

EXPERIMENTING



Schools Seeking
STEAM Designation
2020-2021

Osceola Magnet Elementary
Pelican Island Elementary
Glendale Elementary
Rosewood Elementary
Beachland Elementary
Treasure Coast Elementary
Dodgertown Elementary
Gifford Middle School
Storm Grove Middle School
Vero Beach High School

COMMUNICATING

PROBLEM SOLVING

INNOVATING

SDIRC STEAM School Designation Plan

School: Osceola Magnet School

1. **Who are the members of the school's STEAM team? Indicate primary STEAM leader.**
Chadwick Bacon, Natalie Ern, Kathryn Woodall, Janine Jones, Dorie Shemo, Therese Victoria, Courtney Jensen, Kathy Cathcart, Jennifer Morrow, Kristen Bruckner, Brittany Eatman, Heather Young

2. **Please fill out the following chart.**

	Math Proficiency	Science Proficiency
	ACH	ACH
2018-2019 Data	79%	68%
2020-2021 Goals	82%	75%

3. **Briefly describe how incorporating STEAM student learning experiences will support the school's science and mathematics goals.**

STEAM student learning experiences teach students how to think critically and use creativity to solve real world problems. The STEAM educational discipline aims to spark an interest and lifelong love of the arts and sciences in all our students from Kindergarten through 5th grade. STEAM student learning experiences empower our teachers to employ project-based/problem-based learning that crosses each of the five disciplines and fosters an inclusive learning environment in which all students can engage and contribute.

This year Osceola Magnet has implemented the 5E model in conjunction with genuine STEAM student learning experiences to specifically address our schools Science goal of: 66 students out of 88 5th graders achieving a level 3 or higher on state assessments equating to 75% proficiency. 5E is a set of interrelated processes by which students pose questions about the natural world and investigate phenomena; in doing so, students acquire knowledge and develop a rich understanding of concepts, principles, models, and theories. Inquiry is a critical component of a Science, Engineering, and Mathematics program at all grade levels. By taking the 5E approach we are ensuring that content, as well as the teaching and assessment strategies, reflect the acquisition of understanding through inquiry. Students in turn learn STEAM content in a way that reflects its function in real-world practice and as opposed to traditional models of teaching, educators using the STEAM framework bring the disciplines together, leveraging the synergy between the modeling process and math and science content, in order to blur the boundaries between modeling techniques and scientific/mathematical thinking. Through this holistic approach, students are able to exercise both sides of their brain at once.

In addition to the 5E model Osceola Magnet is in the 5th year of implementing Singapore Math Methodology which uses a CPA instructional methodology. Singapore Math in conjunction with genuine STEAM student learning experiences specifically address our schools Math goal of: 212 students out of 265 will achieve a level 3 or higher on state assessment equating to 80% proficiency. When teachers implement the CPA instructional methodology consistently to deliver standards focused lessons, paired with genuine STEAM student learning experiences, they cultivate and facilitate educational learning environment that promote a conceptual understanding rooted in connections from concrete experiences to abstract. Students will make connections over time from concrete experiences to abstract thinking, developing their cognitive processing skills.

4. How will the school incorporate technology into STEAM learning experiences?

Our Engineering units will include a Technology component to ensure that our students are getting the full STEAM learning experience. Three years ago, we converted our Media Center into a "Media & Technology Center." Our Media Specialist has since focused on teaching our students technology skills. One of her roles this next year may be to guide our grade levels to help with the technology learning and implementation within their Engineering units. Through the Fab Lab grant, student-use iPads were purchased to implement various applications including TinkerKad and a 3D printer.

5. How will the school involve stakeholders such as families, community members, and business partners to enrich student learning experiences?

Osceola Magnet has a very long history of parent, community, and business partnerships. As we implement our Engineering magnet focus, we have a committee specifically named "Public Relations" whose primary goals is to involve stakeholders.

6. What supports does the school need from the SDIRC STEAM Team?

We would like the SDIRC STEAM team to visit our school and review our new Engineering units. We would like feedback, specifically, on two areas:

1. Science standards being taught to full extent with each unit
2. Incorporating each component STEAM within each unit and activity

7. What budget have you set aside for STEAM?

We have currently budgeted \$1,100 for implementation of Engineering as our mode of delivering STEAM education to our students. We have additional school-based ideals that will require delving in to a variety of grants. Ultimately, we were allocated \$9914.35 via our Fab Lab grant through the Education Foundation. A hydroponics garden was established as the result of a \$243,94 grant from Florida Farm Bureau. And the AIAA allocated \$496.80 for the STEAM challenge of Aeronautics and Rocket Unit.



SDIRC STEAM School Designation Plan

School: Pelican Island Elementary School

Please save this document and fill it out. Please upload the finalized document into the STEAM Designation Teams Files Folder: School Files.

1. Who are the members of the school's STEAM team? Indicate primary STEAM leader.

Rachel Moree, Jamie Stalter (lead), Meghan Digiacomo, Diane Lott, Kelsey Whelan (others TBD by June)

2. Please fill out the following chart.

	Math Proficiency			Science Proficiency
	ACH	LG	BQ	ACH
2018-2019 Data	48%	44%	38%	40%
2020-2021 Goals	50%	60%	70%	60%

3. Briefly describe how incorporating STEAM student learning experiences will support the school's science and mathematics goals.

