

## 9-12 Force & Motion SCAVENGER HUNT

**Chaperones & students:** Work in small groups to explore the following questions. You will have the opportunity to explore acceleration, kinetic and potential energy, and technology at COSI today.

### Foucault Pendulum:

At what point in the pendulum's swing does the bob have the MOST potential energy?

At what point in the pendulum's swing does the bob have the MOST kinetic energy?

Describe the process of energy transfer during the pendulum's swing.

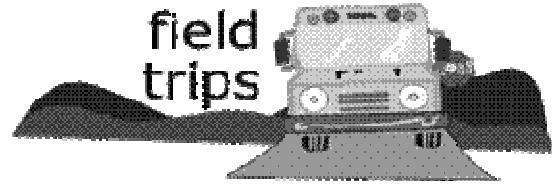


Describe the forces must a rocket overcome to exit the earth's atmosphere?

An object in motion tends to stay in motion and an object at rest tends to stay at rest unless it is acted upon by some other force. This is Newton's First Law of Motion. Find an example of Newton's First Law of Motion in the space exhibit. Describe it here.



Walk through the anechoic chamber (the little room with the bumpy white walls). What do you notice and how can you explain it?



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(Weather permitting)

Use the 2.5 ton granite sphere to demonstrate how an outside force must be used to create acceleration.

What forces are involved in the Centripetal Generator? Describe how the forces work in the Centripetal Generator.



Explain the principles of the erosion table. What forces are at work? Can you reliably predict the pattern of the sand at the bottom of the table? (Delta)

### Weather Center:

Describe how the dual Doppler radar predicts the weather and tracks the path of storms.