

Motion on an inclined plane: Overview

Summary

When an object is placed on a flat surface, it will sit still on the surface and won't move unless an outside force causes it to move. However, when the object is placed on an inclined surface, the object will start to slide down the surface due to gravitational forces. These inclined surfaces surround us everywhere. Such examples include when a car is on a hill and when a skateboard is rolling down a ramp. In this experiment, students will utilise their knowledge of acceleration and velocity and investigate how varying the angle of the ramp will affect how fast the object will accelerate down the surface.

Curriculum Outcomes: Victorian Curriculum F-10

Levels 7 and 8

- Change to an object's motion is caused by unbalanced forces acting on the object; Earth's gravity pulls objects towards the centre of Earth (VCSSU103)

Levels 9 and 10

- The description and explanation of the motion of objects involves the interaction of forces and the exchange of energy and can be described and predicted using the laws of physics (VCSSU133)

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