As a School of Environmental Science, STEAM learning experiences will be embedded cross-curricularly. The real-world applications of STEAM-learning, paired with hands-on experiences, will provide students a deeper understanding of science and mathematics concepts, allowing for student achievement to increase. Incorporating STEAM student learning experiences will support Pelican Island Elementary School's science and math goals through hands-on, rigorous, complex activities that really push students to excel. PIE is a School of Environmental Science, and each grade level connects their learning to different areas of environmental science. For example, our 3rd grade focuses on recycling, and we are able to help students grow as protectors of the environment while helping them master the science and math standards for the year. Other grade levels focus on gardening, composting, working in our greenhouses, etc. and are able to connect those themes to their math and science standards in a tangible way, leading to real-world experiences for students, helping them truly become advocates for our environment. Incorporating STEAM student learning experiences will support the school's science and mathematics goals by helping students to develop problem solving skills (growth mindset). Students will

work together in a collaborative environment solving real world problems. This will make the math and science content more relatable for them. When teaching students a lesson, we often ask them “why” they are learning a concept. It is often difficult for students to answer that question/tell us why. STEAM will allow them to truly understand the “why” of their learning.

4. How will the school incorporate technology into STEAM learning experiences?

Digital labs and field trips, experiment data collection and graphing using technology-based modalities, use of the online components of the Discovery Education core curriculum, and creatively summarizing experiments and learning using technology presentation methods (PowerPoint, Prezi, DiscoveryEd Board Builder, Creation/Editing of Videos, etc) will incorporate technology. The school will also incorporate technology by having student-created videos to summarize projects (Kizoa/FlipGrid/etc.). Students will use google documents to record data; students will take photographs throughout process. We plan to have a digital journal to showcase the learning and progress students make over the course of each year as they progress through our School of Environmental Science.

5. How will the school involve stakeholders such as families, community members, and business partners to enrich student learning experiences?

In addition to having the stakeholders as part of the STEAM team, families and community members will be regularly invited to participate in experiments. Guest speakers will visit to present aspects related to the topic of study to students. Business partners will pair with classes for increased connections to real-world applications for students, such as through the sale of products developed (compost). The school will involve stakeholders to enrich student learning experiences through our School of Environmental Science approach. We have many tools for enrichment on our campus, including greenhouses, hydroponic gardens, composters, and vegetable gardens. Our goal is to create environmental mindfulness across our campus with an understanding of environmental sustainability. This is a great opportunity for stakeholders to volunteer. We will also embed these resources to create STEAM opportunities for our students. This is all in addition to the ongoing partnerships we have within the community, including the ELC, Pelican Island National Wildlife Refuge, and ORCA.

6. What supports does the school need from the SDIRC STEAM Team?

We would love your support in connecting us with the Audobon Society, along with assisting us with the restoration of the nature trail on our school property.



PELICAN ISLAND ELEMENTARY



SCHOOL OF ENVIRONMENTAL SCIENCE

ONE SMALL SCHOOL, ONE BIG DIFFERENCE.

#WATCHUSGROW

ENVIRONMENTAL SCIENCE STRATEGIC PLAN 2020-2025

Six outcomes comprise the Environmental Science education priorities of this initiative:

1. Increased interest and performance of our students in Environmental Science fields.
2. Increased emphasis on Environmental Science from Pre-K – 5th grade and beyond.
3. High quality STEAM teachers prepared.
4. Our community recognizes the importance of Environmental Science education in leading productive lives that not only create but sustain a positive impact on our planet.
5. A national leader in Environmental Science through STEAM education.
6. Coordinated, complementary and uniform Environmental education opportunities throughout the class, school, and community.

Where we currently stand, what actions need to be taken and what measures might indicate success make up this map to our Small School/Big Difference initiative. Pelican Island Elementary future prosperity and ability to compete in a global economy depend on an inclusive school wide Environmental Science education pipeline of learners and future workers reflective of our increasingly diverse population. This map can lead us there.

Mission: Inspire our Pelicans to adopt practices that will conserve natural resources, promote sustainability, and reduce our waste allowing them to SOAR to Success.

Vision: Empower our Pelicans to make Every Day Earth Day, positively impacting our school, our community, and our world.

Environmental Science education is....

- A lens to view our impact on Earth that prepares students to engage in an everchanging world with a sense of wonder.
- An integrated approach that supports rigorous academic expectations.
- A collaborative, design-thinking approach that embeds inquiry-based learning to integrate science, technology, engineering, mathematics and the arts through environmental science in order to solve real world challenges.

Environmental Science Targets

Target 1 – Environmental Science Culture and Climate

Integrate Environmental Science curriculum to increase collaborative opportunities and rigor, encourage critical thinking, improve student achievement, and enhance personal growth through authentic learning opportunities using standards-based instruction and **project-based learning**.

Target 2 – Environmental Science & STEAM Curriculum Alignment and Student Learning

Implementation of an environmental science/STEAM vertical plan from K-5 that compounds the student learning ultimately preparing our 5th graders to respect themselves, others, and the environment. These **hands-on experiences** will not only connect to standard-based instruction but empower our students to advocate for their community and the environment.

