

GRADE 8

2a

## Forces

Unbalanced forces cause changes in velocity. As a basis for understanding this concept:

Students know a force has both direction and magnitude.



## Forces

Unbalanced forces cause changes in velocity. As a basis for understanding this concept:

Students know when an object is subject to two or more forces at once, the result is the cumulative effect of all the forces.

GRADE 8

2c

## Forces

Unbalanced forces cause changes in velocity. As a basis for understanding this concept:

Students know when the forces on an object are balanced, the motion of the object does not change.



## Forces

Unbalanced forces cause changes in velocity. As a basis for understanding this concept:

Students know how to identify separately the two or more forces that are acting on a single static object, including gravity, elastic forces due to tension or compression in matter, and friction.



## Forces

Unbalanced forces cause changes in velocity. As a basis for understanding this concept:

Students know when the forces on an object are unbalanced, the object will change its velocity (that is, it will speed up, slow down, or change direction).

GRADE 8

2f

## Forces

Unbalanced forces cause changes in velocity. As a basis for understanding this concept:

Students know the greater the mass of an object, the more force is needed to achieve the same rate of change in motion.



## Forces

Unbalanced forces cause changes in velocity. As a basis for understanding this concept:

Students know the role of gravity in forming and maintaining the shapes of planets, stars and the solar system.