom grades.
- Gain admission to competitive middle and high schools with enriched academic programs.

We set targets for each of these predictors for individual students and cohorts of students at the beginning of each school year and compare with actuals at the end of the school year.

**5. Summary**
LET'S GO designs and delivers high-quality STEM activities to low income/high risk students with the goal of inspiring and supporting them to follow a pathway to career and

economic success. To demonstrate our progress towards that goal, we establish predictors of success (achievable outcomes) for elementary and middle school students that indicate future success, set program-specific targets, and compare target metrics with actual results.

LET'S GO Predictors of Success

| Rank | Predictor | Why this Predictor is Important |
|---|---|---|
| 1 | Support System | Support from a healthy home environment, school, and out-of-school programs starts and helps sustain children on a pathway to success |
| 2 | School Attendance | If you aren't there, you can't learn! |
| 3 | Reading Test Scores | Reading is the foundation of all other academic pursuits. |
| 4 | Math & Science Test Scores | These scores indicate the skills that are needed to be successful and confident in STEM coursework. Students growing these skills will be closer to developing identity, interest, perseverance in STEM. |
| 5 | Algebra 1 by 8th grade | Taking Algebra 1 by 8th grade demonstrates the ability to academically push oneself and take risks (i.e. be temporarily uncomfortable in order to achieve). This is also a gatekeeper course, so if a student doesn't take Algebra 1 by 8th grade, he or she may not be able to fit in the other courses by graduation that are needed for acceptance into a STEM undergraduate degree. |
| 6 | Persistence in extra-curricular activities | When these are STEM related, there is a concentrated effort of STEM learning that is happening outside of school that isn't confined by state standards or high-stakes testing. Students can pursue their topic of interest. |
| 7 | Participation in team based STEM activities (FLL Robotics, Science Olympiad, etc.) | This is a specific case of #6 – persistence in extra-curricular activities. FLL Robotics is also an established, vetted program that has been evaluated as increasing high school graduation rates, college attendance and graduation, and career success. |
| 8 | Grades/Class standing | High grades can result in confidence in a subject, thereby raising self-efficacy, which in-turn can help students take risks in learning challenging material. |
| 9 | Middle and high school selection and admittance | Students and parents have a choice to select middle and high schools with enriched academics. Examples include STEM magnet schools, schools with Project Lead the Way, and schools with the Ingenuity Project STEM program. |