

STEAM on the Quad

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INTRODUCTION

STEAM on the Quad is a family-oriented educational program, initiated in 2016, involving K-12 youth. Participants are able to do hands-on activities that improve their knowledge and interest in the Science, Technology, Engineering, Arts and Math fields. The event is a collaborative project between Ohio State Lima and OSU Extension. The 4-H programs of Putnam, Hardin and Allen County hosted activities that featured Bluetooth sports, circuitry, Lego zip lines, virtual reality, graphics tablets, solar panels, sculpture building, hovercrafts and sewing. Community partners included the Allen County Soil and Water Conservation District, ArtSpace/Lima, YWCA Child Care, the Neil Armstrong Museum and the Lima YMCA Bean City Bots Robotics Team. Ohio State Lima faculty from Biology, Education, Engineering, Geology, and Theater engaged K-12 students and their families in a variety of hands-on projects, as did Ohio State law enforcement. OSU staff and students aided in these endeavors and in logistical support.

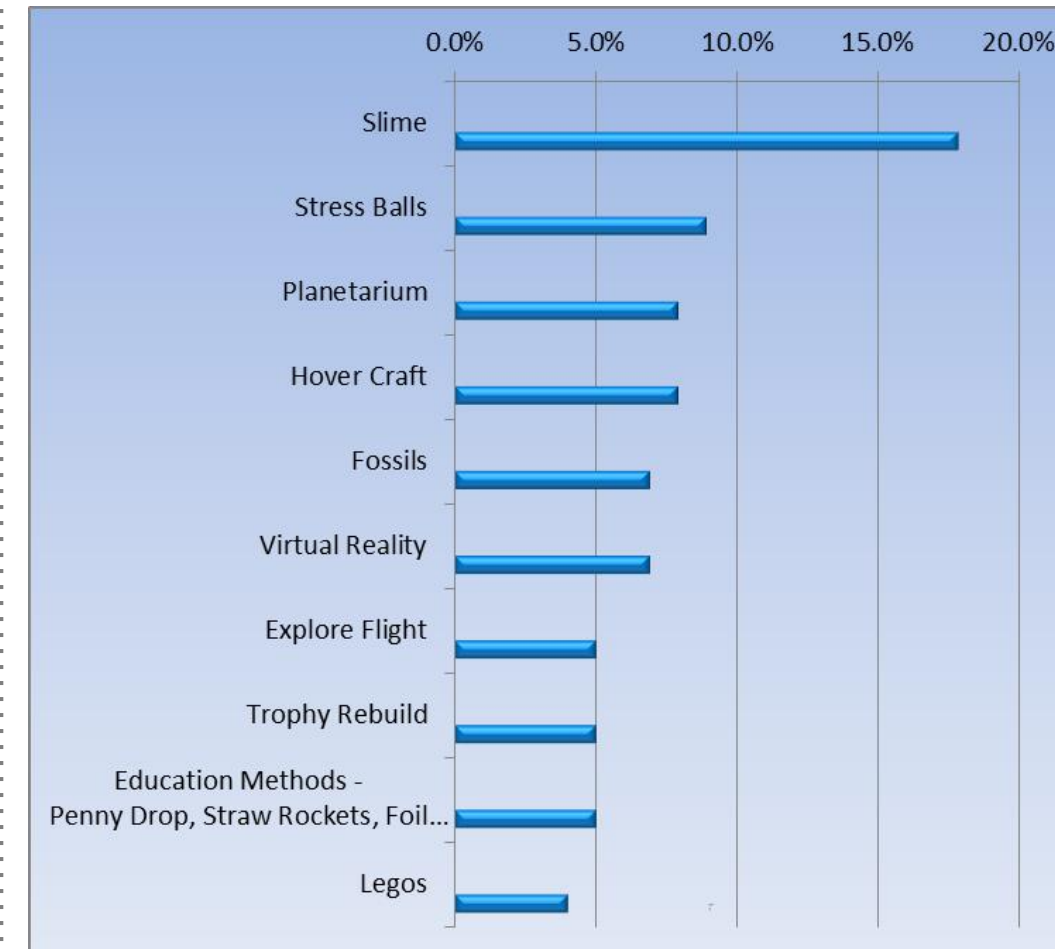
STATIONS

- Penny Drop
- Straw Rockets
- Aluminum Foil boats
- Marshmallows and Noodles
- Willie the Worm
- Little Pig House Building
- Butterflies/Caterpillars
- Sink or Float
- Pete the Cat and the 5 Little Pumpkins
- Meditation Bottles
- Fun with Science
- Miniature Soap Box Derby Races
- Flying Simulator
- Fossils
- Buckeye Necklaces
- Planetarium
- Trophy Rebuilding
- Virtual Reality Goggles
- Woodburning
- UV Bracelets
- 3-D Printing
- Fun with Math
- Artbots
- Bluetooth Sports
- Hovercraft
- Keva Towers
- Sewing Station
- Slime

