SESSION: LABQUEST DATA COLLECTION (ELECTRICITY)

DAY ONE

1. An introduction to LabQuest; Overview of the data collection software
2. Automatic sensor detection; Data collection setup; Study of Newton's law of cooling.
3. Data collection with data entry by the user; Electricity activity

DAY TWO

1. Selecting and conducting activities from the labquest lab manual
2. Developing lesson plans, and assessments for specific grades.
3. Reviewing different probes and procedures to checkout of technology from UCA

SESSION: PLANTS: Workshop designed to assist teachers in presenting botanical material to their classes utilizing a minimum of equipment. All connected to frameworks, SLEs and Next Generation Science Standards.

DAY ONE

1. Study of plants in the outdoor lab: Field trip to the Jewel Moore UCA Nature Reserve noting stature and structure of plants in their natural habitats. Study vascular plants — trees, herbs and mosses
2. In door lab: Dissection of various flowers and life cycles; pollination and fertilization

DAY TWO

1. Seeds and seedlings: (primary growth); Development...mitosis; Location in fruit; Dispersal; root and shoot structures and tissues.
2. Woody stems (secondary growth): Growth rings...wood and bark
3. Leaf structure and function: Tissues and function
SESSION: NASA/STEM AND NEXT GENERATION SCIENCE

DAY ONE: NASA Lessons

1. NASA- lessons for integrating the engineering design process into your classroom
2. Hands on activities using simple, easily obtainable materials.
3. NASA robotics and technology resources for education.
4. Application and hands on activities including building and programming simple robots.
5. Using the iPad and SmartBoard to Teach

DAY TWO Next Generation Science

1. What are Next Generation Science Standards?
2. Clarity and Specificity
3. Performance Expectations
4. Instructional Implications of the Performance Expectations
5. Scientific and Engineering Practices
6. Crosscutting Concepts
7. Engineering Design

SESSION: Technology

DAY ONE: iPad training
1. General Productivity tools: Apps for word processing, presentation, dictation, file management
2. Teaching and Learning tools: Mainly Math, Science, Technology, and Engineering Apps
3. Communication tools: Apps to aggregate and read daily news, videoconference, translate and network.

DAY TWO: For SmartBoard training
1. Introduction to SMART Notebook and the SMART Board interactive whiteboard
2. Design fundamentals and develop presentation creation skills
3. Develop lessons that are engaging and interactive