**ORS STEM Committee Agenda**

Monday, November 15, 2021

4-5pm

1. Portrait of a Graduate (4Cs) Recap

Portrait of a Graduate is our vision for what skills and competencies students will have to prepare them for college, career, and life success. It is comprehensive (academic and non-academic) and progressive. The district has a vision for students when they leave PreK, 4th grade, 8th grade, and 12th grade. Portrait of a Graduate is made up of 5 lenses: College & Career Ready, The 4Cs, Career Options, Digital Citizen, and Life Ready. While the 4Cs main focus is STEM skills, STEM Education can be found throughout all 5 lenses. The District and School 4Cs score card will take into consideration the 4 domains that Cognia says make up high-quality STEM schools. The underlined parts of the STEM domains are areas that this STEM Committee are currently supporting or areas the committee could support through participation in school classrooms and events.

* STEM Community looks at equity/inclusion, STEM educator collaboration, STEM community engagement, and STEM leadership.
* STEM Learning Culture looks at communication, professional development, project-based and inquiry learning, and self-directed learning.
* STEM Experiences looks at STEM extended learning, performance assessment, STEM discipline integration, STEM curriculum organization.
* STEM Outcomes looks at STEM content knowledge, STEM skills and competencies, strategic management, and program evaluation.

1. Guest Speaker: Callie Painter discusses how ORS is utilizing Social Emotional Learning (SEL) and Connections to STEM

SEL stands for Social Emotional Learning and is important component for student learning so that students are more self-aware, more socially aware, have better self-management, make more responsible decisions, and have better relationship skills. SEL requires teachers, schools, families, and communities to work together to foster this important growth for students.

Some areas that committee members felt were lacking in students, recent application, and new hires were:

* Self-awareness and self-regulation
* Intrinsic motivation
* Accountability
* Failing forward / growth mindset
* Customer service attitude
* Perseverance

Character Strong is the new SEL curriculum being used across the district from PreK-12. SEL has very important tie-ins to STEM education.

1. Schools Discuss STEM Goals for 21-22 and upcoming STEM Opportunities

Preschool: The main goals focus on learning more about the new Early Childhood STEM Certification and evaluating school’s strengths and weakness and creating a plan to grow in weaker areas of STEM.

Glenwood Elementary: wants to focus on collecting evidence for STEM recertification in 4 years, improve math and science TNReady scores, and involve more stakeholders in STEM activities and decision making. Using a new problem-based math curriculum called IM (Illustrative Math) to help support inquiry thinking.

Willow Brook Elementary: started a robotics club this fall. They have a teacher (Becky Sensibaugh) coach, but would love to have parents or community partners help volunteer and work with students. They are also focusing on capstone projects for each grade level focusing on the ELA curriculum modules to show growth of students in the 4Cs.

Linden Elementary: Linden has created a design den which teachers can sign up and use 3D printers, laser cutter, etc. They are also planning a school-wide Earth Day celebration (potentially at Bissel Park) and would like to do 5-6 stations with students. They are also working on a joint STEM Night/ STEM week which will have activities involving popular video games. They also have a record number of Lego League teams. Parent or community partners support is appreciated for all these endeavors.

Woodland Elementary: just finished their annual STEM Night which had the highest attendance ever. They want to focus on a better system to collect and store evidence for next STEM Recertification as well as establish expectations and accountability around STEM experiences in each classroom. All students should get the same type of experience year to year. They will also visit another STEM Elementary school in January and will hold a professional development around that visit.

Jefferson Middle: wants to focus successful STEM events of previous years. They will hold a STEM day in December and one in the spring where classes hold different STEM activities throughout the day. They will also host a STEM Night on March 10 and would like volunteers to host a booth.

Robertsville Middle: is focusing on implementing strong Project-Based Learning opportunities at each grade level and utilize new 4Cs rubrics to assess student proficiencies as well as have a middle school Capstone project for Portrait of Graduate. They also want to focus on more intentional data collection around enrollment data, programming data, and survey data. They offer a variety of afterschool clubs that enhance the STEM experience such as robotics, TSA, and 4H. TSA could use experts in BioTech or Forensics to come talk to the club.

ORHS: the high school’s biggest goal is to accomplish Cognia STEM Recertification this spring and will be working to provide evidence to Cognia. They hope to have each collaborative team submit a project-based learning plan by the end of the year to give students more real-world, relevant experiences and problem-solving opportunities. They will also host a STEM Night in the Spring. They will also incorporate the 4Cs rubrics into all classrooms to track student growth in those skills. The Business Classes have created a semester long project-based learning experience for their students around developing, researching, and designing a food truck. They would like to have volunteers from banking/finance to come to presentations to judge projects.

1. Community Partner Share-Out

* What can ORS do to better prepare our students for the community and local industry?
* What can you do to help ORS better prepare our students?

ORAU/ORISE currently has an Empathy in STEM lesson plan competition in November and prize is Makerspace materials. [https://orise.orau.gov/resources/k12/competitions-for-educators.html](https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Forise.orau.gov%2Fresources%2Fk12%2Fcompetitions-for-educators.html&data=04%7C01%7Ckjfoust%40ortn.edu%7C1ab77e1b4d0043ff868608d9a883a593%7C1858d3bdfad64e60b539e526f0aaa23f%7C0%7C0%7C637726105638998677%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=bgnJ4zmE3JzHFEu3gNzsMQ4xHxkhHFVGb5g%2BlONAxi4%3D&reserved=0) Jennifer Tyrell (K-12 Education ORAU) offered materials to Linden and Willow Brook to support STEM rooms.

Fallon Watts from SAIC shared info on cyber patriots. <https://www.uscyberpatriot.org/Pages/Special%20Initiatives/Tech-Caregiver-Program.aspx>

1. Local Needs Assessment Survey

5 question survey needed by Dr. Cross to complete a local needs assessment for TDOE and will help shape CCTE courses. <https://www.surveymonkey.com/r/QYWMMRG>

\*\*Next Meeting will be Tuesday, January 18 from 4-5pm on Teams.\*\*