

1077-O1-1351      **Kathleen Cage Mittag\*** ([kathleen.mittag@utsa.edu](mailto:kathleen.mittag@utsa.edu)), One UTSA Circle, San Antonio, TX 78249, and **Sharon Taylor**. *Riding the Ferris Wheel: A Sinusoidal Model*.

When thinking of models for sinusoidal waves, examples such as tides of the ocean, daily temperatures for one year in your town, light and sound waves, and certain types of motion are used. Many textbooks also present a “Ferris wheel problem” for students to work with a canned set of data. This activity takes the Ferris wheel problem out of the abstract and has students explore a hands-on model of a sinusoidal scenario. Students will gather data, create their own sinusoidal function, and then verify their results with the calculator. This activity uses an inexpensive hamster wheel that makes it possible for small groups of students to experience the activity and it takes only one hour of class time. No expensive data collection devices are required. Students also experience working with number of seats as the independent variable instead of time. We have used this activity with high school, college, in-service and pre-service teachers successfully. (Received September 19, 2011)