

Abstract Submitted  
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**Cheerleading and Dance Jumps** JAZMINE JOHNSON, KIMBERLY FARAH, Lasell College, DIPTI SHARMA, WIT — In this project, undergraduate science minors measured the amount of force applied when doing a pike jump and a leap. The problem of study was to determine if the force applied during a pike jump differed from the force applied during a leap jump [1]. How can Newton's second law be used and what physical parameters and quantities can be studied during this jump? The independent (manipulated) variable was jump type. The dependent (to be measured) variables were height and time. Velocity and acceleration were calculated for each jump type. The controlled variables were mass and gravity. Logger pro software was used for the project and data analysis.

[1] D. Sharma and K. Farah, "Introducing the "RPPTM" Model of Teaching Physics to Health Science Majors," Bulletin of the American Physical Society, s2014, 59 (4) B1.00005)

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