Target 3 – Our Student Learning Improves our Classrooms, Campus, and Community

Impact of our initiative will spread into our community through partnerships with local organizations and projects that raise awareness and provide opportunities to improve the footprint we have on our environment.

Priority Goals

1. Assemble a "Green Team" and create support system that utilizes existing resources and identifies needed supports.
2. Plan an environmental science curriculum and a scheduled roll out.
3. Provide structured professional collaboration opportunities, through professional development, to develop a comprehensive Environmental science PD.

Individualized Action Plan

Priority Goal 1:

Establish EnviSci Vision and the project scope for 2020/2021 school year.

Rationale:

In order to fully integrate the small school/big difference initiative, all stakeholders must be able to understand and communicate the scope of the initiative.

Growth Target:

By August 31st, 2020, an EnviSci vision statement will be completed and published.

How: Write rough draft and get feedback from Green Team. Revise and Edit

Individualized Action Plan

Priority Goal 2:

Create a Green TEAM and create an EnviSci support system that utilizes existing resources and identifies needed supports.

Rationale:

In order to meet Priority Goal 3, identifying resources and supports that exist, and establishing new supports is necessary. These supports should examine and utilize all expertise from parents, teachers, administrators, business, community members and students.

Growth Target:

By August 31st, 2020, a Green Team will have been established.

By January 1st, 2021 support structures will be in place to support EnviSci initiatives.

How: Decide who else needs to be included from school, district, and community.

Timeline, Due dates, Tiers of roll out, etc.

Individualized Action Plan

Priority Goal 3:

Plan an environmental science curriculum and a scheduled roll out.

Rationale:

In order to embed EnviSci into our current curriculum we must create a curriculum that is not only standards driven, but user friendly. (Vertical plan?)

Growth Target:

By January 1st, 2021, an EnviSci curriculum will be created (PLT?) and plan for PD and implementation will be developed.

How: Finalize choice for curriculum, examine needed training, plan said training, and implement.

Individualized Action Plan

Priority Goal 4:

Provide structured professional collaboration opportunities, through professional development, to develop a comprehensive Environmental science PD.

Rationale:

In order to fully integrate the small school/big difference initiative, all stakeholders must be able to understand and communicate the scope of the initiative.

Growth Target:

By January 1st, 2021, a STEAM vision statement will be completed and published.

How: During planning stage, strategically and intentionally schedule PD trainings.



SDIRC STEAM School Designation Plan

School: Glendale Elementary School

Please save this document and fill it out. Please upload the finalized document into the STEAM Designation Teams Files Folder: School Files.

1. Who are the members of the school's STEAM team? Indicate primary STEAM leader.

Adam Faust, Michelle Banack, Jessie Porter- (STEAM Leader), Aimi Medina, Julie Dossantos, Lisa Skinnider, Jennifer Corey, Rene' Koppelman, Jessica Napier, Courtney DiPietro, Essence Okwan, Lauryn McDaniel, Kerrie Walton, Maribel Espinosa

2. Please fill out the following chart.

	Math Proficiency	Science Proficiency
	ACH	ACH
2018-2019 Data	63%	52%
2020-2021 Goals	63%	60%

3. Briefly describe how incorporating STEAM student learning experiences will support the school's science and mathematics goals.

STEAM is an integrated approach to learning. We will continue to work on collaborating across grade levels and subjects to ensure we are incorporating a true STEAM educational opportunity. The STEAM approach will include a minimum of two standards containing Science and Math, as well as technology, engineering, and the arts. The Engineering Design Process will be a focus in our Center for Innovation and will enable students the chance to learn different ways to problem solve in Math, Science and across all educational/life experiences.

4. How will the school incorporate technology into STEAM learning experiences?

Our goal is to thread technology through all content areas. We will use laptops, Thinkpads, and desktop computers for students to utilize various research websites, interactive programs, and programs such as Classroom Architect, Tindercad, and Kodable. We will also plan to continue to use technology for virtual field trips and connect with experts in various scientific and math fields. In the Center for Innovation, we currently have a plethora of robotics including; Ozobot, KIBO, LEGO Sphero, WnderRobotics-Dash, Dot, and CUE.

5. How will the school involve stakeholders such as families, community members, and business partners to enrich student learning experiences?

We will reconnect with our STEAM Partners as we move through the summer-Harbor Branch, ELC, VB Museum of art, UF and ORCA are our current partners. We have had limited connection due to the pandemic but are excited for the coming year. Through those representatives, we hope to form relationships in which students can embark on real-world field experiences, as well as having those stakeholders sharing their expertise with our students at our Glendale Elementary campus. In the 2021-22 school year we will plan four family nights showcasing student work and inviting families to participate in STEAM activities.

6. What supports does the school need from the SDIRC STEAM Team?

We will need access to technology – laptops carts ready and available in each wing. We will need PD for teachers, focusing on support with Vertical planning and more in-depth training on math and science standards. Teachers will need guidance on how to integrate STEAM throughout our entire school culture, ensuring it becomes a way of thinking and not a list of activities. We also will need support connecting the vertical plan moving into the new school year.

