



of the bodies and the distance between them, so in general relativity there was bound to be a problem since masses change when in relative motion; Einstein was able to remove this by what he called the **principle of equivalence**.

To appreciate this principle we must consider the mass or quantity of matter in a body, and there are two ways of defining this. On the one hand we can consider defining a body's mass as its tendency to resist change, either to the change from a state of rest to a state of motion (or *vice versa*), or from uniform motion in a straight line to motion in some other way. This is called the **inertial mass**, and can be seen in operation when a vehicle stops suddenly, propelling the driver towards the windscreen (Fig.

