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| pn-logo-on-wte | **2013 ACE Critique and Awards Program**  ***NMSU Media Productions — Jeanne Gleason*** |

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| ***Ratio Rumble***    **Class 17:**  **Logo** | http://ace.nmsu.edu/2013/mathsnacks/Class17RUmblelogo.png |
| **To see details of the logo (the image here is a sample) and examples of how the logo was used, please visit:**  [ACE.nmsu.edu/2013/mathsnacks/Class17\_Rumble.html](http://ace.nmsu.edu/2013/mathsnacks/Class17_Rumble.html) |

Overview:

This logo was designed for the *Ratio Rumble* game, part of the *Math Snacks* educational initiative developed at NMSU and funded by the National Science Foundation. Ratio Rumble is one of the games designed to address gaps in conceptual understanding of math concepts. The logo captures the theme of a battle game where students build their own magical potions in a face-off battle with an opponent.

Purpose (goals, objectives, need):

*Ratio Rumble*, part of the NMSU’s Math Snacks initiative, is an innovative tool for teaching content addressed in the National Common Core mathematics standards. *Math Snacks’* **goal** is to give students, especially those who don't particularly like math, another way to look at math concepts.

*Ratio Rumble* has the look and feel of a commercial battle game – you select your own character, choose your own difficulty level, and have a different challenge each time you play**.** Its **objective** is to be so engaging that students enjoy solving common ratio challenges and are later able to identify ratios in a variety of situations. As with commercial games, the difficulty level progresses, but even if players return to an earlier level, the game continues to reinforce the four learning challenges identified as **student** **needs** by the National Council of Teachers of Mathematics (NCTM):

* Identifying ratios when used in a variety of contextual situations.
* Providing visual representations of ratios.
* Solving common problems or communicating by using rate, particularly unit rates.
* Explaining why ratios and rates naturally relate to fractions and decimals.

Audience:

While *Ratio Rumble* is designed for middle school, it is used across New Mexico in grades 3 through 8. *Ratio Rumble* is still in beta testing but early data shows that it is particularly helpful when students are slow to master more complex ratio or rates, especially as related to fractions and decimals.

Marketing/promotion:

The game for which this logo was developed is still in beta testing and is a part of our randomized control trials. At this time, the website is being used by teachers and children engaged in research trials and by those who have been exposed to the product through presentations, articles in journals, during summer teacher training programs, and through online curriculum portals like Edmodo.com. In anticipation of widespread release of the tools in 2014, NMSU is developing a marketing and promotion plan through NMSU’s *Math Snacks* outreach initiative, supported by a full-time NMSU staff member. The availability of many of these *Math Snacks* on the Internet, iPhone and iPad makes it possible for students to enjoy *Math Snacks* games and animations during non-school time as well as in class. The sustainability and commercialization of the products is also being considered, building on current *Math Snacks* distribution partnerships with BrainPop, the National Council of Teachers of Mathematics (NCTM), and a successfully funded National Science Foundation I-Corp proposal to investigate commercialization.

Role of each entrant for the project:

All work, including animation, programming and instructional design, was produced in NMSU’s Media Productions studios. The specific team for each *Snack* is listed in the credits. The overall team includes animators, artists, programmers, designers, content specialists, writers and editors.

Extent to which project met goals and objectives:

Each element of every game, including the logo, was pilot tested throughout development. The results of research on tools have not yet been analyzed, but anecdotal reports from teachers and the pilot testing trials reveal that the *Ratio Rumble* game is both highly effective at teaching key concepts and also so much fun that kids forget they are learning math.

How diversity was incorporated into your entry:

New Mexico has Hispanic-majority public school student body populations and has long been considered a bellwether for future student body characteristics in the United States. Without competency in mathematics, students – particularly those in low-income areas, English language learners and students with special needs – are limited in their course and career options in STEM fields. *Math Snacks* has a proven track record of creating innovative products for all learners, with a design approach that involves underrepresented students throughout the design, development and testing phases of the products. Products have been tested extensively with diverse students and been reviewed by independent quality assurance panels annually, with specific attention paid to accessibility by diverse audiences and cultural sensitivity. Funders, such as the National Science Foundation, have found that interactive modules that test well with New Mexican students are often highly effective in increasing readiness to grasp STEM-related concepts within a national student population.

Other information:

*Ratio Rumble* is aligned with the Common Core State Standards for Mathematics (CCSSM).