

INTRODUCTION

For more than 100 years, 4-H has been at the forefront of teaching young people about science, technology, engineering, and math (STEM). Our hands-on programs empower youth and provide them with opportunities to grow, learn, and become confident. According to the *Positive Development of Youth: Findings from the 4-H Study of Positive Youth Development*, a longitudinal study that began in 2002, youth who participate in 4-H are more likely to pursue STEM careers.



4-H National Youth Science Day (NYSD) is an exciting, interactive learning experience that engages thousands of youth across the country. It is the premier national rallying event for year-round 4-H Science programming, bringing together volunteers, youth, and educators from the nation's 109 land-grant colleges and universities to simultaneously complete the **National Science Experiment**.

The **2015 National Science Experiment, Motion Commotion**, explores the science of motion through the relationship of speed and stopping distance. The activity extends to real-world investigations on reaction time and safety, making connections to the dangers of distracted driving.

This experiment is designed to take about an hour and is appropriate for youth in grades 4 and above. If you have additional time, consider expanding the experiment to include one or more additional activities included at the end of the guidebook and on www.4-H.org.