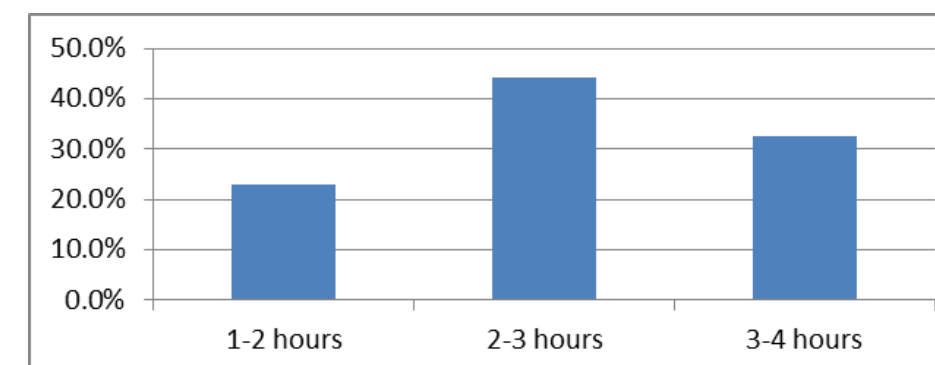


RESULTS (N=275)

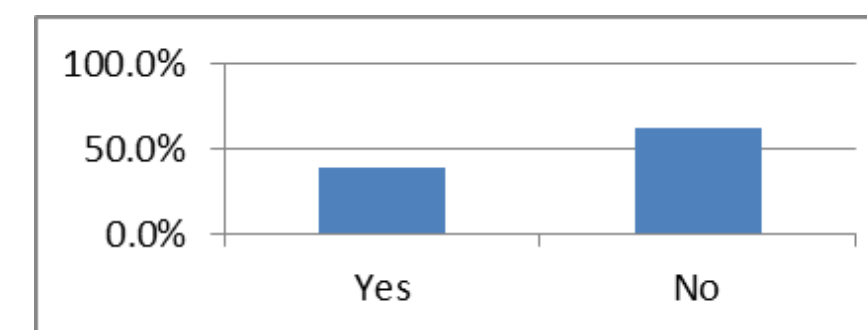
Best Rated Sessions



How much time did you spend at OSU STEAM on the QUAD?



Before the event, did you know 4-H offered STEM related projects?



BEST PRACTICES

Format – An “experience at will” format allows youth to spend more time at activity stations that interest them, and less time at those that they have already have experience with or are not interested in. This format also helps keep the wait line at each station short, as youth can flow to another station that is less busy and come back later.

Timing – choose activities and stations that take less than 10 minutes for youth to complete. This allows youth to experience more and holds their interest longer.

Partnerships – invite other academic and youth oriented groups to host an activity station, as these groups have goals that align with a maker festival. Invitations to community service personnel, such as fire, EMS, and law enforcement can add variety and specialized activities.

Variety – include both activity stations and make and take stations. Youth should be able to either make something, test a hypothesis, or have a new experience at each station. A wide variety of activities will keep the interest of a broad audience.

Volunteers – besides volunteers and organizations to facilitate activity stations, volunteers are also needed for administrative and organizational tasks. Consider having a volunteer serve as a point-person for tasks such as registration, set-up, tear-down, refreshments, first aid, and activity station assistance.



ACKNOWLEDGEMENTS

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OBJECTIVES

1. Connecting local families, faculty, educators, and businesses to promote STEM education through innovation, learning, and creativity in collaboration with OSU Lima.
2. Taking Ohio State's current resources and equipment and create programming that reaches new audiences, while bringing local 4-H members to an OSU campus.
3. Creating a program model that can be reproduced by Extension in Ohio and other states.