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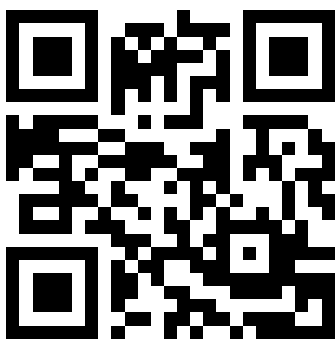
**When you support
Extension,
youth engage
in experiential
learning where
they apply math
and science to
their daily lives.**



Kentucky 4-H Science, Engineering and Technology Leadership Board members planning the 2015 National Youth Science Day "Stop & Go" experiment.

4-H National Youth Science Day Reaches over 4,000 Kentucky Youth in 2015

Extension professionals and volunteers enabled youth to investigate the physical and human factors of motion, incorporating Newton's Law of Motion.



“The 4-H National Youth Science Day Experiment lets youth explore the fun side of science, engineering and technology. Youth apply critical thinking and problem solving skills as they discover various situations they may encounter.”

Torey Earle, 4-H Agent for Science, Engineering and Technology

The 4-H National Youth Science Day experiment, *Motion Commotion*, was a two-part experiment that investigated the physical and human factors of motion (incorporating Newton’s Laws of Motion) using toy cars to simulate a speeding car collision and distracted driving. The first part of the experiment, *Stop and Go Science*, encouraged participants to test the results of impacts and collisions on the occupants of a vehicle. After testing unmodified vehicle designs, participants were allowed to make modifications to improve the safety of the vehicle occupants and/or to the barriers the vehicles impacted. Parts two and three of the experiment, *We Need More Time* and *Distract & React*, presented participants with the opportunity to test normal driver reaction times to establish a baseline then to incorporate distractions, such as texting while driving, to determine how much reaction time was affected.

The 4-H National Youth Science Day experiment reached over 4,000 youth in fifteen Kentucky counties with the assistance of over 150 adult and teen volunteers. Efforts were made to encourage students who are underserved in science, technology, engineering, and math (STEM) related programs and reached females (51.1 %) and minorities (9.6%). Throughout the activities, students learned about career opportunities related to technology and physics, such as engineering and safety analytics.

In Nelson County, over 80% of the students recognized that the science of motion is part of their everyday life. Examples identified by students included their reaction time when driving, walking and biking. Over 50% made a pledge to teach others about the dangers of distracted driving. 4-H National Youth Science Day is held annually in the fall. The event venue



Scott County 4-H Teen Club members trying out “We Need More Time” from the 2015 4-H NYSD Experiment, Motion Commotion.

varies by county and has been held at elementary and middle schools, after school programs, and county Extension offices. The hands-on activities are age appropriate for 4th through 8th grade youth and address National Science Standards outcomes. Educators who wish to participate in future 4-H National Youth Science Day experiments can contact their local county Extension office .