

## Educational Engagement Activity Report

Please complete and submit this form each time you host an educational engagement event.

(Return within 2 weeks of the event end date)

School/Organization name: University of Alabama, Huntsville – Charger Rocket Works

Date(s) of event: 3/04/2017

Location of event: University of Alabama, Huntsville

### Instructions for participant count

*Education/Direct Interactions: A count of participants in instructional, hands-on activities where participants engage in learning a STEM topic by actively participating in an activity. This includes instructor- led facilitation around an activity regardless of media (e.g. DLN, face-to-face, downlink.etc.). Example: Students learn about Newton’s Laws through building and flying a rocket. **This type of interaction will count towards your requirement for the project.***

*Education/Indirect Interactions: A count of participants engaged in learning a STEM topic through instructor-led facilitation or presentation. Example: Students learn about Newton’s Laws through a PowerPoint presentation.*

*Outreach/Direct Interaction: A count of participants who do not necessarily learn a STEM topic, but are able to get a hands-on look at STEM hardware. For example, team does a presentation to students about their Student Launch project, brings their rocket and components to the event, and flies a rocket at the end of the presentation.*

*Outreach/Indirect Interaction: A count of participants that interact with the team. For example: The team sets up a display at the local museum during Science Night. Students come by and talk to the team about their project.*

Grade level and number of participants: (If you are able to break down the participants into grade levels: PreK-4, 5-9, 10-12, and 12+, this will be helpful.)

Participant’s Grade Level	Education		Outreach	
	Direct Interactions	Indirect Interactions	Direct Interactions	Indirect Interactions
K-4				
5-9	50			
10-12				
12+				
Educators (5-9)				
Educators (other)				

Are the participants with a special group/organization (i.e. Girl Scouts, 4-H, school)? Y

If yes, what group/organization?

Saint James Junior Varsity, PCA, Holy Family Catholic School, St. Joseph Catholic School, Altamont, Rebecca Roth Mt. Gap, Excalibur, Floyd, Bumpus Middle School, Monrovia Middle School, Saint James Varsity, HCMS, Marion Academy, Leigh Adams Liberty Middle, Florence Middle School

Briefly describe your activities with this group:

On March 4<sup>th</sup>, CRW assisted at the Science Olympiad on UAH's campus. At this event, a total of 50 individuals of middle school age were impacted via direct educational engagement. The students were to construct a functional water bottle rocket per the "Bottle Rocket B" sheet seen on page 3. The constructed rocket was then launched by a CRW team member and the launch was scored.

Did you conduct an evaluation? If so, what were the results?

No formal evaluation was conducted.

Describe the comprehensive feedback received.

CRW received no feedback from the indirect interaction.

# BOTTLE ROCKET B



Checklist – 2017

Team Number: B\_\_\_ Team Name: \_\_\_\_\_ Rank: \_\_\_\_\_

Student Names: \_\_\_\_\_ Final Score: \_\_\_\_\_

<u>Event and Construction Parameters (SAFETY CHECK)</u>	<u>Rocket 1</u>		<u>Rocket 2</u>	
2. Team must have eye protection and up to two rockets. Parts from one rocket are not used on the other rocket.	Y	N	Y	N
3.a. Pressure vessel is made out of a single $\leq$ 1-liter plastic carbonated beverage bottle with a nozzle opening internal diameter of $\sim$ 2.2 cm.	Y	N	Y	N
3.a. Label for the bottle (can be removed) is presented at inspection.	Y	N	Y	N
3.b. Only tape is used to attach fins and other components to the pressure vessel. No glue of any type is used on the pressure vessel. No metal of any type or commercial model rocket parts are used on the rocket.	Y	N	Y	N
3.c. Structural integrity of the pressure vessel is not altered.	Y	N	Y	N
3.e. The nose of the rocket is rounded as described in the rules.	Y	N	Y	N
3.f. Does not use explosives, gases other than air, chemical reactions, pyrotechnics, electric devices, elastic powered flight assists, throwing devices, remote controls, or tethers at any time. All energy at launch originates from the water/air pressure combination.	Y	N	Y	N
<u>Does this rocket pass safety check? (If N, do not launch)</u>	1. Y	N	8. Y	N

<u>Competition Parameters</u>	<u>Rocket 1</u>		<u>Rocket 2</u>	
3.g. Fins and other parts added to the bottle are $\geq$ 5cm above the level of the bottle's opening.	Y	N	Y	N
3.h. Rocket does not change shape or deploy any type of recovery system.	Y	N	Y	N
3.i. Nothing adheres to the egg.	Y	N	Y	N
4.c. Teams do not touch or approach the rocket once pressurized.	Y	N	Y	N
<u>Is this rocket free of all competition violations?</u>	2. Y	N	9. Y	N

## Score

4.a. Did the team request another egg because they broke it before launch?	3. Y	N	10. Y	N
5. Did the egg survive? (no wet spot on a paper towel & rocket is retrievable)	4. Y	N	11. Y	N
Timer 1 (in seconds to the nearest 0.01 second)	5. _____		12. _____	
Timer 2 (in seconds to the nearest 0.01 second)	6. _____		13. _____	
Timer 3 (in seconds to the nearest 0.01 second)	7. _____		14. _____	
<u>General Rule: Disqualified (notify the team and their coach as soon as possible)</u>			15. Y	N

Tier 1. Launches with 2 surviving eggs

Tier 2. Launches with 1 surviving egg

Tier 3. Launches with no surviving eggs

Participation. Unable to launch both rockets due to safety

Ranking within each tier is determined by the highest combined time aloft of both rocket

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