PALM BEACH COUNTY STEM INITIATIVE

A Productive Partnership Between
The School District of Palm Beach County & The University of Florida Lastinger Center for Learning

September 16, 2016

A PRODUCTIVE PARTNERSHIP

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FLORIDA DEPARTMENT OF EDUCATION fldoe.org

THE STEM SCHOOL CERTIFICATION RUBRIC:
AN OVERVIEW

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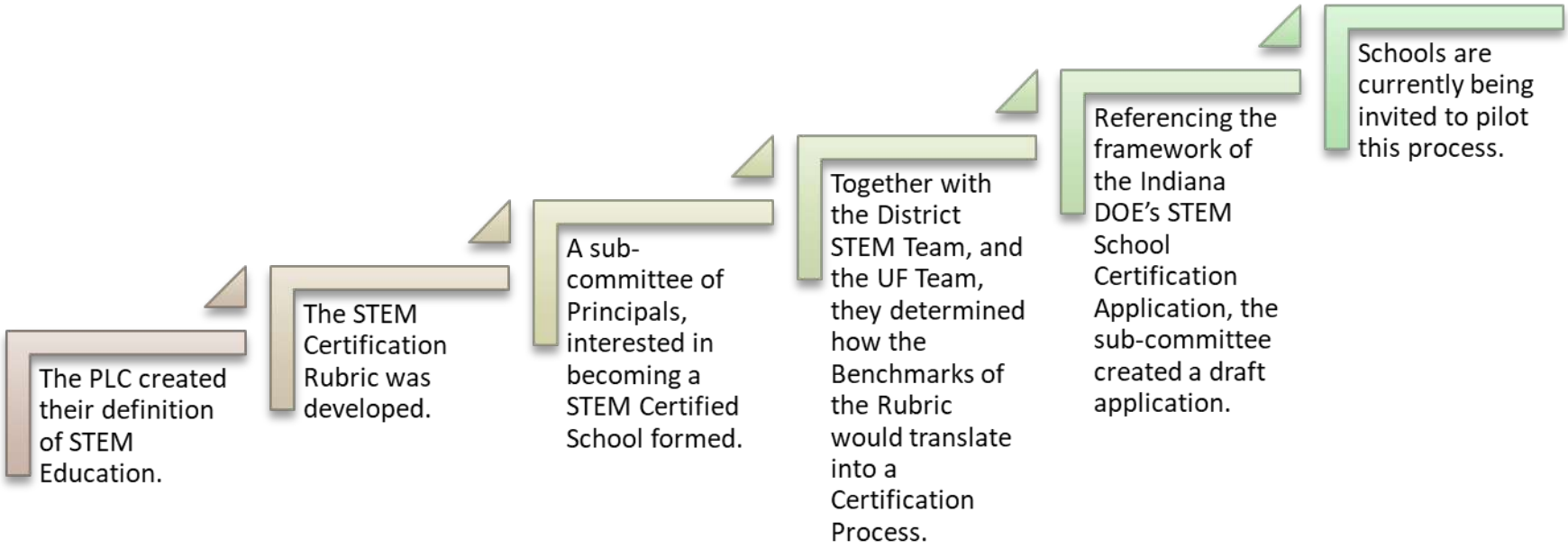
Palm Beach County STEM School Certification Rubric

Benchmark 1: Focus on STEM Mission		
1.1 The school has developed and maintains a shared mission and vision of STEM education.		
Key Element for Success	**Example Artifacts**	
• **Plan integrates STEM into all aspects of learning including reading, writing, and social studies.** • **Clear focus about how the STEM vision and integration is implemented.** • **Staff, Family, and Community awareness of and participation in STEM education**	• **STEM Program Plan (See Template)** • **STEM leadership team (See Template)** • **Evidence of student participation in STEM activities** • **Newsletters, Websites, Bulletin boards** • **Evidence of staff, family & community participation in STEM education**	
Candidate	**Certified**	**Model/Demonstration Site**
Key members of a STEM Leadership Team have been identified and the school has designed a plan to create a STEM program.	A fully-formed STEM Leadership Team has led stakeholders in a collaborative design process to create a STEM Program Plan that is aligned with Palm Beach County STEM Strategic Plan.	A fully-formed STEM Leadership Team has implemented a STEM Program Plan that is aligned with Palm Beach County STEM Strategic Plan. They regularly meet to review and develop the plan further.
A culture of inquiry and creativity exists between and among the students, teachers, and administrators and emphasizes the inclusion of 50% students in the STEM culture.	A culture of inquiry and creativity exists between and among the students, teachers, and administrators and emphasizes the inclusion of 80% students in the STEM culture.	A culture of inquiry and creativity exists between and among the students, teachers, and administrators and emphasizes the inclusion of 100% students in the STEM culture.
School culture honors, encourages, and incentivizes innovation in STEM among students.	School culture consistently honors, encourages, and incentivizes innovation in STEM among students and teachers.	School culture consistently honors, encourages, and incentivizes innovation in STEM among students, teachers, and community.

