



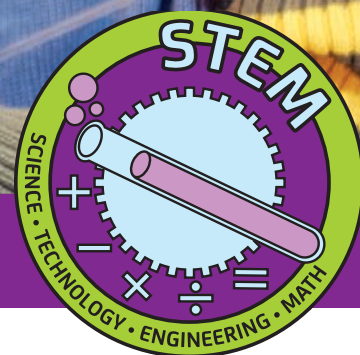
indianaafterschool.org

Indiana Afterschool Specialty Standards

A Guide for High Quality Programs Serving Youth in Out-of-School Time



Science, Technology, Engineering and Math (STEM)



INDIANA
Afterschool
NETWORK



IN Afterschool Standards and Specialty Standards

Purpose

The purpose of the Indiana Afterschool Standards is to outline the path and steps that lead to high quality youth programs that take place outside the school day. The afterschool standards are based on national research and best practices in the youth development and education fields.

The IN Afterschool Standards and Specialty Standards are voluntary statewide standards that may serve as:

- A framework of clear expectations for all stakeholders.
- A guide to inform statewide decision-making, for example, professional development focus areas, funding support and advocacy.
- A guide for program providers to assess their own program site and organizations to help determine what they are doing well and what needs improvement.
- A guide for parents and youth to identify quality programming.
- A guide for school principals and district superintendents to reinforce and advance educational priorities.

Structure

1. Category

- Priority areas that helps organize all 38 standards
- Answers: What topics are needed for assessing program quality?

2. Standards

- Broad researched-based best practices in quality out-of-school programs
- Answers: What do we need to do?

3. Indicators

- Specific and detailed descriptions of the standard or best practice in quality out-of-school programs
- Answers: How do we do that?

4. Standards-based Practices

- Evidence that can be observed in a high quality out-of-school program
- Answers: What does it look, sound, and feel like?

About the Science, Technology, Engineering and Math (STEM) Specialty Standards

This special STEM addition to the Indiana Afterschool Standards outlines best practices and recommendations specific to STEM programming for K-12 youth in out-of-school time programs. In order to develop these specialty standards, the Indiana Afterschool Network convened a taskforce of STEM experts in education, business, and youth development. The taskforce researched standards and best practices throughout the nation and compiled these standards from many sources (see Sources section). Indiana is on the leading edge in developing STEM standards for out-of-school time programs.

Defining STEM Education

- **STEM Education:** The Indiana Department of Education defines STEM Education as “an intentional, multi-disciplinary approach to teaching and learning, in which students uncover and acquire a cohesive set of concepts, competencies, and dispositions of science, technology, engineering, and mathematics that they transfer and apply in both academic and real world contexts in order to be globally competitive in the 21st Century.”
- **Informal STEM Education** inspires student learning through hands-on, experience-based activities that enrich and add value to their school experiences. Informal STEM takes place beyond school day hours, in schools, community organizations, and cultural institutions such as libraries and museums.

Youth outcomes for informal STEM programs include:

- Increased interest and excitement in STEM learning
- Increased STEM skills, understanding, knowledge and competence
- Increased awareness and interest in STEM education and career pathways

Indiana Quality Program Self-Assessment (IN-QPSA)

Purpose

Indiana Quality Program Self-Assessment (IN-QPSA) is an online strengths-based self-assessment tool that enables youth programs to rate their performance based on the Indiana Afterschool Standards and Specialty Standards.

Function

- Choose which standards you want to assess.
- Rate how well your program meets each standard.
- Start the assessment and complete over time.
- Use online or print stakeholder surveys.
- Generate automated reports for organization and/or program site(s).
- Generate an automated action plan.
- Track your program results over time and compare progress.

Benefits

The IN-QPSA can help OST programs:

1. Identify and understand the factors that support or inhibit top performance.
2. Use data to drive decisions.
3. Take action and make positive changes.
4. Continue to grow, learn and improve.
5. Maximize positive impact for staff, youth, families and community partners.

