

Presentation of Proposals for Implementation of New Innovative Programs

**Paden Elementary School
Ruby Bridges Elementary School**

May 22, 2017

Timeline

Action	Date
Presentation of Proposals for Planning Activities for New Innovative Programs	May 24, 2016
Program Planning	2016-17
Presentation of Proposals for Program Implementation (Information)	May 22, 2017
Proposals for Program Implementation Approval	June 13, 2017
Proposed Implementation	August 2017

Paden Elementary School's Innovative Program Proposal: Learn and Play by the Bay



Evolution



traditionally

**Smaller, neighborhood,
innovative school on the bay**

**2015-2016=
a unifying
year**

- **Play Sheds established**
- **Existing innovative plans reviewed**
- **Staff united around unique vision for Paden**

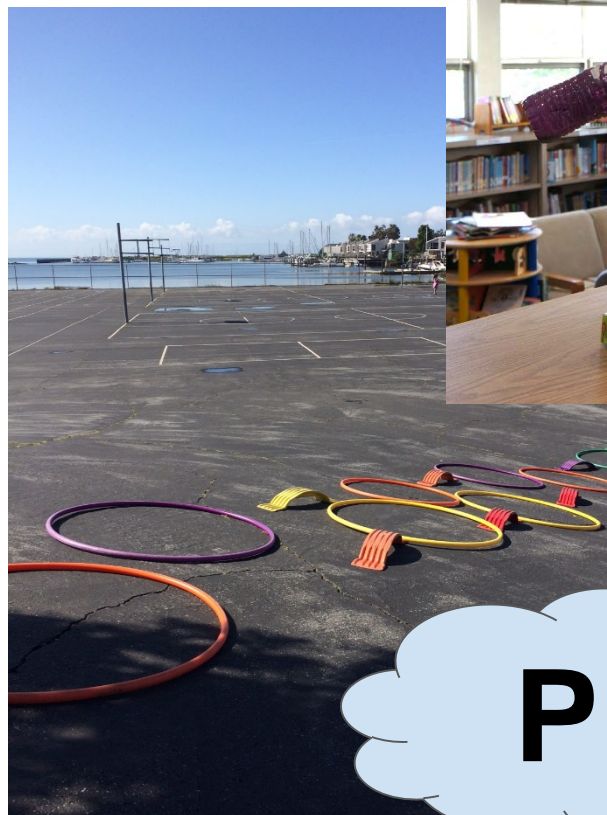
Bay



**Creative
Reuse**



Recycling



Play



Engagement

Paden

Bay

Ocean

Place-Based Education



NGSS

FOSS

Bay Sci

Marine Activities, Resources & Education

Lawrence Hall of Science, Exploratorium,
and Bay Area districts and teachers working
together to advance science education

