

1st law of motion:

- A Force in a **particular direction** causes a change in speed **in that direction**.

- No Force in a **particular direction** means no change in speed **in that direction**.

Inertia!

- **Objects will always move in a straight line at constant speed UNLESS a force is acted upon it!**

As we can see in the
“ProjectedandDropped.mov” the force of gravity always acts downwards and does NOT affect the side-to-side motion. Gravity doesn’t act side-to-side, and therefore, no side-to-side force is acting on the object. Therefore, the velocity horizontally stays constant due to the object's Inertia!