7. What budget have you set aside for STEAM?

We have \$545.00 in our Science budget and will look to use some of our SIP budget as well. This will be a fluid number as we build the SIP for 2021-22.



SDIRC STEAM School Designation Plan

School: Rosewood Magnet School

1. Who are the members of the school's STEAM team? Indicate primary STEAM leader.
Casandra Flores (admin- primary contact), Jennifer Norris, Allison Falana (primary contact), Julie Carroll, Samantha Siquig, Megan Stranzin, Lisa Ross, Niki Srigley, Lori Hanlon, Amy Brown

2. Please fill out the following chart.

	Math Proficiency			Science Proficiency
	ACH	LG	BQ	ACH
2018-2019 Data	77	70	57	76
2020-2021 Goals	79	73	65	80

3. Briefly describe how incorporating STEAM student learning experiences will support the school's science and mathematics goals.

By integrating steam experiences into our instruction we will lead students to digging deeper into standards and using higher order thinking skills as they learn material in a cross curricular approach. It will helps us to ensure rigorous instruction as teachers plan units that incorporate STEAM elements throughout all content areas and across the nine weeks periods. Students will explore, get hands on and learn to navigate their own learning based on their curiosities and understandings. Students will become adept in presenting their learning in ways that others can understand and relate to and they will see how their learning relates to real world situations and problems. This will lead them to be better problem solvers, team workers and innovators. They will be better prepared for secondary schools, college and careers. Most importantly, they will be excited about learning. By increasing rigor, cooperative learning, integration across content, and higher order thinking opportunities we will lead our students to increased learning gains and proficiency in both math and science.

We plan to integrate STEAM instruction into our Core Knowledge themes that we do as a magnet program. We use an integrated approach already with our core knowledge themes being spread across social studies, science, reading and math, as well as the performing arts. STEAM will tie right into this approach and allow us to update some materials to relate to current real world situations, problems, discoveries and innovation opportunities. We will look at our planning with a nine weeks approach so we can ensure the materials cross over multiple content areas and are more than just a day or a fun activity.

We will work to incorporate our thinking maps that we have been focusing on to encourage students to use systems to organizing thinking and summarize learning. We will also begin this upcoming year to focus on cooperative learning strategies that will help to create purposeful, organized and meaningful cooperative learning opportunities as students investigate through STEAM experiences.

4. How will the school incorporate technology into STEAM learning experiences?

We will utilize technology to help make information and hands on learning readily available to our students and our teachers. We can use technology for labs, research, collaboration with outside organizations, virtual field trips, expert presenters and curriculum resources. Technology will be a great resource for providing professional learning opportunities for our teachers and parents.

Technology will also be a valuable tool for allowing and encouraging students to use a variety of methods to demonstrate their learning and understanding. They will be able to “show what they know” with more than just typical paper/pencil types of assessments and assignments.

5. How will the school involve stakeholders such as families, community members, and business partners to enrich student learning experiences?

We will begin by informing our parents of what we have been doing over the past couple of years with STEAM and how we started integrating it into our school days. We will share our plans for the next steps and where we are heading with applying for the STEAM designation and integrating it into our Core Knowledge curriculum year round and school wide.

We will look for community partners to help us support students in learning and provide students with opportunities to see how their learning connects to and helps their community and the world. We would like our students to learn how they can contribute to the community around them and what opportunities are available to them within the community.

We will invite families and community to come in when we hold STEAM and Core Knowledge show cases of culminating learning experiences. We will look for business partners to help fund and support STEAM learning experiences for our students throughout the year.

6. What supports does the school need from the SDIRC STEAM Team?

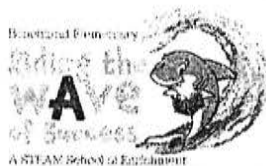
Identifying programs and resources available for students and teachers, connections with programs such as ORCA, Harbor Branch, and Master Gardeners are often used throughout the county and it would be helpful to have a system that it all runs through so we are not all asking the same people and potentially overloading programs and then losing out on opportunities for students to connect with the community.

Professional development and support for teachers as they dive into STEAM and how to integrate it more fully across content areas and throughout an entire school year. Making STEAM an school wide approach, not an activity or unit.

Help with finding funding streams and business partners. Sometimes we may not know the opportunities that are out there.

7. What budget have you set aside for STEAM?

We funded most of our STEAM initiatives this year through a grant from the Education Foundation and our general supplies funds from the school.



STEAM 2020-2021

STEAM Team: **due to COVID, the members of this team changed since June 2020*

1. Diane Jellie
2. Alisa Johnson
3. Vickie Fielder
4. Adrianne Polverari
5. Rachel Finnegan
6. Samantha Crisafulli
7. Lisa Bishop

STEAM Plan: **The Project Lead the Way initiative is an instructional practice relating to science and evident in our 2020-2021 school improvement plan.*

As a STEAM School of Enrichment, all teachers will be enriching the curriculum with real-world application through science standards and Project Lead the Way (PLTW). In addition, two teacher leaders are training Cultural Arts teachers to target all students in real-world problem-solving application through PLTW. Based on science unit assessment scores from 19-20, science standards will be taught in cultural arts as well as in grade level classrooms through PLTW modules and units.