BaySci
A Partnership for Bay Area Science Education



Recycling

Service Learning

Environmental Literacy

Service

- Trash free lunch

Learning

- collecting data about current trash levels

Service learning

- **students** documenting the results,
- advocating/implementing solutions



Life Skills

Time +

Materials

Play = Learning



Inquiry

Creativity

Tinkering

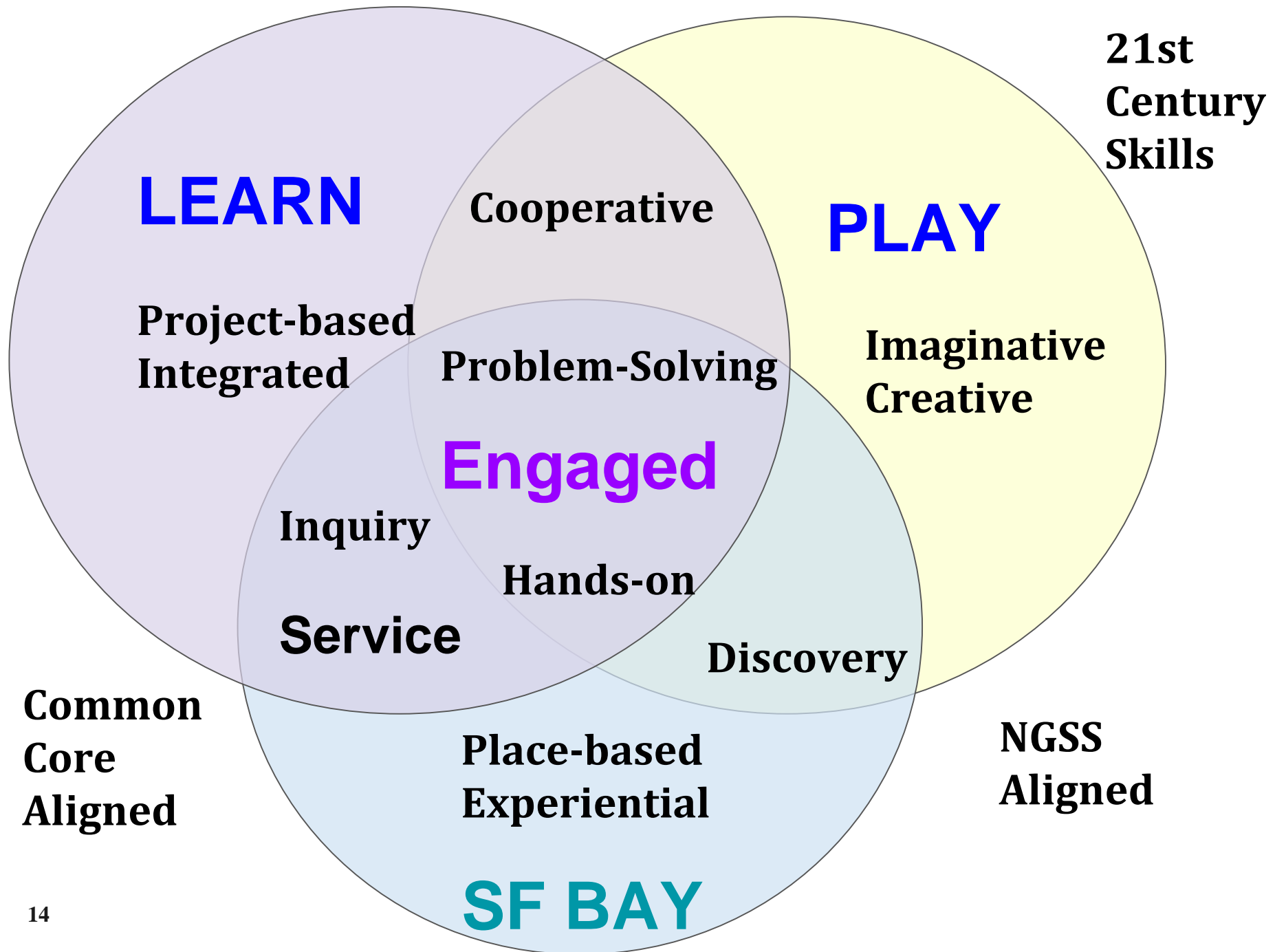
Constructionist Learning





Vision

Paden students engage in work and play to positively impact their well being and that of the planet.



Sustainability

- Teachers will train teachers by fifth year
- Continue to seek out and apply for grants
- PTA supports our efforts and will increase fundraising as the program momentum grows
- Recruit volunteers once program is well-established and tasks and their time commitment are defined by coordinator



Outcomes

If students are encouraged to play creatively, exposed to the world around them, and allowed to set problems and solve them, then we would see these outcomes...

Outcomes

- More student agency: motivation, engagement, and voice
- More imaginative play
- Improved literacy and communication skills
- Increased science competencies
- Fine and gross motor fitness
- Increased parent involvement & student attendance

Budget: Proposed Funding over 5 years

	2017-18	2018-19	2019-20	2020-21	2021-22	Total
Staffing	\$38,370	\$38,370	\$38,370	\$38,370	\$38,370	\$191,850
PD	\$8,400	\$6,400	\$5,400	\$1,400	\$1,400	\$23,000
Materials	\$14,286	\$8,224	\$5,494	\$2,974	\$2,974	\$33,952
Learning Activities	\$8,700	\$8,700	\$10,200	\$7,000	\$9,600	\$44,200
Technology	\$2,734	\$330	\$80	\$80	\$80	\$3,304
Total	\$72,490	\$62,024	\$59,544	\$49,824	\$52,424	\$296,306

*Additional costs associated with preparation of maker space TBD

*Consistent with existing innovative/magnet programs, any approved expenditures would be funded out of the General Fund

District Recommendation

Paden's Learn and Play by the Bay program proposal exemplifies the district's current vision in key areas:

- Implementation of the Next Generation Science Standards (NGSS)
- Environmental Literacy

Staff recommend the approval of Paden Elementary School's Proposed Innovative Program Implementation

