June
2025

STEM + SPORTS PROGRAM EVALUATION SUMMARY REPORT

STEM
playbook

EXECUTIVE SUMMARY

Survey Date: June 16, 2025
Survey Responses: 30 Students

This report analyzes survey responses from 30 students who participated in a STEM + Sports program. The data reveals overwhelmingly positive outcomes, with students showing high confidence in STEM concepts, strong interest in future STEM careers, and successful integration of technology with sports activities.

Program Highlights

Metric	Result	Details
Total Survey Responses	30 students	100% response rate from program participants
STEM Excitement Level	9.0/10 average	Exceptional enthusiasm generated
STEM Career Interest	28/30 students (93%)	Only 1 "No", 1 "Maybe" response
Technology Usage Rate	29/30 students (97%)	Used smart devices or measurement tools
High Confidence Areas	4+ scores in 7/10 areas	Strong learning outcomes across metrics
Top Activity Category	Interactive Games	Whack-a-Mole, Boxing, Smart Ball Building
Primary Application	School Science/Math	21/30 students plan to use learning
Grade Range Coverage	1st through 5th grade	Successful across all elementary levels

Key Findings

Outstanding STEM Interest: Students reported an average excitement level of **9.0/10** for STEM, indicating the program successfully generated enthusiasm for science, technology, engineering, and mathematics.

Strong Learning Outcomes: Students demonstrated solid confidence across all measured areas, with scores averaging 3.6-4.5 out of 5 in key competencies.

High Career Interest: **93% of students** expressed interest in pursuing STEM-related careers, with only one student responding "No" and one "Maybe."

Participant Demographics

- **Total Survey Respondents**: 30 students
- **Response Rate**: 100% (all program participants completed survey)
- **Survey Duration**: Administered on June 16, 2025 between 11:03 AM - 12:11 PM

Grade Level Distribution
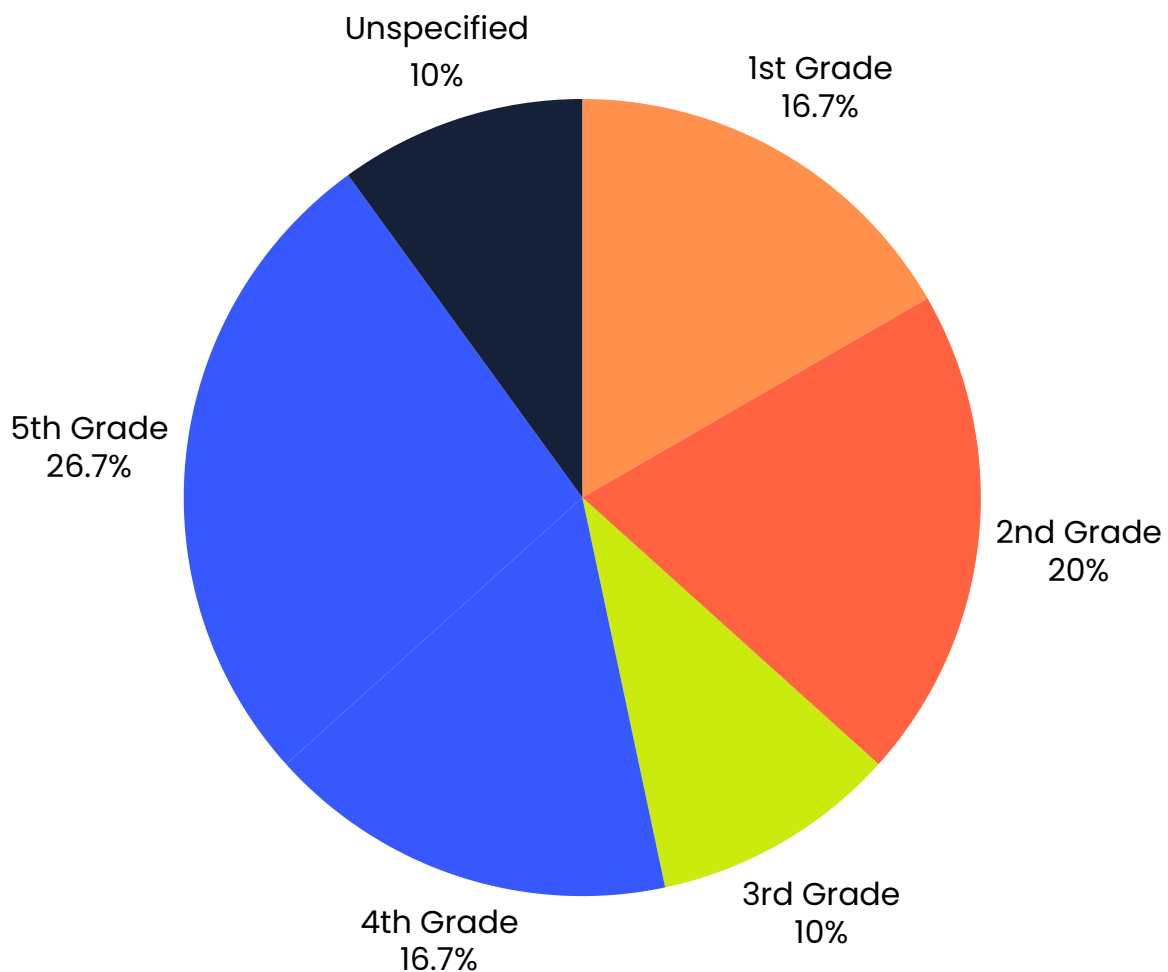
Total Elementary Coverage: All grade levels from 1st through 5th grade successfully participated, with 5th graders representing the largest group (26.7%)