Goal: Unit assessment science scores in third, fourth and fifth will increase with an overall average of 10%.

1. Train Cultural Arts teachers during pre-planning weeks and during one of the first school-based professional development days on Project Lead the Way
2. Project Lead the Way will be infused to the Cultural Arts curriculum every fifth day.
<https://www.pltw.org/our-programs/pltw-launch> (see Cultural Arts schedule)
3. During the first semester, Cultural Arts teachers will complete or be in the process of completing one module with students in grades Kindergarten through fifth grade.
4. Collaboratively plan the Project Lead the Way modules with Cultural Arts teachers (teacher leaders will plan with cultural arts department)

All areas of focus relate directly to school-wide improvement priorities. Focuses and priorities are outlined in the teacher and staff handbook. All teachers were trained on the priorities and focus areas during the pre-planning weeks. Priorities and areas of focus will be discussed and reviewed during learning opportunity meetings bi-weekly during PLCs and during faculty meetings (Ride and Surf Opportunities at BES).

The school leadership will be training all teachers on learning goals/targets and tasks aligned to the rigor of the standard through collaborative planning and utilizing the strategies and school-wide initiatives the school team has been training on. These initiatives include Sanford Harmony, Thinking Maps, and Kagan.



SDIRC STEAM School Designation Plan

School: Treasure Coast Elementary

1. Who are the members of the school's STEAM team? Indicate primary STEAM leader.

Scott Simpson, Felice Heppern, Amy Getchell, Terri Rollins, Chelsea Castillo, Rebecca Palmer, Coletta Murray, Gayle Green, Sandi Benham, Angel Solomon, Gina Venditti, Kim Weese, Daphna Vogel

2. Please fill out the following chart.

	Math Proficiency			Science Proficiency
	ACH	LG	BQ	ACH
2018-2019 Data	66%	44%	37%	45%
2020-2021 Goals	70%	55%	55%	65%

3. Briefly describe how incorporating STEAM student learning experiences will support the school's science and mathematics goals.

We will be integrating STEAM units of instruction with a culminating activity into our classroom approach to teaching and learning. Students will be able to explore various scientific concepts through direct, hands-on learning experiences. All five areas of STEAM (Science, Technology, Engineering, Arts, Mathematics) will be brought together during our STEAM-based enrichment block as well as during the regular learning blocks of times. Students will be better prepared for middle and high school, as well as better prepared for college and career. The goal is for students to be excited and engaged in the learning process in addition to gaining valuable knowledge and skills. Additionally, we expect a direct correlation between our STEAM instruction and higher scores in FSA Mathematics and Science.

We are excited to implement our new schoolwide theme of Marine Science. As we are continuing to teach all Science domains within our state standards, we recognize that many of our STEAM and Science units of study will not incorporate Marine Science. However, we are hopeful to tie as many STEAM units to Marine Science as possible in order to continue to implement and "dive deeper" into Marine Science.

4. How will the school incorporate technology into STEAM learning experiences?

Our STEAM enrichment block and units of study will include a Technology component to ensure that our students are getting the full STEAM learning experience. We will be able to use technology for research, hands-on experiences (robotics, etc.), communication of learning, virtual field trips, and many more areas. Technology will play a central role in the our students' learning opportunities.

5. How will the school involve stakeholders such as families, community members, and business partners to enrich student learning experiences?

As we have been planning for our implementation of Marine Science and STEAM units of study, we have every grade level team member on a "committee" for implementation. In addition to curriculum, we have a committee for Public Relations (families, community), Organizations (e.g., Indian River Lagoon Council, Environmental Learning Center), and Business Partners (fundraising, etc.). Our goal is to create a Marine Science and STEAM program that involves our Treasure Coast Elementary families, our local community, and world-wide organizations.

6. What supports does the school need from the SDIRC STEAM Team?

We are in the beginning stages of developing our Marine Science program. Each grade level is focusing on a different marine animal with a distinct issue to address. For example, 4th Grade is adopting the manatee and will be addressing sea grass loss in the lagoon. While exploring this animal, the grade level will also be developing STEAM units of study around Marine Science and other Science domains. We look forward to feedback from the SDIRC STEAM Team regarding our STEAM units of study and finding the balance of Marine Science and all other Science.

7. What budget have you set aside for STEAM?

We currently planning to budget \$1,000 for implementation of Marine Science and our STEAM units of study. Additionally, we are looking at grants and additional fundraising opportunities during the 2021-2022 school year.



SDIRC STEAM School Designation Plan

School: Dodgertown Elementary School

Please save this document and fill it out. Please upload the finalized document into the STEAM Designation Teams Files Folder: School Files.

1. Who are the members of the school's STEAM team? Indicate primary STEAM leader.

1. Vernetta, Aretha
2. Racine, Kristen
3. Ingram, Raina
4. Miller, Stacey
5. Swanigan, Denise
6. LaViska, Elizabeth **Primary STEAM Leader**
7. Perez, April
8. Gatlin, Dana
9. Daphne Patterson
10. Ti'Rhon Parks
11. Maddalon, Susan

2. Please fill out the following chart.

	Math Proficiency			Science Proficiency
	ACH	LG	BQ	ACH
2018-2019 Data	40	61	58	26
2020-2021 Goals	62	62	62	62

3. Briefly describe how incorporating STEAM student learning experiences will support the school's science and mathematics goals.

