Drag force
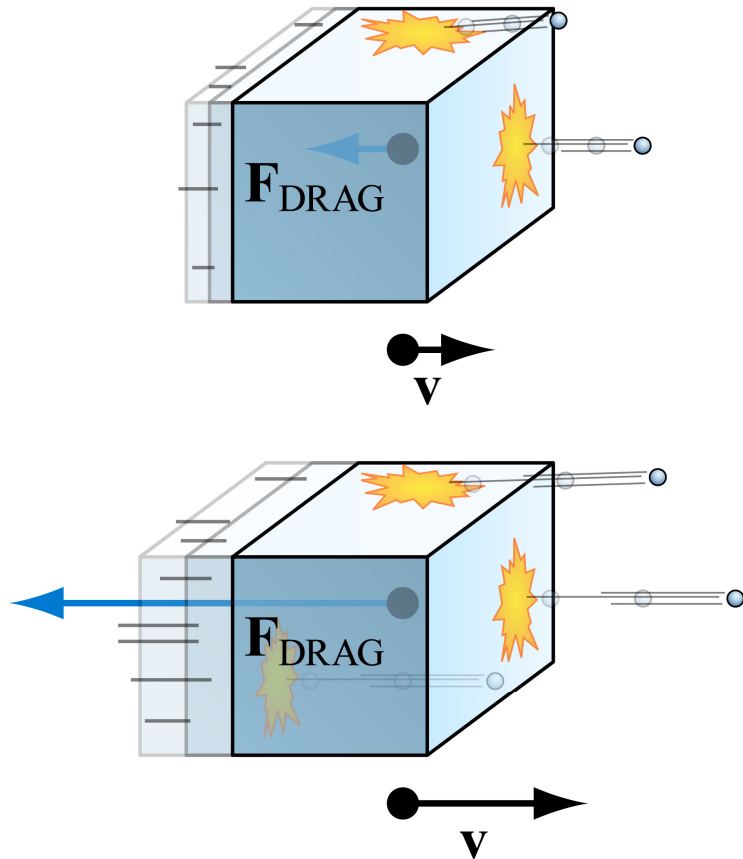
When an object moves through a fluid, the fluid pushes on the object with a **drag force** that

(a) opposes the movement of the object through the fluid
(b) increases in strength as the object moves more quickly through the fluid.

F_{DRAG} is often neglected when not explicitly mentioned.

An object that has achieved **terminal velocity** is falling through a fluid at a velocity for which $\vec{F}_{\text{DRAG}}$ balances $\vec{F}_G$.

(a) Release from rest $\mathbf{v}_i = \mathbf{0}$ •

(b) After falling for a while $\mathbf{v}$

(c) A lot of time   ⋮

(d) After falling for a very long time $\mathbf{v} \approx \mathbf{v}_T$