

## A Tale of Friction

TeachEngineering

### Design

Design and construct simple roller coasters that consider the friction present, using a flexible material like foam pipe insulation as the coaster's path and a marble.

### Suggested Learning

Time

3 : 15

Cost

0.00

### PreRequisites

### Requirements

### Skills

Focus

Level

Standard

Points



Physics



11



Mathematics



7



Problem Solving



3



Accuracy



3

**Total Skill Points**

**24**

### Knowledge Gain

Estimate the effect of friction for a spherical body rolling on an incline. Use free-body diagrams to analyze the friction force acting on a body rolling on an incline.

### Resource Link

<https://www.teachengineering.org/lessons/view/ind-1996-friction-force-along-curved-path-ap-calculus>