1. Offering "hands on" and "minds on" STEAM enrichment opportunities for students, especially in Mathematics and Science, will provide additional engaging learning experiences for students to demonstrate proficiency of grade-level standards in Mathematics and Science.
2. Furthermore, offering an interdisciplinary approach will:
 - Encourage independent thinking, requiring students to think critically through problems, which can be expressed verbally and/or in writing, thereby integrating the highest form of cognition—verbal and written Literacy skills;
 - Utilize goal-oriented learning;
 - Develop problem-solving skills;
 - Engage students in real-world applications;
 - Promote meaningful collaboration; and
 - Empower students to become part of the teaching process.

All of which will support Dodgertown's 2020-2021 Mathematics and Science goals.

4. How will the school incorporate technology into STEAM learning experiences?

1. Robotics (e.g. Spheros, etc.)
 2. Coding through online experiences and hands on experiences.
 3. Digital Learning Systems (e.g. Canvas, MicroSoft Teams, SmartLab Curriculum, etc.)
 4. Presentation Platform (e.g. Prezi, MicroSoft Applications—PowerPoint, Publisher, etc.)
5. How will the school involve stakeholders such as families, community members, and business partners to enrich student learning experiences?
1. Dodgertown Elementary will leverage its Community School Partnership and its core partners to recruit and involve families, community members, business partners, student mentors (such as secondary and post-secondary students or adults) and other stakeholders through membership in our School Advisory Council (SAC) and Parent Teacher Organization (PTO) to support opportunities to enrich student learning experiences and other campus events—such as family nights, parent academies, curriculum nights, etc.
6. What supports does the school need from the SDIRC STEAM Team?
1. Curricular Resources (interdisciplinary approaches, robotics, coding, etc.)
 2. Support and approval of proposed STEAM Lab
 - CreativeLearningSystems.com “SmartLab”
 3. Professional Development for STEAM Resource Teacher, homeroom teachers—especially, interdisciplinary approaches across all subjects—including Art and Music, etc.
7. What budget have you set aside for STEAM?
1. We repurposed budget for a STEAM Resource Teacher
 2. We have budgeted time for PD, PD-to-Practice, and collaboration
8. Professional Development dates and topics
1. PD dates: 8/26/20- What is STEAM, 12/17/20- The Design Process, 1/4/21- 5E Instructional Strategy Planning
 2. Teachers will have an opportunity to express topics that they feel a PD would most benefit the student instruction in accordance to STEAM teaching methods and skills to be delivered during planning times.
9. Specific details on your collaborative planning activities
1. The STEAM Specialist will attend grade level planning to collaborate with grade K-2 teachers at least twice quarterly to plan and support for interdisciplinary lessons that are standards based
 2. The STEAM Specialist will attend grade level planning to collaborate with grade 3-5 teachers at least twice quarterly to plan and support for interdisciplinary lessons that are standards based
 3. AND within a week after a science unit assessment to review the data in order to create differentiated options to meet the needs for individual students.
10. Specific dates for implementation of student experiences
1. STEAM Specialist will implement lessons that are based off the 5E instruction model (Engagement, Exploration, Explanation, Elaboration, and Evaluation) weekly

2. Classroom Teacher will implement STEAM methods/skills that encourage a Constructivist learning environment, once per quarter (at least 4 times a year) on Modified Day Wednesdays; 9/23/20, 11/18/20, 2/24/21, 3/17/21
11. Specific progress monitoring and evidence that your implementation is supporting academic success
1. Students will be required to demonstrate mastery of content through performance-based assessments district unit assessments, interdisciplinary projects, Science Fair and STEAM Fair
 2. Teachers will be facilitators in an environment of student-based learning as students work collaboratively in the Design Process with the use of projects, informal assessments, exit tickets, quick chats, accountable talk etc. will be used to assess and monitor student progress
 3. STEAM Specialist will work hand and hand with grade 3-5 teachers to support data driven instruction. She will also be available during specific times of the day to push in and support science instruction, as directed by the data, after each unit assessment.
 4. STEAM Specialist will progress monitor and work with the BQ students in science, weekly, as to support the classroom teachers.
 5. Evidence that the STEAM implementation is supporting academic success will be data from the performance-based unit assessments
 6. Teachers will observe and monitor students working collaboratively to assess progress in the Design Process (problem solving)
 7. STEAM Specialist or teacher will conference with student after each performance-based unit assessment to develop their personal goals
12. Specific extended learning activities that extend opportunities to the student
1. Community Service projects- Beach clean-up, Recycle Initiative with Waste Management
 2. Community Partners and business partnerships- Children's Home Society, Treasure Coast Community Heath, Indian River State College, Ocean Research & Conservation Association Inc., Staples, First Presbyterian Church of Vero, STEAM Learning Activities extended to after school Extended Day Program
 3. Partnerships that are directly involve with in class learning- Indian River State College, Ocean Research & Conservation Association Inc., Staples, First Presbyterian Church of Vero



SDIRC STEAM School Designation Plan

School: GIFFORD MIDDLE SCHOOL

Please save this document and fill it out. Please upload the finalized document into the STEAM Designation Teams Files Folder: School Files.