Infrastructure

Online System Functionality

- 2 Self-Assessments
 - Indiana Afterschool Standards
 - Specialty Standards (College & Career Readiness, Healthy Eating and Physical Activity, STEM and Summer Learning)
- 4 Stakeholder Surveys and more to come!
 - Parent, Youth, Community Partner and Staff
- Multiple Automated Reports
 - Program Site & Organization Aggregate
 - Comparison Reports
- Program Quality Improvement Action Plan

To Get Started:

<https://myian.indianaafterschool.org>

Recognition of Pledge To Quality

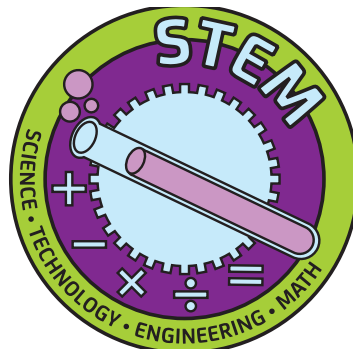
Each program site and/or organization that successfully completes the Indiana Quality Program Self-Assessment (IN-QPSA) will receive:

1. Indiana Afterschool Pledge To Quality Poster
2. Specialty Standard Badge

Badges serve to recognize some learning or accomplishment. This is not a credential—it is a symbol for an accomplishment that can be used for communicating or marketing quality efforts. These special badges communicate that your program/organization has aligned your practices and programs to the IN Afterschool Standards or Specialty Standards.



Indiana Afterschool Pledge To Quality Poster



Specialty Standard Badge

The Rating Scale

The Indiana Quality Program Self-Assessment Tool uses the following rating scale to help you and your team assess the degree to which each quality indicator is evident in the program. The definitions outlined below are to help guide the reviewers' understanding of the numeric ratings.

4 = Excellent/ Exceeds Standard

EXCEEDS STANDARD means that the program is exceptional or outstanding in this area because it implements nearly all or all of the Standards-Based Practices for this indicator. The relevant Standards-Based Practices are demonstrated in clearly observable ways.

3 = Good/Meets Standards

MEETS STANDARD means that the program executes many of the Standards-Based Practices. The rater can generate examples of how and when the program executes these specific practices. This is an area the program executes well.

2 = Some Progress Made/Approaching Standard

APPROACHING STANDARD means that the program is working toward executing Standards-Based Practices, but is currently only implementing a few of them. The program may benefit from targeted assistance in order to implement more of the Standards-Based Practices.

1 = Must Address and Improve/Standard Not Met

STANDARD NOT MET means that the program is not currently implementing any of the Standards-Based Practices and requires significant support in this area. There is a need for significant support to get on track to address this indicator.

NA = Don't Know/Not Applicable

This rating indicates that the program is not familiar enough with this indicator to rate performance or is just not sure how to rate it at this time. This rating could also mean that the indicator simply does not apply to the site or program

Rating	4	3	2	1	NA
Scale Description	Exceeds Standards	Meets Standard	Approaching Standard	Standard Not Met	Don't Know/ Not Applicable
Program might say:	<i>"We are a leader in this."</i>	<i>"We demonstrate this in observable ways."</i>	<i>"We could use some support here."</i>	<i>"We need significant support in this."</i>	<i>"We're not sure." or "This doesn't pertain to our program."</i>

PROGRAM CULTURE AND ENVIRONMENT

STANDARD 1: THE PROGRAM CREATES AN INSPIRING STEM LEARNING ENVIRONMENT FOR ALL YOUTH

AVERAGE INDICATOR RATING

INDICATOR RATING

1a. The STEM program encourages youth to discover, explore, experiment and take learning risks:

- Staff have received training and are knowledgeable of age appropriate STEM activities
- Activities are hands-on and inquiry-based
- Activities require problem solving and/or critical thinking
- Children/youth suggest and help plan activities
- When introducing activities, staff emphasize that these are not school projects/activities that will be graded. Instead children/youth are told the purpose of the activity is to develop a skill, such as critical thinking, or for discovery purposes
- Staff reinforce and praise children/youth for their willingness to try new things
- Staff encourage children/youth to use technology to explore areas of interest, learn new information, and become more technologically literate

