

PRESS RELEASE

May 14, 2008

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Who: 1,017 middle school students from 20 Michigan Schools (see bottom paragraph)
What: Students work in teams to solve problems by using handmade accelerometers
Where: Michigan's Adventure Amusement Park, off Russel Road, Muskegon
When: Wednesday, May 14, 2008, 9:30 a.m.–2:30 p.m. RAIN OR SHINE!

Middle school students will be first to ride new Thunderhawk; Solve problems in park

On **Wednesday, May 14, 2008**, over **1,000** middle school students in grades 5 – 8 from **20 Michigan schools** will be some of the first thrill seekers to ride the new *Thunderhawk*, Michigan's first suspended looping roller coaster. The students will be combining work and play from **9:30 a.m. – 2:30 p.m.** as they attempt to solve scientific problems during the 17th Annual Amusement Park Physics Day at Michigan's Adventure Cedar Fair Park. Officials from the Muskegon Area Intermediate School District Regional Mathematics & Science Center will also take advantage of the preview of the *Thunderhawk* in order to collect data needed to prepare problems and solutions for next year's event.

This year students will focus their problem-solving efforts on the Sea Dragon, Wolverine Wildcat, Flying Trapeze, Gondola Wheel, Logger's Run, Carousel, Zack's Zoomer, Corkscrew, Thunderbolt, and Shivering Timbers. Because students cannot interfere with the normal operations of the rides, they will use other problem-solving techniques to find answers to the eight written questions. Required to work in teams, they will hop on roller coasters, carousels and other rides that create push-and-pull (forces) on them. During the rides they will use handmade "accelerometers" to detect and measure the "g-forces." Students will also use trigonometry and the length of their own pace to solve height problems. Students will use the relationship between distance, rate, and time in order to determine the speed of a ride. At the end of the day, the student teams will submit completed problem sheets that will be scored by the Muskegon Area Intermediate School District's (MAISD) Regional Mathematics and Science Center. Results and prizes are sent to teachers within two weeks of the park visit.

Prior to their experience in the park, students learn to measure distance, time, vertical angles, and acceleration using a few basic trigonometry and physics concepts. Each child also builds an altimeter (for measuring angles) and accelerometer (for measuring acceleration) out of common inexpensive materials. Then they move outside the classroom to solve problems similar to those encountered in an amusement park. They measure the height of school buildings, flagpoles, trees, and telephone poles. Students complete their preparation by reviewing sample problems.

The following schools are participating in this year's Middle School Amusement Park Physics Day: Bay City Public Schools, Calvary Christian Schools, St. Ann School (Gaylord Diocese), Godwin Heights Public Schools, Immaculate Heart of Mary (Grand Rapids Diocese), Hamilton Community Schools, Haslett Public Schools, Hesperia Community Schools, Manistee Catholic Central Schools, Montague Area Public Schools, Muskegon Heights Public Schools, Muskegon Public Schools, Muskegon Technical Academy, Oakridge Public Schools, Orchard View Schools, Spring Lake Public Schools, St. John's Lutheran School (Grand Haven), St. Thomas School (Grand Rapids), and Whitehall District Schools. ### **Leadership • Programs • Services**