1. Who are the members of the school's STEAM team? Indicate primary STEAM leader.

Mrs. Sleeper-Mrs. Susan Ridlen-Mr. John Schwenger-Mr. Jean-Mr. Phelps

Mr. Greenwood-Mr. Tomlinson-Ms. Moran-Ms. Hutchinson-Ms. T. Jones

Mrs. Blidgen, STEAM Leader

2. Please fill out the following chart.

	Math Proficiency			Science Proficiency
	ACH	LG	BQ	ACH
2018-2019 Data	54	50	36	48
2020-2021 Goals	60	55	45	65

3. Briefly describe how incorporating STEAM student learning experiences will support the school's science and mathematics goals.

Both Math and Science decreased from 2018 to 2019, we would incorporate STEAM into our classroom to enhance our current curriculum. One of our focus areas for this year and we will continue next year has been student engagement. We know that students who are authentically engaged in standards-based activities perform better in the classroom and on state assessments. STEAM will support our goals by incorporating those hands-on activities and opportunities to learn outside of the classroom.

4. How will the school incorporate technology into STEAM learning experiences?

We plan to incorporate technology throughout the entire school/student body through themes. Each quarter we will have a designated area of focus theme that each subject area will incorporate into their lessons/activities.

5. How will the school involve stakeholders such as families, community members, and business partners to enrich student learning experiences?

GMS will host quarterly Family Nights, which will include community and business partners.

6. What supports does the school need from the SDIRC team?

Professional Development

Collaborative Lesson Planning

Resources (How and where to obtain them)

7. What budget have you set aside for STEAM?

We currently do not have a budget set aside for STEAM, the budget has not been released yet.



SDIRC STEAM School Designation Plan

School: Storm Grove Middle School

Please save this document and fill it out. Please upload the finalized document into the STEAM Designation Teams Files Folder: School Files.

- 1. Who are the members of the school's STEAM team? Indicate primary STEAM leader.**
Joan Martinelli* (STEAM Leader), Anne Bieber, Dawn Duchemin, Keandra Foster, Chris Taylor, Nancy Demeter, Maria Nasci, Caitlin Harris, Ashley Rollin, Nadine Council, Concetta Hall, Shana Nathaniel, Kim Bryant, Joe Refsland, and Caitlin Petrosky
- 2. Briefly describe how incorporating STEAM student learning experiences will support the school's science and mathematics goals.**

Storm Grove Middle School is a STEAM school focused on the Environment and the Arts, with a team approach. The purpose of the SteamCase is to highlight each teams' projects throughout the year. These projects are collaborative efforts with an environmental theme including Technology, Science, Math, Language Arts, Social Studies and the Arts. The first is the expectation that all students can perform at rigorous academic levels. This expectation is reflected in curriculum and instruction throughout the school such that all students are consistently being challenged to expand their knowledge and skills to solve real world problems. The second purpose of SteamCase is the belief that we can prepare every student for higher intellectual engagement by starting the development of skills and acquisition of knowledge as early as possible. Addressed effectively, the middle school years can provide a powerful opportunity to help all students acquire the knowledge, concepts, and skills needed to be prepared for high school and beyond.

Students will be exposed to STEAM and the curriculum will address individual learning styles and intelligences to meet the diverse needs in the 21st century. Students will be challenged with project-based activities and real-world connections. The curriculum will have a STEAM emphasis on the Arts, Math, and the Environment.

- 3. How will the school incorporate technology into STEAM learning experiences?** We will incorporate technology to help our students with hands on learning experiences. We will continue to use technology for collaboration with all stakeholders, labs, 1-1 devices, curriculum resources (digital textbooks) and our computer labs. Technology incorporates into STEAM

learning experiences by allowing students to become problem solvers and improving learning through deeper experiences unique to technology.

4. **How will the school involve stakeholders such as families, community members, and business partners to enrich student learning experiences?** SGMS will involve all stakeholders by including them in the planning and process of STEAM, during the SAC meetings each month. Throughout the year, we will have conversations with community groups as to how they can participate in student learning.
5. **What supports does the school need from the SDIRC STEAM Team?** Digital Integration Specialists, STEAM Specialists, Math Coaches, and Career Tech Specialists can visit SGMS to support student and staff initiatives.
6. **What budget have you set aside for STEAM?** We propose budgeting \$4000-\$5000 a year for our current initiatives.



VBHS STEAM

SCIENCE, TECHNOLOGY, ENGINEERING, ARTS AND MATH

SDIRC STEAM School Designation Plan

School: Vero Beach High School

Please save this document and fill it out. Please upload the finalized document into the STEAM Designation Teams Files Folder: School Files.

1. **Who are the members of the school's STEAM team? Indicate primary STEAM leader.**
John Martin*, Mary Hiller, Kathy Nestor, Carrie Emmerson, Dan Dickens, Roger Robinet, Malik Bailey, Allison Wright, Nichole Bot, Nichole Mosblech, Jeff Bush, Andy Lewis, Kimya Louis, Alex Chopie... More teachers may be invited based on individual class load.

