

Afterschool STEM - Youth Outcomes

Anita Krishnamurthi
Vice President, STEM Policy



Afterschool 101

- 8.5 million children in afterschool programs
 - 15 million unsupervised
 - Demand outstrips availability
-
- Girls participate in equal numbers to boys
 - African-American & Hispanic children participate in greater numbers
 - Children in federally funded afterschool programs participate for average of 14.5 hours/week
-
- Huge support from voters

Impact

- Benefits of afterschool participation well-researched
-
- Show measurable gains in both academic and social behavior
 - More likely to come to school, stay in school and graduate
 - Lower incidence of truancy, drug use, drop-outs, violence and teen pregnancy
 - Greater self-confidence and development of leadership, critical thinking and team-building skills
 - Students at greatest risk show greatest gains
 - Certain program characteristics are linked to continuous quality improvement and sustainability

Science Club

Boys & Girls Club of Chicago
Northwestern University

<https://www.youtube.com/watch?v=arT2XOq8OvY>

Defining appropriate STEM outcomes

Study results show that afterschool providers and supporters believe that afterschool STEM programs can support young people to:

A

Develop interest in STEM and STEM learning activities

B

Develop capacities to productively engage in STEM learning activities

C

Come to value the goal of STEM and STEM learning activities


Full report available at:

www.afterschoolalliance.org/STEM-PUBLICATIONS.CFM

Indicators of Progress

- 1 Active participation in STEM learning opportunities
- 2 Curiosity about STEM topics, concepts or practices
- 3 Ability to productively engage in STEM processes of investigation
- 4 Awareness of STEM professions
- 5 Ability to exercise STEM-relevant life and career skills
- 6 Understanding the value of STEM in society





Sub-Indicators (specific, measureable)

High Confidence

- Active engagement and focus in STEM learning activities
- Ability to work in teams to conduct STEM investigations
- Active inquiries into STEM topics, concepts, or practices
- Understanding of the variety of STEM careers related to different fields of study
- Understanding of relevance of STEM to everyday life, including personal life
- Demonstration of STEM skills
- Applied problem-solving abilities to conduct STEM investigations
- Awareness of opportunities to contribute to society through STEM

Medium Confidence

- Understanding of STEM methods of investigation
- Knowledge of how to pursue STEM careers
- Mastery of technologies and tools that can assist in STEM investigations
- Knowledge of important civic, global, and local problems that can be addressed by STEM
- Pursuit of in-school STEM learning opportunities
- Awareness that STEM is accessible to all
- Active information seeking about mechanical or natural phenomena or objects
- Demonstration of STEM knowledge

Success in practice

- Programs successful in **engaging and retaining large numbers of students** from very diverse populations in STEM.
- Young people in these programs also **express curiosity about STEM subjects** and seek information to answer questions and satisfy their curiosity.
- Young people **gain real skills and the ability** to productively engage in STEM processes of investigation.

Success in practice

- Youth learn essential STEM-relevant life and career skills
- Participants begin to think of themselves as young people who can help to solve problems in their own communities, and come to understand the value of STEM to contribute to society and solve global problems.
- Students in these programs display an increased awareness of career options as well as a nuanced understanding of those careers.
- There is an impact of afterschool STEM programs on academic performance.

Learn more!

- Website - www.afterschoolalliance.org/STEM
- Examples & Models - STEM Storybook
- akrishnamurthi@afterschoolalliance.org;



Follow Us

@afterschool4all



Like Us

/afterschoolalliancedc



Read Us

Afterschool Snack Blog