Ruby Bridges Elementary Innovative Program Proposal: STEAM



Vision



Science, Technology, Engineering, the **A**rts, and **M**athematics

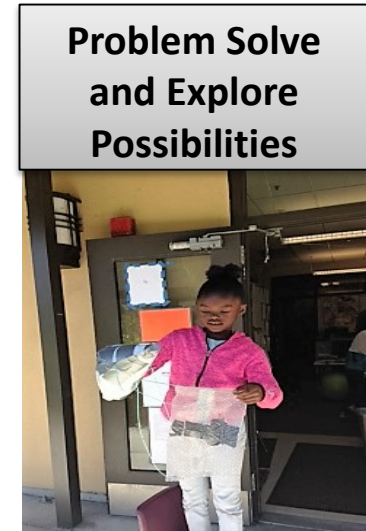
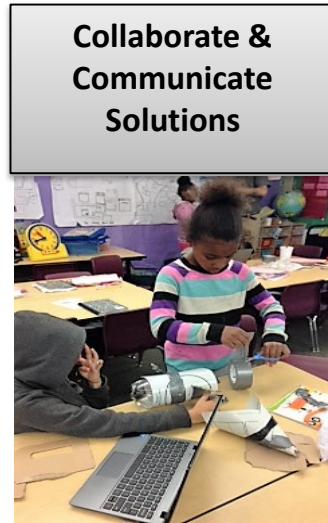
STE@M = Science & Technology, interpreted through Engineering & the Arts, all based in Mathematical elements –STEAM.edu

Through STEAM, Ruby Bridges produces the future designers, inventors, and innovators.

STEAM will be a signature program that sets the Ruby Bridges Stars apart by emphasizing whole-child social-emotional wellness in addition to building collaboration, critical thinking, communication, creativity, and problem solving skills.

Theory of Action

If we facilitate meaningful, reality based instruction so that students learn to...



(Third grade students are learning about rockets: how to design and build rockets that propel.)

Then our students will not only develop 21st century skills required for college and career but also be more motivated, engaged, and curious learners who have developed functional literacy in science, technology, engineering, art, and mathematics. As beginning engineers, they will learn how to define and research problems, refine ideas, find solutions, and test and evaluate those solutions; therefore, their learning experiences will be meaningful and applicable to real-life issues and challenges.

**First graders designing
parachutes.**



**What happens when you place the
parachute in the wind tunnel?**



Why does Ruby Bridges want to implement STEAM?

- To level the playing field for our students who do not have access to technology; technology that can not only be used for creating documents but also to explore and experience the world and learn computer programming skills that may only be taught at school.
- To help students understand how science, technology, engineering, mathematics, and the arts relate to each other and how they apply to real life.
- To empower students to become curious about the role of STEAM and how they can use their knowledge of the subjects to tinker, creatively build, design, and invent structures and products.
- To capitalize on students' innate desire to use their hands which helps develop a conceptual understanding when problem solving; they learn by doing, questioning, listening, and collaborating with others.
- To enhance feelings of competence, confidence, and creativity because students experience learning as a process as opposed to quickly finding one "right" answer.
- To provide a safe place for all students who need support with learning self-regulation skills.
- To teach students how to react and respond to stress at the right time and provide them with the skills to better understand themselves.

Components of STEAM: Project-based Learning and Exploration

Students using technology
multi-media representations
to create posters



Examples of activities that would be done
in our Studio/makerspace



STEAM and Mindfulness Practices used to support the Whole-child and Wellness Program



Wellness liaison will use Mindfulness and social emotional learning practices to help students develop self-discipline and self-regulation skills.

Intervention and special assistance strategies are used to motivate and re-engage students.

STEAM classroom management strategies focus on WE versus ME by providing: PIE, Physical Safety, Intellectual Safety, & Emotional Safety.

Sustainability: Funding, PD, Curriculum, Assessment, and Evaluation

- All classroom teachers and support staff will complete the online STEAM training by October 2017
- Two staff will be certified to implement and create lessons
- All classroom teachers and support staff will receive training re: how to use 3-D printer
- STEAM Coordinator will maintain schedule for all classes to receive lessons on the Studio
- STEAM training includes classroom management and cooperative learning processes
- STEAM training includes lesson plans; lesson plans will be aligned with Common Core State Standards and district/state assessments
- STEAM training includes assessment practices: rubric, portfolios, observations of design, and student interaction
- Online subscriptions for K-5 coding will be funded by school-site
- All technology required for full implementation has already been purchased and delivered
- School funds will be used to pay for any additional staff needed STEAM training
- Teachers will use monthly collaboration time to learn how to use maker materials, share experiences, co-plan lessons, and evaluate lesson implementation as directed by STEAM Coordinators
- Methods for program evaluation and student outcomes has been developed—will be monitored by Leadership Team and STEAM Coordinator

Budget: Proposed Funding over 5 years

	2017-18	2018-19	2019-20	2020-21	2021-22	Total
Staffing	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000
PD						
Materials	\$4,761	\$2,689	\$1,100	\$1,100	\$700	\$10,350
Learning Activities						
Technology						
Total	\$104,761	\$102,689	\$101,100	\$101,100	\$100,700	\$510,350

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District Recommendation

Ruby Bridges' STEAM program proposal is in close alignment with the district's vision for implementation of Next Generation Science Standards (NGSS) and a focus on wellness. It also aligns with similar programs implemented at Earhart Elementary and Wood Middle School.

Staff recommend the approval of Ruby Bridges Elementary School's Proposed Innovative Program Implementation.

Questions?