WACO ISD EDUCATION FOUNDATION
COVER SHEET – PART II
Application for Grant:
2025-2026 Funding Cycle

Assigned Grant Proposal #: 4

Project Title: Underwater Odyssey: Enhancing Aquatic Science Through Virtual Reality (VR)

Grade Level(s): 11 & 12 **# of Students DIRECTLY involved:** 120

Subject Area(s): Aquatic Science

Amount Requested: $ 6,500.00

Grant Focus Area(s): In order to be considered, Waco Education Foundation Innovation Grant proposals must fall under one or more of the E4 focus areas: early childhood development, enhanced programming for advanced students, extended education for staff, and emphasis on student performance. NOTE: In addition to meeting one of the E4 focus areas above, grant readers are especially interested in creative and innovative grant requests that target fine arts, STEM, literacy, or enrichment.

(check all that apply)

- ☐ Early Childhood Development
- ☐ Enhanced Programming for Advanced Students
- ☐ Fine Arts
- ☐ Literacy
- ☐ Extended Education for Staff
- ☐ Emphasis on Student Performance
- ☑ STEM
- ☐ Enrichment

Grant Proposal: Integrating Virtual Reality Technology in Aquatic Science Education

Assigned Grant Proposal # __*4*__

Project Title: Underwater Odyssey: Enhancing Aquatic Science Education Through Virtual Reality (VR)

Summary: This grant proposal seeks funding to incorporate Virtual Reality (VR) technology into the Aquatic Science curriculum at Waco High School. VR will enable students to explore underwater ecosystems, simulate marine research, and engage in interactive learning experiences that are otherwise inaccessible to Waco students. By integrating cutting-edge technology, I aim to inspire students to pursue careers from aquatic science and marine biology to marine engineering and marine ecology and enhance environmental awareness, and develop critical STEM skills.

Project Description:

Background: Aquatic science is a multidisciplinary field that investigates marine ecosystems, freshwater systems, and the interrelationships between aquatic organisms and their environments. Traditional classroom methods often fall short. VR technology offers a unique opportunity to open up a whole new world of possibilities for student engagement, inquiry and comprehension.

Goals and Objectives:

1. Enhance student understanding of aquatic ecosystems through immersive VR simulations.
2. Increase engagement and interest in STEM and environmental science careers.
3. Provide equitable access to high-quality science education for all students.
4. Develop skills in data analysis, problem-solving, and critical thinking using VR tools.

Proposed Activities:

1. **Procurement of VR Equipment:** Acquire VR headsets, compatible computers, and software licenses for aquatic science simulations.
2. **Curriculum Development:** Integrate VR modules into the existing aquatic science curriculum, aligning with national and state science standards.
3. **Student Activities:** Engage students in:
    - Virtual exploration of coral reefs, deep-sea environments, and freshwater ecosystems.
    - Interactive lab simulations such as water quality testing and marine biodiversity surveys.
    - Real-world problem-solving scenarios like oil spill remediation and habitat restoration.
    - Resources:
        1. https://sanctuaries.noaa.gov/vr/lessons.html
        2. https://www.victoryxr.com/oceans-of-wonder-tsp/
        3. https://sanctuaries.noaa.gov/education/fun/virtual-dive-activity-sheets.html
        4. https://www.livingoceansfoundation.org/education/lesson-plans/virtual-reality-field-trips/
        5. https://oceanschool.nfb.ca/collection/interactive-experiences?types=collections,resources&page=1

Expected Outcomes:

- Students will gain a deeper understanding of aquatic science concepts.
- Increased student interest in pursuing STEM-related fields.

- Enhanced teaching effectiveness and teacher confidence in using technology.

Budget:

Item	Cost
VR headsets (20 units) Item Link: https://a.co/d/gHBmdJF (Amazon)	$6,500

Evaluation Plan: We will assess the program's success through:

- Pre- and post-lesson assessments measuring student comprehension and engagement.
- Longitudinal tracking of student interest in STEM subjects and careers.

Sustainability: The program will be sustained through:

- Continued use of VR equipment and materials in subsequent years.
- Partnerships with local universities and environmental organizations for content updates and support.
- Pursuit of additional funding from grants and sponsorships for additional website materials.

Conclusion: The integration of VR technology into the aquatic science curriculum will revolutionize learning by providing students with unparalleled access to the underwater world. This project will inspire a new generation of scientists, foster a deeper appreciation for aquatic ecosystems, and equip students with skills essential for the 21st century. We respectfully request funding to bring this innovative vision to life.

Waco Education Foundation

Grant Budget Form

Assigned Proposal #	4
Project Title:	Ocean Odyssey: Enhancing Aquatic Science
Number of Students Served by Grant:	120

Qty	Budget Item	Verify Vendor (Y or N)	$ Requested from the WISD Foundation	Other Secured Source	$ from Other Source (if applicable)	Total Amount
	Consumable Supplies					
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
	total Consumable Supplies		$ -		$ -	$ -
	Technology					
20	Meta Quest 3S 128GB	Y	$ 6,500.00			$ 6,500.00
						$ -
	total Technology		$ 6,500.00		$ -	$ 6,500.00
	Long-Term Supplies / Equipment (items that will last beyond the grant year)					
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
	total Long-Term Supplies		$ -		$ -	$ -
	Contracted Services					
						$ -
						$ -

	total Contracted Services		$ -		$ -	$ -
	Personnel					
						$ -
						$ -
	total Personnel		$ -		$ -	$ -
	Travel / Other					
						$ -
						$ -
						$ -
						$ -
	total Other		$ -		$ -	$ -

Totals	**Total Requested from the WISD Foundation**	**Foundation Cost Per Student**	**Total from Other Sources**	**Total Cost of Project**
	$ 6,500.00	**54.16666667**	**$ -**	**$ 6,500.00**