Steps towards
STEM Certification in Palm Beach County:
SUMMARY



THE STEM CERTIFICATION PROCESS PILOT

PILOTING THE PROCESS: DISTRICT COMMITTEES

STEM Certification Assistance Team

This team works directly with the STEM Leadership Team of the pilot schools to assist them through the certification process. The team may help them interpret the rubric or suggest sample artifacts to collect.

STEM Certification Review Committee

The role of this team is to make the final determination of certification level (candidate, certified, model/demonstration site) for a school under review. This team will examine the binders of the pilot schools and conduct a school site visit before making this decision.

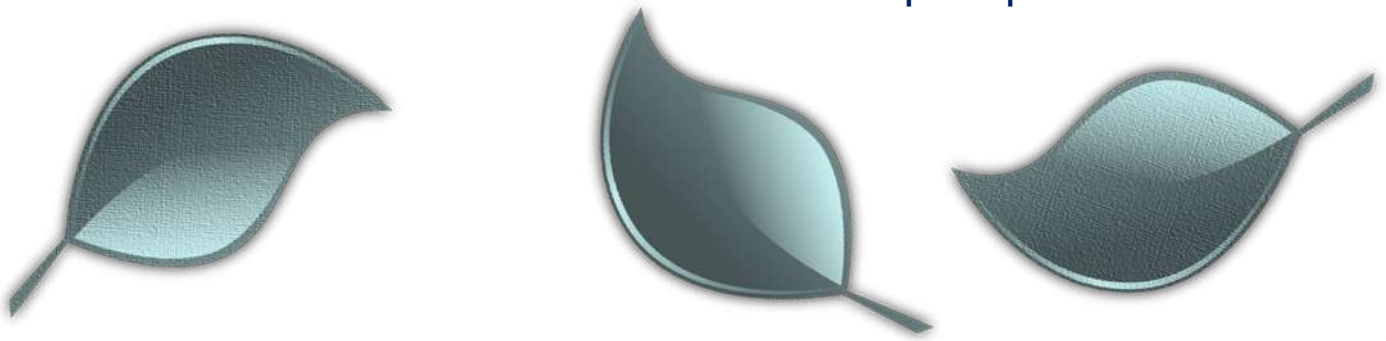
PILOTING THE PROCESS: UF LASTINGER CENTER ROLE

STEM Certification Assistance Team

This team provides training on the rubric; facilitates meetings with STEM Leadership Teams and collects data for research on the pilot process.

STEM Certification Review Committee

The committee provides training on the rubric; inter-rater reliability training for reviewers; facilitates meetings; assists in designing a school site visit protocol and collects data for research on the pilot process.



Resources and Acknowledgements

1. Tina Marcus, North Carolina STEM School Rubric, http://www.dpi.state.nc.us/stem/
2. Gilda Lyons, Georgia STEM School Rubric, https://www.georgiastandards.org/resources/Pages/STEM-Georgia.aspx
3. Texas STEM School Rubric, http://www.tstemblueprint.org/rubric/
4. Outlier Report of Characteristics of Successful STEM Schools (U. of Chicago), http://outlier.uchicago.edu/outlier/resources/stem_schools/
5. Teachers and Title 1 Principals of the School District of Palm Beach County

BENCHMARK ONE: FOCUS ON STEM MISSION

1.1 The school has developed and maintains a shared mission and vision of STEM education.
Examples of development and maintenance: STEM Leadership Team; 80% of students included in STEM culture; culture incentivizes innovations in STEM for students and teachers
Examples of shared mission: monthly communication of progress on STEM Plan; regular meetings with community stakeholders; one-way and two-way communications with community; model STEM classrooms established; participation in local STEM network

BENCHMARK ONE: FOCUS ON STEM MISSION

1.2 The school has allocated time, resources, and facilities to advance the achievement of the STEM education mission & vision.
Examples of time & resources: 70% of teachers participate in PLCs which plan vertically and horizontally for integrated STEM lessons on a monthly basis; funds are allocated to implement STEM strategies and purchase needed technology; stakeholders assist in formulating the STEM Plan and establishing long-term funding streams

Examples of resources & facilities: technology use is ubiquitous; technology is supported and rarely inoperable; space is available for students to virtually collaborate/communicate/plan; exhibition space is provided.