Technology Usage During Program

Smart Sports Devices Usage (30 responses)

Usage Level	Number of Students	Percentage
Many times	10 students	33.30%
A few times	13 students	43.30%
Once or twice	6 students	20.00%
Never	1 student	3.30%

Total Technology Engagement: 29/30 students (96.7%) used smart sports devices.

Body Measurement Tools Usage (30 responses)

Usage Level	Number of Students	Percentage
Many times	16 students	53.30%
A few times	10 students	33.30%
Once or twice	4 students	13.30%
Never	1 student	3.30%

Total Measurement Tool Engagement: 29/30 students (96.7%) used body measurement tools.

Learning Outcomes (Detailed Analysis)

Confidence Levels (1-5 Scale) – 30 Students Surveyed

Learning Area	Average Score	Students Scoring 4-5	Students Scoring 1-2	Interpretation
Reaction Time Knowledge	4.47/5.0	26 students (87%)	1 student (3%)	Excellent understanding
Physical Activity Confidence	4.20/5.0	24 students (80%)	2 students (7%)	Strong confidence
Smart Sports Ball Understanding	4.07/5.0	22 students (73%)	3 students (10%)	Good comprehension
Performance Tracking Confidence	3.97/5.0	21 students (70%)	4 students (13%)	Good confidence level
Chart/Graph Creation Skills	3.86/5.0	20 students (67%)	4 students (13%)	Solid data skills
Body Performance Tools	3.83/5.0	19 students (63%)	5 students (17%)	Good confidence level
Math Skills (Average/Mean)	3.60/5.0	18 students (60%)	6 students (20%)	Good mathematical understanding

STEM Interest & Career Metrics

Metric	Score/Response	Details
STEM Interest Level	9.0/10.0 average	Range: 5-10, with 20 students (67%) scoring 10/10
Career Knowledge	4.54/5.0 average	25 students (83%) scored 4-5 out of 5
STEM Career Interest	28/30 students (93%)	28 "Yes", 1 "Maybe", 1 "No"

Most Enjoyed Activities (Qualitative Analysis)

