

 **FALL Middle School 2019 STEM-E Conference Workshops & Room Numbers**

 ***Notes: ES means Elementary Building; MS = Middle School Building; Gathering Place is where lunch is held.***

 ***1st Session-9:45-11:00 2nd Session-11:45-1:00 Awards 1:00-1:15***

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| **Morning Registration-Middle School Lobby** | **Middle School Auditorium** |
| **Lunch -Gathering Place** | **Gathering Place** |
| **Afternoon Dismissal.**  | **Students load buses in front of middle school** |
| **Friends Of Cherokee Museum-**Join Friends of Cherokee Museum on outdoor track-Explore examples of pottery and discussing the science of firing and tempering the pots, the physics of flint knapping, and will be demonstrating blowgun, atlatl, and fire by friction. | Rotation-Track or Gymnasium? |
| **Code Your World** - 2018 4-H National Youth Science Day KitStudents will complete two activities from last year’s 4-H National Youth Science Day Kit based on learning the basics of coding.  We will learn about coding basics such as loops, action statements, and conditional statements with ‘Code Your Dance,’ an activity where students will use visual cards to create coding dialogue for self-created dances.  We will also learn about artificial intelligence with an epic rock, paper, scissors tournament using dice, coins, and algorithms to make decisions like a computer would! | Sally Dixon,Extension Agent, 4-H Youth DevelopmentNorth Carolina State University |
| **Hands On Virtual Reality-***HTC VIVE PRO*- Students will get to experience one of the best virtual reality headsets/controllers on the market with the HTC Vive Pro. Students will gain a basic understanding of VR and its capabilities by taking turns experiencing it firsthand. Students will get to select from a variety of different programs to have a unique VR experience. Companies are using VR as a means for employee training, medical schools using it for surgical training, law enforcement using it for situational preparedness and crisis aversion. After completing the VR workshop the students will have gained an awareness of some of the newest technology available and how it is going to impact society.  | Eli Mauck, Nantahala School |
| **EGG Drop Challenge-** In this activity, you will be given cardboard, paper, 1 roll of masking tape, and a raw egg. You will design and build a container that can be dropped from the Cherokee Fire Department ladder truck at a height of either 70 or 100 feet. Your goal is to have the egg survive without being broken. If you sign up for this activity, it will be for both the morning and after lunch session. You will design and build the container in the morning session. After lunch, you will do any last minute changes and then the containers will be dropped. | Neil Hawken, ScienceCherokee Central Schools |
| **Breakout of the Ordinary**Locks, boxes and clues, oh my!  Students in this session will be working in groups to solve clues and complete challenges to unlock locks.  Students will be working collaboratively with team members and racing against the clock to see who can breakout of the ordinary first.   | Pam Cabe, Instructional Technology Facilitator, JCPS |
| **Explore Virtual Reality!**  Explore Virtual Reality! Enjoy hands on computer time to explore the virtual reality programs for student learning on zSpace computers. Students explore circuit boards, architectural design, 3D modeling, and endless science topics through virtual images that can be manipulated. We also will be trying out our new zSpace Rover to watch 3D educational movies | Terri Hogner, Lab Facilitator, CCS**Middle School G213** |
| ***Design Thinking*** -Engage in the Design Thinking process through rapid paper prototyping. Students will work through a hands-on creative exercise where they will brainstorm creative solutions to problems and will design and build an interactive lamp! | Zane Cochran, Berry College |
| **Trout Unlimited**- Trout Unlimited &EBCI will share how natural resource management and entrepreneurship can go hand-in-hand in today’s cultural and economic environment. Participants will have the opportunity to touch and explore stream and terrestrial habitat and the critters that live here with us. A brief discussion of personal attributes that many entrepreneurs possess will also be shared – and these qualities may not be what one expects! | Andy Brown, TU Manager, Asheville NC |
| **Morning Session-Sphero Robot Programming -** from the creators of Star Wars bb-8-The Sphero robot was inspired by the inventors of the real Star War's bb-8. You will work with block coding with an interactive robot that will roll around, jump and be able to play games. During this session, you will do a bit of free driving around the room, program the robot to go and do what is needed to do to solve specific tasks. | **Scott Freeman, CCS Math instructor** |
| **Afternoon-EV3-Robotics-**Prepare for spring Robotics competition-Bring your own device and hone your team’s Robotics knowledge. Come explore EV3 Programming whether you are a beginner, intermediate or just want to enjoy Scott Freeman's workshop! Teachers welcome! Bring your own laptop & complete robot if possible | **Scott Freeman, CCS Math instructor** |