

GSK Science in the Summer™ “Be a Physicist”



2023 Evaluation Report

Prepared for:



In collaboration with



Prepared by:

Rockman et al
Cooperative
Research & Evaluation

EXECUTIVE SUMMARY

GSK Science in the Summer™ is a free, educational program that offers youth in second through sixth grades a hands-on science experience during the summer months. The program is sponsored by GlaxoSmithKline (GSK), and coordinated by The Franklin Institute (TFI) in Philadelphia, PA. In 2023, TFI implemented the program at libraries across the five greater Philadelphia area counties (Bucks, Chester, Delaware, Montgomery, and Philadelphia) and through thirty-eight Out-of-School Time organizations (OST) across the five counties. TFI also provided support and resources to thirty-six National sites across the United States, which carried out in-person programming through partnerships with libraries, community centers, and OSTs in Summer 2023.

Rockman et al Cooperative (REA), an external research and evaluation group, conducted an independent evaluation of the program's impacts and implementation. Evaluation data includes Philadelphia area library registration forms, OST and National Site Profiles, surveys from Philadelphia area site coordinators, educators, and trainers, interviews with National and Philadelphia area OST site coordinators and Philadelphia area educators, and in-person program observations at National and Philadelphia area programming sites.

Key Findings by Impact Area

Reach

- In 2023, GSK Science in the Summer™ had a broad reach across the Philadelphia area and nationally (see Table 1). In total, **29,097** youth participated in "Be a Physicist" programming.
 - **Philadelphia Area:** A total of **6,283 youth** participated through Philadelphia area GSK Science in the Summer™ programs.
 - A total of **1,050 youth** participated at 48 library locations across Bucks, Chester, Delaware, Philadelphia, and Montgomery counties.
 - A total of 38 Philadelphia-area OST sites participated, reaching **5,233 youth** at 97 programming sites.
 - **National Sites:** A total of 36 museums and science centers collaborated with 422 sites outside their own organization to reach **22,814 youth** across the United States.

- The Franklin Institute, in collaboration with 86 Philadelphia area and 71 National site coordinators, trained **679 educators** to implement the GSK Science in the Summer™ program in Summer 2023.
 - **Philadelphia Area:** A total of **396 educators** in the Philadelphia area were trained to implement the GSK Science in the Summer™ program by The Franklin Institute staff.
 - **National Sites:** National site coordinators trained **283 educators** to implement programming.

Learn

- Most educators (92%) agreed that participating in the GSK Science in the Summer™ “Be a Physicist” program helped youth learn more about physics.
- The majority of educators found the “Be a Physicist” program to have a positive impact on youth’s confidence (92%) and excitement (93%) around doing science.
 - Working through activities autonomously and alongside other youth to solve problems validated positive views of science
 - Participating science activities with freedom to explore concepts and scaffolding from educators contributes to youths’ feelings of empowerment around science
- Most educators (90%) agreed that participating GSK Science in the Summer™ program increased participating youth’s awareness of science-related careers

Social Impact

- The majority of educators reported the GSK Science in the Summer™ “Be a Physicist” program had a positive impact on youth’s views of science (92%) and youth’s science identity (85%).
 - Relating the “Be a Physicist” activities to experiences or careers youth could encounter in their daily lives reinforced these positive attitudes
 - Site coordinators attributed the shift in youths’ science identity to the fun, hands-on style of the “Be a Physicist” activities
- Most educators (94%) agreed that GSK Science in the Summer™ gave youth opportunities to engage in good scientific practices, such as making observations, making predictions, asking questions, and testing hypotheses.

Fidelity of Implementation

- Most educators (78%) indicated that they are more comfortable teaching STEM topics covered by the GSK Science in the Summer™ program after implementing the program with youth.
- Most educators said they are more personally engaged in (72%) and interested in facilitating (76%) the STEM topics covered as part of the GSK Science in the Summer™ "Be a Physicist" program.
- After participating in the GSK Science in the Summer™ program, educators had higher levels of confidence in: Leading informal science activities (71%), teaching STEM content to youth (69%), asking open-ended questions (78%), encouraging youth to think scientifically (66%), cultivating dialogue between youth (66%), making connections to youths' own experiences (69%), and making connections to STEM-related careers (65%).
- The majority of site coordinators (74%) agreed that after their site participated in the GSK Science in the Summer™ training, they had a greater ability to incorporate STEM into other programming at their site
- The majority of educators (62%) reported that they have used skills from the GSK Science in the Summer™ program, including asking questions, building connections, and specific elements of previous curricula into their education practice.

Table 1: Summary of GSK Science in the Summer™ Youth Impact Areas

Impact Area	Indicator	National Report	Philadelphia Report	
			Library	OST
Program Development	Number of sites and programs	Host Sites: 36	County Libraries: 7	Host Sites: 38
		Partner Sites: 422 Programs Led: 1043	Library Branches/Sites: 48 Programs Led: 63	Programming Sites: 97 Programs Led: 233
		Combined Host Sites: 81 Combined Programming Sites: 567 Combined Programs Led: 1339		
	Number of coordinators; Number of educators trained	Coordinators: 71 Educators Trained: 283	Coordinators: 11 Educators Trained: 78	Coordinators: 75 Educators Trained: 318
		Combined Coordinators: 157 Combined Educators Trained: 679		

Reach	Number of youth attendees	Total: 22,814 youth	Total: 1,050 youth	Total: 5,233 youth
		Combined: 29,097 youth		
	Youth demographics	<p>Female: 51% Male: 49% Non-Binary/Prefer not to say: 0.5%</p> <p>White: 51% African American/Black: 22% Asian: 4% Indigenous People: 7% Hispanic/Latinx: 19% Other: 5% Prefer not to say: 3%</p>	<p>Female: 45% Male: 52% Non-Binary/ Prefer not to say: 3%</p> <p>White: 50% African American/Black: 25% Asian: 21% Indigenous People: 1% Hispanic/Latinx: 5% Other: 3% Prefer not to say: 5%</p>	<p>Female: 54% Male: 45% Non-Binary/Prefer not to say: 1%</p> <p>White: 14% African American/Black: 48% Asian: 11% Indigenous People: 0.5% Hispanic/Latinx: 12% Other: 11% Prefer not to say: 1%</p>
	<p>Combined: Female: 50%; Male: 49%; Non-Binary/Prefer not to say: 1% White: 38%; African American/Black: 27%; Asian: 7%; Indigenous People: 3%; Hispanic/Latinx: 12%; Other: 6%; Prefer not to say: 3%</p>			
Learn	Percentage of youth who demonstrate increased interest in learning about science, interest in pursuing science-related jobs, and confidence in doing science, as reported by educators	Educators:		
		<p>Helped participants learn more about physics: 92% (M=3.42, SD=0.737)</p> <p>Awareness of science-related careers: 90% (M=3.52, SD=0.753)</p> <p>Excitement around science: 93% (M=3.59, SD=0.712)</p> <p>Confidence in doing science activities: 92% (M=3.51, SD=0.705)</p>		
		Learn Construct: M=3.51 (SD=0.727, on a 4-point Likert Scale)		

Succeed / Social Impact	Number of youth who demonstrated that they view science as important, think scientifically, and use problem solving skills, as reported by educators	<p>Educators:</p> <p>Positive view of science identity: 85% (M=3.52, SD= 0.742)</p> <p>Views about science: 92% (M=3.66, SD=0.667)</p> <p>Opportunities to engage in good science practices: 94% (M=3.66, SD=0.745)</p> <hr/> <p>Succeed/Social Impact Construct: M=3.61 (SD=0.708, on a 4-point Likert Scale)</p>
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