Total Activity Responses: 18 out of 30 students provided specific activities

Application Area	Number of Mentions	Percentage of Students
School Science or Math	21 mentions	70%
Sports or Fitness	15 mentions	50%
A Future Job or Career	14 mentions	47%
At Home or with Family	3 mentions	10%
Unsure	2 mentions	7%

Note: Students could select multiple applications, so percentages total more than 100%

Future Application of Learning (30 Responses)

Students plan to apply their learning in multiple areas:

Activity Type	Number of Mentions	Examples
Interactive Games	6 mentions	Whack-a-Mole (4 mentions), Boxing (2 mentions)
Building/Construction	3 mentions	Building reactive ball, Building wearable device
Physical Activities	3 mentions	Running (3 mentions), Jump rope, Agility ladder
Technology Platforms	3 mentions	STEM Playground, Nex Playground
Skill Development	3 mentions	Reaction time training, Everything activities

Most Popular Single Activity: Whack-a-Mole game (mentioned by 4 different students)

STEM + Sports Career Awareness (Detailed Analysis)

Total Career Responses: 15 out of 30 students provided specific career examples

Career Field	Number of Mentions	Specific Examples
Mathematics/Analytics	4 mentions	Math, Math Designer, Football Statistician
Technology/Development	4 mentions	Developer, Gaming, Computer Development, Technology
Sports-Related	2 mentions	Online Sports, Boxing machinery
General STEM	2 mentions	Nex Playground (development), Science investigation
Other	3 mentions	Crime Scene Investigation

Career Knowledge Improvement:

- Significant Knowledge Gain (Scores 4-5): 25 students (83%)
- Moderate Knowledge Gain (Score 3): 3 students (10%)
- Limited Knowledge Gain (Score 2): 2 students (7%)

Average Career Knowledge Score: 4.54/5.0 (indicating excellent program impact on career awareness)

Recommendations

Program Strengths

1. **Exceptional STEM Interest Generation**: The program successfully created high enthusiasm for STEM (9.0/10 average)
2. **Technology Integration**: Strong usage of both smart sports devices and body measurement tools
3. **Career Awareness**: Excellent improvement in knowledge of STEM + Sports careers (4.54/5.0)
4. **Practical Application**: Students see clear pathways to apply learning in multiple contexts

Areas for Enhancement

1. **Performance Tracking Confidence**: While good (3.97/5.0), this could be strengthened with more hands-on practice
2. **Math Skills**: Lowest scoring area (3.60/5.0) could benefit from more reinforcement
3. **Smart Ball Understanding**: Room for improvement in technical comprehension (4.07/5.0)

Strategic Recommendations

1. **Continue Current Approach**: The program format is highly effective at generating STEM interest
2. **Expand Math Integration**: Include more mathematical concepts and practice opportunities
3. **Increase Tracking Tool Usage**: More hands-on experience with performance measurement devices
4. **Career Exploration**: Continue highlighting diverse STEM + Sports career pathways

Conclusion

STEM playbook

The STEM + Sports program demonstrates exceptional success in engaging students across grade levels. With 93% of students interested in STEM careers and an average excitement level of 9.0/10, the program effectively bridges the gap between sports and STEM education. The strong performance across all measured competencies, combined with high technology usage and clear application pathways, positions this program as a highly effective educational intervention.

The data suggests students not only gained technical knowledge but also developed confidence in applying STEM concepts to real-world scenarios, particularly in sports and fitness contexts. This integrated approach appears to resonate strongly with students from 1st through 5th grade, making it a scalable model for broader implementation.

> "It was truly an experience to see our students so engulfed in STEM Playbook. I have been in the education field for many years and to see such a variety of ages happily engage in many areas of instruction and hands on lessons just blew me away. Your staff is truly passionate about STEM Playbook and your mission."

Taylor Turner   Community Impact Manager, United Way of Youngstown and the Mahoning Valley