

**An Implementation Plan for a Voyage Scale Model Solar System in
Chalmette, LA**

SECTION 1 – The Coversheet - Partner Organizations and Contacts (no page limit)

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Lead Organization

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Partner Organizations

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Organization Name: St. Bernard Parish Government
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Organizational Point of Contact: Ronald Alonso, 504-278-4200

Organization Name: St. Bernard Chamber of Commerce
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Organization Name: The Arlene and Joseph Meraux Charitable Foundation
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SECTION 2 – The Community (1 page limit)

Chalmette, LA is a town in St. Bernard Parish located less than 30 minutes away downriver from downtown New Orleans, LA with a lot of history. It is home to Chalmette Battlefield which is the site of the 1815 Battle of New Orleans which is considered the last great battle in the War of 1812.

One of the major assets in Chalmette is Nunez Community College, which has been serving the community for many decades and has one main campus that is centrally located in Chalmette. Nunez Community College is a student-centered institution that delivers relevant and innovative curriculum integrating the arts, sciences, and humanities leading to academic credentials and workforce opportunities. Nunez serves a vital role in the community by engaging with partners to support student success and personal growth. Nunez is part of the Louisiana Community and Technical College System.

Serving almost 2400 students and multiple parishes and states we focus on making education attainable for many students in our community. Our student body is very diverse with 53.8% non white students and 63% female students. This also allows us to expose STEM to those who have historically been more excluded from it. We also work closely with local businesses and industry having 75+ partners and using their feedback in our more than 25 unique academic & technical programs.

One of the many hands-on programs that we offer is unique because Nunez is the only school in the state of Louisiana that offers it: the Aerospace Manufacturing Technology program. This program focuses on training Aerospace Technicians who have been going to work at local NASA facilities helping to build the Space Launch System and the Orion Spacecraft. This means that the pipeline of students who become connected to space in elementary or middle school have a clear path forward if they desire to make aerospace their future in high school or college.

As partner organizations we have the:

- St. Bernard Parish School Board which comprises 12 local schools and 7800 students
- St. Bernard Parish Government which oversees Chalmette and the surrounding towns
- St. Bernard Parish Chamber of Commerce which focuses on the success of the business community
- NASA Michoud Assembly Facility which is houses hundreds of local workers focused towards the aerospace industry
- Mereux Foundation which is a private 501(c)(3) nonprofit organization that was established by Arlene Meraux to benefit the community of St. Bernard Parish by leveraging its landholdings
- GNO the economic development group for the Greater New Orleans region, which St. Bernard is part of

SECTION 3 – Your Strategic Objectives In STEM (1 page limit)

When Nunez became aware of the Voyage Mark II Scale Model Solar System Exhibition availability, it seemed like a natural component that our campus should have. Just a couple of years earlier Nunez had started the Aerospace Manufacturing Technology program to train local individuals to become Aerospace Technicians to assist NASA and local manufacturing industry partners. It is not well known, but American's Rocket Factory, the Michoud Assembly Facility (MAF), is located in New Orleans and just 5 minutes away from the Nunez campus. MAF has actually been a part of every single manned space mission by the USA.

Since one of the Nunez goals is to make the region into a national aerospace manufacturing hub we want to engage the community in STEM and Space related experiences and education. We believe this exhibition will thrill and inspire further exploration in an outdoors setting where K-16 students, families, educators and the public can gather and engage with each other, and the wonders of Space.

The mission of the Science, Technology, Engineering, Art, and Math (STEAM) department at Nunez Community College is the proliferation of STEAM and it's related skills. STEAM is essential to ensuring that American workers are competitive in both local and national arenas. As community educators it is our mission to prepare a highly skilled and internationally competitive workforce. This STEAM based achievement gap must be addressed. Large scale change starts locally and the STEAM Department at Nunez Community College is poised to deliver many opportunities to deepen the STEAM experience of Southeastern Louisiana.

Nunez currently puts on NeuroCamps which allow students to fly drones with their minds. We also do 3D printing bootcamps to turn ideas into objects. CAD and coding are also part of our offerings.