2. **Please fill out the following chart.**

	Math Proficiency			Science Proficiency
	ACH	LG	BQ	ACH
2018-2019 Data	50%	54%	47%	67%
2020-2021 Goals	54%	58%	52%	72%

3. **Briefly describe how incorporating STEAM student learning experiences will support the school's science and mathematics goals.**

The more STEAM oriented we become the better our student outcomes will be for college and career preparedness. STEAM will help us to further provide the opportunity for each of our students to discover and learn, pursue a fulfilling post-high school pathway and become resilient, lifelong learners and highly productive members of society. It will help us to increase our outcomes as we introduce students to rigorous academic concepts and learning with increased real-world, projectbased experiences. Through an increased focus on STEAM we will make authentic connections between school, community and work experiences for our students.

4. **How will the school incorporate technology into STEAM learning experiences?**

Our school will use technology to help us to develop a host of skills that our students need, from creative thinking and problem solving, to collaboration. By increasing our access that technology offers we can help make STEAM accessible to more students with learning programs, digital textbooks, and the access need to satisfy their curiosities. Through technology, we can personalize instruction more and give students options to dig deeper and improve their learning. Deeper exploration and personalized teaching will provide improved outcomes for our students.

5. **How will the school involve stakeholders such as families, community members, and business partners to enrich student learning experiences?**

Stakeholders will be involved in furthering our student experiences through key partnerships with community organizations and companies who may provide STEAM opportunities to our students through exploration and discovery activities that may be viable experiences by the nature of their operations, so our students see the real world applications of STEAM.

6. **What supports does the school need from the SDIRC STEAM Team?**



VBHS STEAM

SCIENCE, TECHNOLOGY, ENGINEERING, ARTS AND MATH

VERO BEACH HIGH SCHOOL STEAM Implementation

Overview:

VBHS will be undergoing a 3-year STEAM designation journey. This journey has a multitude different facets and working parts that will evolve over the next 3 roll outs. Each roll out will be subsequently more detailed, with the final goal of attaining the SDIRC GOLD DESIGNATION. Our plan has 7 major indicators in which our STEAM Steering Committee will be working as small subgroups to plan and implement at the start of each school year.

Research:

<https://www.act.org/content/dam/act/unsecured/documents/STEM/2017/STEM-Education-in-the-US-2017.pdf>

Vision:

All students at Vero Beach High School will have access to high quality STEAM education and Vero Beach High School will be the leader in the SDIRC in STEM literacy, innovation, and career exploration. This vision will be achieved by pursuing the following three goals as a STEAM School:

- STEAM Literacy and Digital Literacy
- Increase diversity, equity, and inclusion in STEAM based learning
- Prepare STEAM students for post-secondary experiences through career exploration

Mission:

To improve high stakes test scores through:

- Thoughtful implementation of the STEAM strategic plan
- Professional development focusing on STEAM teaching methods and skills
- Collaborative planning to develop standards based cross discipline lessons
- Student learning experiences that are intentionally designed to encourage creative problem-solving thought processes.
- Use of digital integration tools to enhance classroom learning experiences
- Data driven decision making to guide the direction of instruction
- Extended learning activities through job shadowing, internships, guest speakers and business partnerships.



VBHS STEAM

SCIENCE, TECHNOLOGY, ENGINEERING, ARTS AND MATH

Strategic Plan:

Year 1: Bronze STEAM Designation

Infrastructure: Convene a STEAM Steering Committee

- Start branding of VBHS STEAM culture
- Analyze potential positive impacts that can be made at VBHS through STEAM

Professional Development:

- STEAM committee members will participate in Project based learning seminars and attend planning sessions for future strides in STEAM designation.
- Plan for and fund a 4-week planning summer workshop
- Locate and fund an ISD consultant

Collaborative Planning:

- In the first year, the collaborative planning will be limited to the tested subjects. Each collaborative unit will be challenged to incorporate at least one STEAM PBL (Project based learning) per 9 weeks
- Plan for and facilitate collaborative planning times for Co-Teach subjects

Student learning Experiences:

- Through STEAM Co-Teach activities, students will start to use STEAM methods and skills along with technology integration. The 10th grade Cohort for the 21-22 school year will be the starting place for our STEAM Co-Teach Initiative.

Data driven decision making:

- Each of the collaborative planning teams will identify standards with the greatest opportunity for growth based on the 19'-20' school year assessment data paired with the 18-19' school year FSA/EOC data. The goal would be to fully understand the needs of the students based on data and tailor the STEAM PBL experience to those areas with the greatest opportunity for growth.

Extended Learning Activities:

- VBHS already offers a wide range of afterschool STEAM type of clubs and in-school CTE courses. In the first year, VBHS will not expand on this front but instead better advertise the "Wins" that our students are experiencing through these spectacular programs. In the first year of implementation, VBHS and its STEAM stakeholders will work to build community relationships, focusing on businesses and community leaders interested in being a part of VBHS's journey to STEAM designation.
- VBHS STEAM will survey its students about possible STEAM related extracurricular interest in the first week of May