1b. The STEM activity space feels different than school (e.g. youth can sit at work stations or on carpet pieces):

- Children/youth and staff can rearrange the space to meet the needs of the activity
- While planning program activities, staff consider the feasibility of embedding the varied interests of children/youth in each activity
- There are tables or other modifiable furniture structures available to create collaborative work spaces

Rating	4	3	2	1	NA
Scale Description	Exceeds Standards	Meets Standard	Approaching Standard	Standard Not Met	Don't Know/ Not Applicable
Program might say:	<i>"We are a leader in this."</i>	<i>"We demonstrate this in observable ways."</i>	<i>"We could use some support here."</i>	<i>"We need significant support in this."</i>	<i>"We're not sure." or "This doesn't pertain to our program."</i>

PROGRAM CULTURE AND ENVIRONMENT: STANDARD 1 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

1c. The space encourages interest in STEM (e.g., scientific tools, visible posters or other visual displays):

- Materials, posters, etc. are visible and accessible to children/youth
- Materials, posters etc. are connected to current activities/topics
- Materials, posters, etc. connected with the next activity/project/unit are displayed in advance of the introduction of the next activity/project/unit
- Children/youth are encouraged to post articles, materials etc. of interest
- Children/youth are encouraged to explore and ask questions

1d. The space is arranged to maximize STEM learning and exploration (youth have room to do group work, staff assemble together for discussion and group work):

- STEM space is accessible to all children/youth
- There are tables available in the area to facilitate group work
- Materials needed and used in activities are available in the STEM area, or are stored nearby for easy access by children/youth
- There is adequate space available to enable children/youth to participate in group or individual activities without interfering with others

Rating	4	3	2	1	NA
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PROGRAM CULTURE AND ENVIRONMENT

STANDARD 2: STEM RESOURCES, EQUIPMENT, AND SUPPLIES SUPPORT STEM LEARNING

AVERAGE INDICATOR RATING

INDICATOR RATING

2a. Staff and youth have access to resources, equipment and supplies that support STEM learning:

- The program budget has a designated line for STEM related supplies and equipment
- Storage spaces for STEM equipment and supplies is near the STEM space and easily accessible by staff and children/youth

2b. There is an adequate amount of STEM materials for all youth to participate:

- Children/youth rarely need to borrow or share materials when working on projects – unless that is an intended aspect of the project
- For activities requiring children/youth to share (e.g. looking in a microscope or telescope), there is a procedure in place that allows for access and sharing to occur in an orderly fashion
- Staff schedule and present STEM activities in such a way that all children/youth are able to participate (e.g. if materials are in short supply, small groups rotate through different activities, or the same activity is provided for small groups on a rotating basis)

2c. STEM materials are age- and developmentally-appropriate (e.g. larger lined notebook paper for younger youth rather than college rule paper, handouts use appropriate language):

- There are books and other written materials with reading levels that match the ability levels of the children/youth
- Children/youth need limited adult support when working with STEM materials
- Children/youth are appropriately and independently working with STEM materials and demonstrating comprehension

Rating	4	3	2	1	NA
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PROGRAM CULTURE AND ENVIRONMENT: STANDARD 2 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

2d. STEM materials are well maintained and safe to use:

- A procedure is in place for staff to regularly inspect all STEM materials for their safety and working order
- A procedure is in place for cleaning or sanitizing STEM materials that are used by children/youth
- Sensitive or fragile materials are stored in a secure location

2e. Staff and youth use STEM materials safely and appropriately:

- When planning new activities, staff review all equipment and/or materials to determine any safety or informational needs
- Staff receive training (e.g., in-person, virtual, reading manuals/brochures) on how to use unfamiliar equipment and/or materials
- Children/youth are instructed in the proper use of equipment or materials before their use
- Staff provide appropriate supervision during STEM activities