BENCHMARK TWO:
CURRICULUM, INSTRUCTION, AND ASSESSMENT

2.1 The school's curriculum supports the STEM education mission and vision.

Examples: Teacher have access to information regarding STEM resources, STEM career information and best practices for STEM lessons aligned to FL standards; project-and/or problem-based learned are regularly utilized.

BENCHMARK TWO: CURRICULUM, INSTRUCTION, AND ASSESSMENT

2.2 Classroom instruction supports and maintains the STEM education mission and vision.

Examples: Instruction provides explicit integration of STEM disciplines within lessons via project- and/or problem-based learning; instruction is student-centered and team-based; student autonomy is emphasized; students participate in STEM initiatives, competitions, forums; students and teachers have direct experiences with STEM professionals; students and teachers proficiently utilize technology as tools of learning; students receive daily instruction in math and science.

BENCHMARK TWO:
CURRICULUM, INSTRUCTION, AND ASSESSMENT

2.3 The school's assessment practices support and maintain the STEM education mission and vision.
Examples: In addition to state and unit assessments, students are provided multiple indicators of success in STEM areas, using both knowledge- and performance-based assessments.

BENCHMARK THREE: TEACHER SELECTION, DEVELOPMENT, AND RETENTION

3.1 The school's teacher selection process ensures teacher competence in the STEM education mission and vision.
Examples: STEM teachers have applicable state certification; strategies are used to retain high quality STEM teachers

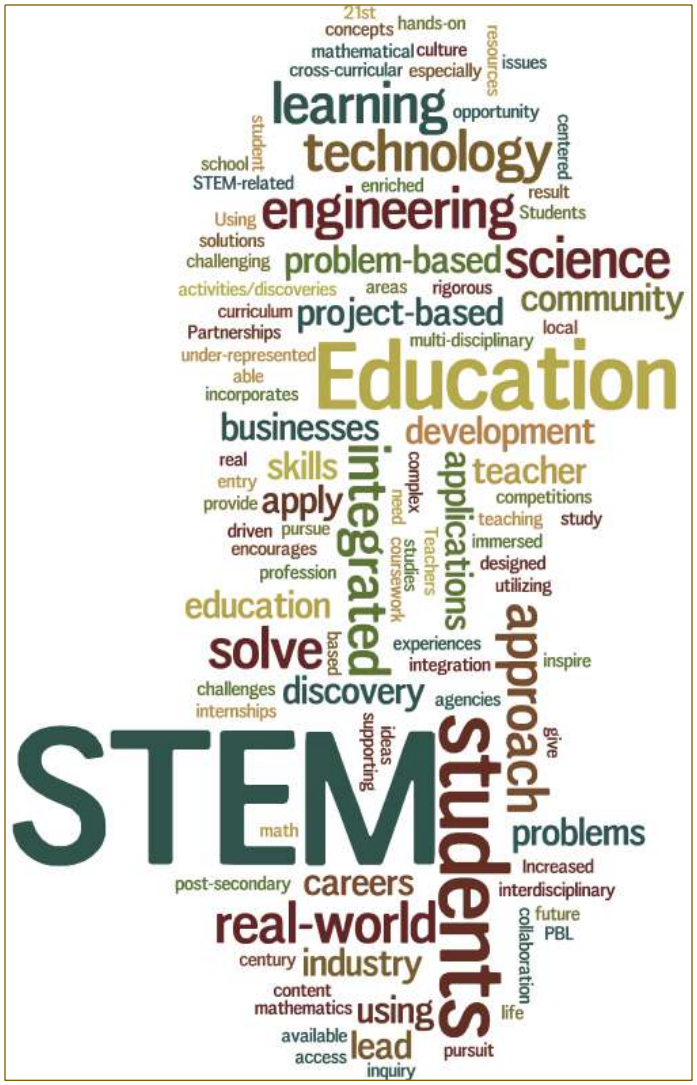
3.2 The school's professional development plan for teachers ensures teacher competence in the STEM education mission and vision.
Examples: Technology PD; on-going STEM-specific PD; evidence of classroom implementation; STEM teachers attend more than one type of PD or an integrated discipline PD.

BENCHMARK FOUR: STRATEGIC ALLIANCES

4.1 The school has created a STEM Program Plan that involves key business, industry, and community partners to support the STEM education mission and vision.
Examples: These key partners are involved in the STEM instructional program 1-4 times per year and are directly connected to in-class learning; students work directly with these key partners during and/or outside school hours.

The STEM Principals Community of Practice

collectively created their definition of STEM Education.



STEM EDUCATION:

STEM Education is an integrated approach to teaching science, technology, engineering, and mathematics through inquiry-based learning. Collaborating with local industry and leveraging community resources, ALL students will develop 21st century skills and a foundation to pursue their potential in STEM careers.