So much of that can be tied to the Voyage exhibit because space is such an inspirational concept to anyone of any age that it can easily catch attention and curiosity. We can incorporate Voyage in the NeuroCamp and have students fly a drone physically from one planetary body to the next, and then discuss what that flight would look like in space. The obstacles encountered and how much time it would take. Students can explore Voyage and then go to the 3d printing lab and create their own 3D models, much like the ones they saw on the exhibit, to take home. CAD can be used to make static digital representations of our solar system. Coding can be incorporated to enhance those computer visuals of the solar system, and even make dynamic models.

Our STEAM program here also focuses on math, so having students work with the scale of the model would be another possibility. Art is also included, so we can have students then draw or paint their own representations of the solar system.

We already have a STEAM group with multiple people who support it on our campus to work these initiatives, and a community that has seen our camps for multiple years now that would jump at the chance for new depths of engagement.

SECTION 4 – Proposed Community Engagement (2 page limit)

Multiple entities in our community are thrilled about bringing the Voyage exhibit to our campus and therefore to our community.

The St. Bernard Parish School Board has prioritized STEM education for nearly a decade in the traditional K-12 public school system. The Maumus Center, their own science center and planetarium, serves the children of St. Bernard and our greater community by providing opportunities for lifelong STEM learning through interactive and multidisciplinary exhibits. The Maumus Center has thousands of visitors per year, offering a summer learning program as well as educational experiences throughout the school year. The district is excited for the opportunity to continue to enrich our students' experiences with the sciences through our partnership with Nunez and the utilization of the Voyage Mark II exhibit. They plan to utilize the exhibit in conjunction with the planetarium and by embedding it into the science curriculum for multiple grade levels.

Our local government has a strategic interest in local STEM, education and training initiatives due to their role as a workforce and educational partner. With a vision to provide a well planned

community with equal opportunity for all, having the voyage exhibit on the Nunez campus is a no brainer. We believe in Nunez and the Aerospace program, as seen by our recent donation of a building and property to house the growing Aerospace Manufacturing Technology Program. The St. Bernard Parish Government plans to utilize the Voyage Mark II exhibit as both an artistic and educational experience for residents and tourists alike. They would be able to utilize the exhibit as an improvement to our community's quality of life as the signature initiative to go along with our existing public sun calendar and planetarium.

The St. Bernard Chamber of Commerce is focused on providing resources and representation essential to the success of our business community and also support the Voyage exhibit erecting in our community. They are interested in working with Nunez to take advantage of the exhibit in both educational and artistic experience for community partners and a group that probably does not get associated with educational endeavours: the local businesses. They would be interested in holding events at the exhibit and having local businesses take advantage of it for their own custom goals.

NASA MAF was pleased to learn about the Voyage Mark II project proposed at Nunez. NASA as an organization has a strategic interest in STEM and education initiatives nationally. At NASA's Michoud Assembly Facility, they are supportive of such initiatives in Louisiana because they are key to maintaining a workforce that enables NASA, along with our partners Boeing and Lockheed Martin, to continue to produce the Space Launch System rocket and the Orion capsule in New Orleans. The exhibit has the potential to enhance the program at Nunez training aerospace technicians. They are excited to learn of projects like this which strive to increase the awareness of aerospace careers and opportunities in the region for students, residents, and community stakeholders. NASA MAF looks forward to opportunities for collaboration related to STEM education with the Voyage exhibit.

The Meraux Foundation has a strategic interest in fostering access to all facets of STEM and to provide our community members and partners the tools and inspiration to succeed in the 21st century and beyond. They are excited to partner with Nunez Community College and make the Voyage Mark II exhibit an artistic, educational and inspirational experience for students and residents in St. Bernard Parish and beyond.

The Greater New Orleans Economic Development Organization has a strategic interest in the local STEM ecosystem and works closely with the 13 higher education institutions in the region, including Nunez Community College. GNO, Inc is the Louisiana Region 1 STEM Network Center, a designation selected by the Louisiana Board of Regents through a competitive application process. As the Region 1 STEM Center, GNO, Inc unites education, nonprofit, industry, and community partners to work together to build a stronger STEM ecosystem in Southeast Louisiana. They plan to use the exhibit to promote, expose, and increase the number of residents prepared for STEM careers.

From the local school board, government, commerce chamber, economic development, and nonprofit organizations to NASA and Nunez we all agree that this project will foster experiences and programming that address our community's education goals in STEM education through a collaborative community experience and we cannot wait to make this exhibit a reality in Chalmette!