STANDARD 3: THE STEM PROGRAM ENGAGES FAMILIES, SCHOOLS AND COMMUNITY

3a. The program collaborates with schools to share STEM resources and expertise:

- Program administrators work with school principals or other school leaders to develop opportunities for the program to utilize school facilities or equipment for STEM related activities
- A written agreement between the school and the program details terms and conditions of the use of school resources

Rating	4	3	2	1	NA
Scale Description	Exceeds Standards	Meets Standard	Approaching Standard	Standard Not Met	Don't Know/ Not Applicable
Program might say:	<i>"We are a leader in this."</i>	<i>"We demonstrate this in observable ways."</i>	<i>"We could use some support here."</i>	<i>"We need significant support in this."</i>	<i>"We're not sure." or "This doesn't pertain to our program."</i>

PROGRAM CULTURE AND ENVIRONMENT: STANDARD 3 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

- Staff have reviewed appropriate school documents such as curriculum maps, standards, etc., in order to coordinate activities with school curriculum
- Staff are provided the opportunity to attend STEM related training that is offered to school personnel
- STEM family nights are encouraged and promoted through program communications
- Guest speakers from the community are encouraged to attend lessons and provide leadership

3b. The program partners and connects with STEM-rich institutions (e.g. museums, libraries, science centers, and STEM education organizations):

- Literature, posters, etc. related to upcoming, STEM related events in the community are posted in a designated area
- Staff highlight upcoming STEM related activities in the community and encourage children/youth to attend
- Staff from STEM-rich institutions visit the program to lead an activity or make a presentation
- Staff provide opportunities for children/youth to visit appropriate, STEM-rich institutions in the community
- Staff attend training sponsored by STEM-rich institutions

3c. The program engages families in a variety of ways (e.g. family science nights, sending home materials that support STEM at home):

- Staff provide families information regarding upcoming STEM activities or field trips, inviting parents to attend when feasible or appropriate
- There is evidence of regular communications between the program and home regarding STEM related activities that can happen at home, and about upcoming community opportunities open to children/youth and their families
- Weekly themes, activities, and suggestions for home/community activities or opportunities are posted in the program where parents can see them

Rating	4	3	2	1	NA
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PROGRAM CULTURE AND ENVIRONMENT: STANDARD 3 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

- When planning activities, staff consider what links might be made to enable carryover to the home (e.g. recycling activity)
- Through questions and discussions during such activities, staff help children/youth see the feasibility and purpose of carrying the activity over to the home

STAFF DEVELOPMENT AND EXPECTATIONS

STANDARD 4: STAFF RECEIVE PROFESSIONAL DEVELOPMENT THAT INCREASES THEIR CONFIDENCE AND ABILITY TO FACILITATE STEM LEARNING

4a. STEM is integrated into existing trainings and broader program goals:

- The staff handbook contains a section describing how STEM is an integrated component of the overall program and the goals and purposes of STEM
- Staff can describe what STEM is, why it is a part of the overall program, and its purpose
- STEM related goals are clearly embedded within annual program goals

4b. Staff development focuses on youth development and STEM learning:

- Training sessions are based on best practices and current research in child/youth development and are provided by trained, youth professionals
- A portion of the annual, internal training for staff is devoted to STEM learning
- A staff needs assessment, completed annually to determine perceived training needs, includes question(s)/item(s) specific to STEM needs

Rating	4	3	2	1	NA
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STAFF DEVELOPMENT AND EXPECTATIONS: STANDARD 4 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

4c. Staff are exposed to interesting, easy to implement STEM content and curricula:

- Program administrators have researched and explored varied professional resources (e.g. the IN Afterschool Network, Afterschool Alliance, the I-STEM Network) for STEM curriculum and materials
- Program administrators have acquired age appropriate curricula and materials as a result of research
- Staff have received training for the use and implementation of curricula and materials
- Training includes opportunities for staff to have hands-on experiences and trials with materials

