Core Knowledge Interdisciplinary Learning is Gaining STEAM

Rosewood Magnet School 2020-2021

The goal is to use an interdisciplinary approach to incorporate Science, Technology, Engineering, Arts, and Math (STEAM) principles into courses across all content areas. We currently use the Core Knowledge curriculum which is an interdisciplinary approach to create culturally literate citizens, we believe taking this and integrating the STEAM will bring our student's learning deeper into 21st century skills and prepare them for the future careers of tomorrow. By integrating content areas through scientific exploration, design and engineering projects, history re-enactments, performing arts and mathematical problem solving that expands and deepens from one grade level to the next, we allow our students to truly step into "Lived Learning" and hands-on engagement. This allows our students to see how their learning connects to the world around them and how they can use it to impact their community. By adding differentiation to the way in which information is presented, as well as the way in which students can demonstrate learning, ALL students will be able to learn in a way that is meaningful to them and addresses the varied levels and learning styles of our students. We will engage learners in team-based multidisciplinary problem solving through mentoring, learning communities, research projects, and partnerships with outside agencies. The goal is to foster a love of learning, ignite a spark of enthusiasm and address learning differences for all students.

Amount Requested: 9,200

Targeted Population: Our target population will be approximately 550 kindergarten through fifth grade students with STEAM being blended into our Core Knowledge curriculum. This includes professional development for 45 teachers and parent involvement for 400 families with take home STEAM activities monthly.

The Issue: This grant will provide an opportunity for teacher professional development on how to implement STEAM lessons and blend them with Core Knowledge to allow for hands on learning and performing arts integration across all content areas. It will provide materials for STEAM lessons, science research projects and investigations, performing arts culminating projects and group design/engineering projects. It will provide funds enabling us to bring community agencies (i.e. ORCA, Mote Marine, Harbor Branch, UF Extensions, Master Gardeners, and others) into our classrooms for school based field trips and engaging interactions. This will allow students to see how their everyday learning can lead to ways that they can make an impact within our community. This grant will provide an opportunity for elementary students to learn, explore, and problem solve without limitations. It will replace learning with wonder, critique, inquiry, and innovation across content areas. Our school improvement goal is to increase gains in the bottom quartile in both Reading and Math by fostering higher order thinking and questioning skills. We believe integrating STEAM with our Core Knowledge Curriculum will help increase rigor, develop higher order thinking skills, increase exposure to informational text and ultimately lead to learning gains in both math and reading for all students.

The Change: As a result of this grant, students will be able to use technology to conduct independent research experimentation and exploration, create digital animation stories and stop motion videos. Students will be able to mentor across grade levels, teachers will be able to collaborate and plan for student labs necessary to foster learning, and it will allow Rosewood Magnet School to partner with

outside agencies to bring experiences to our students, as well as, involving our families in deepening their understanding and experiences with STEAM and Core Knowledge.

We plan to further our implementation of STEAM approaches into our classrooms, blending it with our Core Knowledge Curriculum. Last year we implemented STEAM days, this will now take STEAM and Core Knowledge and spread them across thematic units, incorporating performing arts, throughout 5-9 week units of study. We will continue to offer our afterschool Coding Club for students who want to investigate coding. The STEAM Coordinator will provide training to the faculty (K-5, ESE, and Cultural Arts teachers) on what an interdisciplinary curriculum approach through Core Knowledge and STEAM will look like in the classrooms and provide opportunities to collaboratively plan engaging STEAM lessons with their grade levels. To extend the learning further our families will be able to participate in a monthly, at home, STEAM challenge. Finally, we will work to branch out into the community by bringing in 'school-based field trips' with community partners and reaching out to support community projects in our area.

The Action: Strategic activities to complete this grant will include the purchase of technology, and materials needed to support STEAM both at home and in school. The STEAM Coordinator will set aside a Saturday for professional development for teachers. STEAM coordinator will arrange for collaborative planning meetings amongst grade levels. The Coding Club will set up their afterschool dates and a time for them to share their learning experiences with their peers, parents, and community members. The team will coordinate monthly STEAM activities for families.

Grant Oversight, Monitoring Progress, and Results: Principal Casandra Flores, Mrs. Coleman, Mrs. Falana and Mrs. Stranzin, will be responsible for project oversight and sustainability. Two members of the faculty will help to plan and facilitate the Coding Club and showcase. Progress monitoring of student ability and application will take place throughout the year through problem-solving task completions and we will also monitor through Unify Formative Assessments, rubrics, iReady Diagnostics, and State Assessments.

Itemized Budget:
$1,000 Stipend for Professional Development Support/ Robotics Club
$800 Stipend for STEAM Coordinator
$1,760 (5-hour training and professional development for 2 members per grade level to attend on a Saturday)
Supplies:
$2,700- I Pads for 9 Students
$ 2,400- https://www.stemfinity.com/stem-bundles - STEAM KITS Family night
$540.00- Vtech Go pro camera for kids 18 class set

Total:
$9,200.00