



A Research Practice Partnership: Reedy Creek Magnet Middle School Center for the Digital Sciences and The Friday Institute for Educational Innovation

Information for Parents

Background



Since becoming the Center for Digital Sciences, Reedy Creek has been actively working with professors and graduate students from North Carolina State University (NC State) and the Friday Institute for Educational Innovation on a variety of student learning situations. These researchers

facilitate our use of an immersive game-based learning environment tailored to our digital sciences curriculum and offered in our Bits and Bytes course. They also **work with our science classes to apply computer science related education** within the framework of the North Carolina Common Core and Next Generation Science Standards.

With our teachers, **researchers build and co-deliver lessons that weave together science content and programming activities.** For example, in 7th grade science, students use programming to create models related to invasive species, and in 8th grade science, students program and modify a virus-spreading simulation. Collaborating with NC State and the Friday Institute on such activities supports our mission and theme by **engaging students with the broader community.** This collaboration and the activities that stem from it exemplify the coming together of innovation and community involvement.

Definition of a Partnership

A research practice partnership (RPP) is a long-term, mutually beneficial and formalized collaboration between education researchers and practitioners. RPPs engage both researchers and practitioners in tackling problems of practice.

Our Partnership's Mission

Reedy Creek and the Friday Institute are partnering to develop a culture of computational thinking within Reedy Creek's digital sciences magnet program. Computational thinking is a new and unfamiliar concept to most; however, it's a necessary skillset in virtually every career sector.

Benefits to Students

- **Unique Digital Sciences Learning:** Through this partnership, students learn core class content while simultaneously **increasing their skills in programming, computational thinking and computer science**. The activities in which the students participate are the result of collaborations between Friday Institute's STEM Cyberlearning Team and RCMMS teachers, and they allow students to **work together on challenging, engaging tasks** through which they can meet essential technology and content area standards.
- **Accessing Course Content:** In-class activities offered through our RPP often **combine “unplugged” and “plugged” segments** where students work with concepts in a variety of ways before incorporating technology. In unplugged activities, students may read, answer questions or move around the room to act out scenarios. During plugged activities, students will work on an iPad or laptop to modify or create programming code. This variety **ensures that different learning styles are addressed** and that students are able to engage with course content on many different levels.
- **Collaboration and Communication:** An important part of both the unplugged and plugged lessons is the opportunity for collaboration that they provide. Through **peer programming and partner interaction**, students are able to work with each other and **sharpen their communication skills as well as their technology skills** as they move through the elements of coding and computational thinking.
- **College and Career Models:** This partnership provides students with the opportunity to engage with CS professionals and graduate students from the Friday Institute and NC State, and through these connections, they learn about **college and career opportunities** in higher education and computer science.



Fast Facts

1. Partnership began in 2016 when RCMMS became a magnet school.
2. Friday Institute delivers ongoing professional development to RCMMS staff.
3. Friday Institute is working with a core group of RCMMS teacher leaders and administrators who will provide school-level expertise in coding and CT integration for all teachers and students.
4. Participation in partnership activities is school-wide allowing all students in the 2019-20 school year to engage in relevant activities.
5. In the 2019-20 school year, 71 staff members, including administration and counselors, will take part in partnership initiatives.
6. RCMMS and the Friday Institute are members of the National Network of Education Research Practice Partnerships.



Who To Contact If You Have Questions

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