4d. Staff learn real world applications of STEM:

- Staff can name workforce needs and skills needed in the workforce, in order to incorporate skill building (i.e. problem solving, collaboration, 21st Century Skills etc.) into activities
- Staff can describe how a STEM activity applies to a real world situation
- Activities are designed to align with real world applications (e.g. service learning projects, water conservation)
- Children/youth can transfer knowledge and describe how a STEM activity relates to a real world situation

4e. Staff learn to use the inquiry process and other methods for teaching informal STEM:

- Program administrators choose best practice models (e.g. the National Partnership for After-School Science and the NOYCE Foundation) for training STEM staff
- Staff attend training that focuses on inquiry-based learning and project-based learning
- Children/youth are engaged in activities that encourage problem solving, questioning, and collaboration

Rating	4	3	2	1	NA
Scale Description	Exceeds Standards	Meets Standard	Approaching Standard	Standard Not Met	Don't Know/ Not Applicable
Program might say:	<i>"We are a leader in this."</i>	<i>"We demonstrate this in observable ways."</i>	<i>"We could use some support here."</i>	<i>"We need significant support in this."</i>	<i>"We're not sure." or "This doesn't pertain to our program."</i>

STAFF DEVELOPMENT AND EXPECTATIONS: STANDARD 4 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

4f. Staff are resource gatherers, knowing where to find expertise and how to use it:

- A collection of resources has been developed and is onsite for staff use
- Staff can identify where, when, and how outside resources are used in the design or implementation of activities
- The resource guide is used for planning and designing program activities and for staff development

4g. Staff learn from STEM experts in the community:

- Local businesspeople make presentations to staff regarding the workforce and the skills required of entry level employees and the possibilities of collaborations between business and the program
- Local school personnel make presentations to staff regarding STEM education
- Local experts are invited to observe and/or participate in activities and give feedback to staff
- The program's advisory committee or self-assessment team includes a local expert in STEM education

4h. Staff are partnership builders, actively engaging STEM experts and organizations to support STEM programming:

- STEM experts have made presentations to the staff
- STEM experts regularly visit the program to observe, provide feedback, or lead/participate in activities for children/youth
- Materials and supplies, or funds for materials and supplies have been donated by local or state organizations or individuals
- Staff have received training regarding on available STEM experts are and potential opportunities for partnering

Rating	4	3	2	1	NA
Scale Description	Exceeds Standards	Meets Standard	Approaching Standard	Standard Not Met	Don't Know/ Not Applicable
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STAFF DEVELOPMENT AND EXPECTATIONS: STANDARD 4 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

- The training includes a suggested script to use when making initial contact or when reaching out for support

4i. Staff are encouraged to learn alongside youth and facilitate ways to find answers:

- Staff are actively engaged with children/youth during activities
- Staff ask children/youth questions that include "how," "why," and/or "what do you think?"
- Staff model the inquiry process and to show children that some issues are so complex in order to demonstrate that there may not be a definitive answer, or that identifying a solution is a process that requires speculation and inquiry

PROGRAM FOCUS

STANDARD 5: ACTIVITIES INSPIRE AND ENGAGE YOUTH IN STEM LEARNING

5a. Activities are fun, hands-on, active, and experiential:

- Children/youth are actively engaged in each STEM activity
- Children/youth enjoy the activity as evidenced by: talking to each other about the activity, asking inquisitive questions during the activity; smiling, etc.
- Activities require children/youth to interact with and use manipulatives or other tangible materials that might be novel to them
- Activities often have no clear cut answer or solution, thus requiring thought and trial and error to reach a conclusion or solution
- Staff reinforce and praise children/youth for their willingness to try new things

Rating	4	3	2	1	NA
Scale Description	Exceeds Standards	Meets Standard	Approaching Standard	Standard Not Met	Don't Know/ Not Applicable
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PROGRAM FOCUS: STANDARD 5 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

5b. Activities are collaborative and use a team-based approach:

- Staff design activities that require children/youth work together
- Children/youth work toward a common goal, divide tasks, and help each other
- Staff model a collaborative approach by their interactions with each other in the presence of children/youth
- Some activities require teams to complete different components and then work together as a larger team to develop the final product
- Staff use best practices for cooperative learning

5c. Youth identify topics and questions of interest:

- Staff engage in conversation with children/youth and question children/youth regarding interests or problems/issues in their community that they are aware of or interested in
- A child/youth advisory group regularly meets with staff to discuss future activities/projects
- Staff present scenarios to children/youth that illustrate relevant questions and issues, and allow children/youth to choose what they would like to explore

5d. Activities connect to the interests, experiences, and cultures of youth participants:

- Activities are age appropriate and culturally relevant
- The makeup of the child/youth advisory group reflects the diversity of the children/youth in the program
- Final products and displays reflect a variety of cultures
- Staff talk to students individually or in small groups and utilize probing questions to determine interests or previous experiences

Rating	4	3	2	1	NA
Scale Description	Exceeds Standards	Meets Standard	Approaching Standard	Standard Not Met	Don't Know/ Not Applicable
Program might say:	<i>"We are a leader in this."</i>	<i>"We demonstrate this in observable ways."</i>	<i>"We could use some support here."</i>	<i>"We need significant support in this."</i>	<i>"We're not sure." or "This doesn't pertain to our program."</i>

PROGRAM FOCUS: STANDARD 5 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

5e. Youth learn how STEM connects to their daily lives and the world in which they live:

- Through a variety of media, children/youth are exposed to real life scenarios that demonstrate how STEM skills can help lead to new products, solutions, advancements
- Children/youth are presented with real life problems or issues as a task/activity that is to lead to a possible solution
- Children/youth visit sites in the community that will help them make connections between STEM skills and real life situations
- Children/youth participate in service learning projects incorporating STEM skills
- Visitors/speakers present information to show the link between situations, businesses, etc. in the community and STEM (e.g. dealing with pollution, how a startup business came to be)

5f. Youth have opportunities to experience STEM learning through projects:

- Products resulting from projects are on display
- Staff have received training in project based and cooperative learning
- Children/youth work on service learning projects

5g. Youth have opportunities to practice new skills, present and showcase their work to guests:

- Staff design activities that enable students to practice and refine skills recently learned in earlier activities
- Staff help children/youth target a new STEM related skill they would like to learn
- Parents, community members, etc., are invited to attend demonstrations by children/youth or to observe children/youth as they work on an activity or project
- Displays of products are regularly changed and displayed throughout the year

Rating	4	3	2	1	NA
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PROGRAM FOCUS

STANDARD 6: THE PROGRAM PROVIDES OPPORTUNITIES FOR YOUTH TO LEARN STEM CONTENT, SKILLS AND KNOWLEDGE

AVERAGE INDICATOR RATING

INDICATOR RATING

6a. The program has a STEM curriculum that supports youth learning:

- Staff are aware of STEM related curriculum and activities utilized in the school program
- Program has purchased and/or adopted a STEM curriculum that has been endorsed or researched by a nationally recognized organization
- Staff have received training in the use and application of the adopted curriculum

6b. Common core standards inform STEM planning:

- Through communications with teachers, staff are aware of the standards being addressed in the classrooms of the children/youth in the program throughout the year
- Staff have access to curriculum maps utilized by schools
- Staff review curriculum map(s) as they plan upcoming activities incorporating STEM
- Staff can name the standards being emphasized in an activity or project

6c. Program curricula and activities complement school day learning:

- Through communications with teachers and with children/youth, staff stay informed of current and upcoming curriculum, standards, and activities being utilized in the school classrooms of children/youth
- Staff design activities or projects related to those in the classroom, or provide children/youth with extended time during afterschool time to do more in depth work on a current classroom based activity
- Staff request monthly updates of classroom instructional units
- Staff help students make the link from classroom activities to afterschool activities

Rating	4	3	2	1	NA
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Program might say:	<i>"We are a leader in this."</i>	<i>"We demonstrate this in observable ways."</i>	<i>"We could use some support here."</i>	<i>"We need significant support in this."</i>	<i>"We're not sure." or "This doesn't pertain to our program."</i>

PROGRAM FOCUS: STANDARD 6 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

6d. Activities develop higher-order thinking skills (e.g. inquiry, decision making, planning, problem solving, and reflecting):

- Staff have received training related to incorporating scientific reasoning in activities and projects and training in how children learn in a variety of ways
- Staff explain to children/youth and use vocabulary identifying the various thinking skills children/youth can/will use
- Staff differentiate expectations for children/youth
- Children/youth use a variety of methods for working on and solving problems in all activities
- Bloom's Taxonomy is posted for staff to reference and consider when planning

6e. Youth have opportunities to apply scientific reasoning (e.g. manipulating, testing, investigating, predicting, questioning, and observing):

- Staff design activities that require children/youth to use a variety of scientific reasoning strategies
- The scientific method is posted for all children/youth to see and refer to during STEM programming
- Children/youth are prompted in the use of these strategies in STEM related activities, as well as work in other areas

6f. STEM activities include a variety of subject areas (e.g. reading, writing, and art):

- When planning STEM activities/projects, staff consider what other subject areas can appropriately be incorporated
- When planning any activity, staff consider STEM principles, and a multidisciplinary approach
- Staff point out connections across subjects to children/youth and emphasize that the skills are not isolated by subject
- Staff training emphasizes the importance of being aware of the interdisciplinary nature of activities/projects for children/youth

Rating	4	3	2	1	NA
Scale Description	Exceeds Standards	Meets Standard	Approaching Standard	Standard Not Met	Don't Know/ Not Applicable
Program might say:	<i>"We are a leader in this."</i>	<i>"We demonstrate this in observable ways."</i>	<i>"We could use some support here."</i>	<i>"We need significant support in this."</i>	<i>"We're not sure." or "This doesn't pertain to our program."</i>

PROGRAM FOCUS: STANDARD 6 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

6g. Youth have opportunities to learn about and explore STEM careers:

- Various media (posters, brochures, videos, etc.) are available on site to illustrate STEM related career opportunities
- Internships or shadowing opportunities are available for youth
- Children/youth visit various STEM related businesses or sites to gain awareness
- Persons working in STEM related careers visit the program and talk with children/youth about their career/job
- Children/youth have access to exploring personal STEM career interests through a project or inventory

DATA COLLECTION AND IMPACT

STANDARD 7: THE PROGRAM UTILIZES A VARIETY OF DATA TO MEASURE THE IMPACT OF ITS STEM PROGRAMMING

7a. The program has a written plan with established goals:

- An annual action plan, describing program goals for the year, is designed in collaboration with staff, board, parents, and children/youth
- Goals related to STEM are included or embedded in program goals

7b. The program collects data from staff, students, parents, and community partners to demonstrate STEM learning:

- Program stakeholders complete a survey based on program goals and outcomes
- The Quality Program Self Assessment team, in consultation with the program evaluator, has established what data can be used for demonstration of STEM learning

Rating	4	3	2	1	NA
Scale Description	Exceeds Standards	Meets Standard	Approaching Standard	Standard Not Met	Don't Know/ Not Applicable
Program might say:	<i>"We are a leader in this."</i>	<i>"We demonstrate this in observable ways."</i>	<i>"We could use some support here."</i>	<i>"We need significant support in this."</i>	<i>"We're not sure." or "This doesn't pertain to our program."</i>

DATA COLLECTION AND IMPACT: STANDARD 7 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

- Data routinely collected for the overall program evaluation includes items reflecting STEM related principles and goals
- An external evaluator assess program efficiency and quality using a standards-based observation tool, such as "Dimension of Success"(DoS)

7c. Programming is adjusted based on data findings:

- The annual program evaluation is reviewed by program administrators, board, and stakeholders
- The evaluation information is used to adjust program goals based on areas of need noted in the evaluation
- Program administrators meet with staff to review evaluation results
- Administrators and staff collaborate to decide on needed changes in programming based on evaluation report and annual program plan

7d. The program shares the progress and outcomes with key stakeholders:

- Program administrators meet with stakeholders to review the program evaluation report
- Stakeholders and administrators discuss evaluation results and identify areas in need of improvement

7e. The program maintains confidentiality of all student data and adheres to all federal, state, and local privacy laws:

- There is a written policy and procedures describing the maintenance of child/youth files
- The policy and procedures detail what should and should not be maintained in a file
- Files of children/youth are stored in a secure location easily accessible to staff
- Parents are notified of the confidentiality of records and a procedure for parent access to records is in place

Rating	4	3	2	1	NA
Scale Description	Exceeds Standards	Meets Standard	Approaching Standard	Standard Not Met	Don't Know/ Not Applicable
Program might say:	<i>"We are a leader in this."</i>	<i>"We demonstrate this in observable ways."</i>	<i>"We could use some support here."</i>	<i>"We need significant support in this."</i>	<i>"We're not sure." or "This doesn't pertain to our program."</i>

DATA COLLECTION AND IMPACT: STANDARD 7 continued

AVERAGE INDICATOR RATING

INDICATOR RATING

- The site director provides parent access and remains with parent while file is being reviewed
- Policy regarding confidentiality of child/youth files is reviewed with all staff at beginning of program year

Partners

The following organizations are part of the Indiana Afterschool STEM Taskforce and contributed to the development of the Indiana Afterschool STEM Standards:

- 4-H Youth Development, Purdue University
- EcO15 (Economic Opportunities 2015)
- Indiana Afterschool Network
- Indiana Association of School Principals
- Indiana Department of Education
- Indiana Space Grant Consortium, Purdue University
- Indiana University Center for Evaluation and Education Policy
- Indiana University-Purdue University at Columbus (IUPUC)
- Indiana University-Purdue University at Indianapolis (IUPUI)
- Indiana FIRST Robotics
- I-STEM Network
- Marian University
- Precise Path Robotics
- Purdue University School of Engineering
- Safe Harbor Afterschool Program, Michigan City
- University of Indianapolis, CELL
- WisdomTools, Inc.

Sources

Afterschool Alliance (September 2011). STEM Learning in Afterschool: An Analysis of Impact and Outcomes. <http://www.afterschoolalliance.org/documents/STEM-Afterschool-Outcomes.pdf>.

Jason Freeman, Rena Dorph, Ph.D. and Bernadette Chi, Ph.D. (January 2009). Strengthening After-School STEM Staff Development. http://afterschoolscience.org/pdf/coalition_publications/Strengthening%20After-School%20STEM%20Staff%20Development.pdf.

Kamla Modi, Ph.D., Judy Schoenberg, Ed.M., and Kimberlee Salmond, M.P.P. (2012). Generation STEM: What girls Say about Science Technology, Engineering and Math. New York, NY: Girl Scouts of the USA). http://www.girlscouts.org/research/publications/stem/generation_stem_what_girls_say.asp.

National Research Council (2009). Learning Science in Informal Environments: People, Places, and Pursuits. Washington, DC: The National Academies Press.

Program in Education, Afterschool & Resiliency (2010), Dimensions of Success Rubric. (Harvard University, 2012), 6-27.

Program in Education, Afterschool & Resiliency (2010), Dimensions of Success Rubric. (Harvard University, 2012), 6-27.

Jason Freeman, Rena Dorph, Ph.D.m and Bernadette Chi, Ph.D. Strengthening After-School STEM Staff Development, http://afterschoolscience.org/pdf/coalition_publications/Strengthening%20After-School%20STEM%20Staff%20Development.pdf (January 2009).

For more information about the Indiana Afterschool Standards and STEM resources, go to www.indianaafterschool.org.



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