

aether	a hypothetical non-material formally hypothesised to permeate all space, having the property of propagating electromagnetic waves
aether wind	this was predicted as the result if the Earth moved through the aether
centripetal acceleration	directed towards the centre of a circle about which an object is moving
centripetal force	directed towards the centre of a circle required for an object to travel in a circular path
circular motion	the movement of an object in a circular path

Einstein, Albert

German-born physicist
best known for his work
on relativity

electromagnetic
waves (radiation)

transverse waves composed of
alternating electric and magnetic
fields, the components of which are
perpendicular to each other and to
the direction of the energy flow

escape velocity

the velocity needed
for an object to
escape from the Earth

frames of reference

objects or coordinate
systems with respect to
which we take
measurements

geostationary orbits

orbits in which the satellite
has a period of 24 hours
and orbits in the equatorial
plane about the Earth

geosynchronous
orbits

orbits in which the satellite has a period of 24 hours, but does not orbit in the equatorial plane about the Earth

g-forces

measurements in units of the Earth's gravitational acceleration

gravitational
acceleration

the acceleration due to gravity on Earth

gravitational constant

the constant in Newton's Law of Universal Gravitation

gravitational field

that region of space in which a mass experiences a force of attraction from other masses

gravitational potential energy	the work done to move an object a very large distance away to a point in a gravitational field
gravity	the force of attraction between two or more masses
inertial frame of reference	a frame of reference which is at rest or moving with constant velocity; a frame in which Newton's Laws of Motion are valid
length contraction	where the length of a moving rod appears to contract in the direction of motion relative to a stationary observer
low-Earth orbits	orbits with an altitude that ranges from 250 km to 1000 km above the surface of the Earth

mass dilation

the idea that the mass of a moving object increases in relation to a stationary observer

mass-energy

the idea that mass and energy are different forms of the same entity

measurement

the process of comparing some quantity such as length, mass or time to a selected standard

metre

the distance travelled by light in $\frac{1}{299\,792\,458}$ of a second

Michelson-Morley experiment

an experiment conducted to measure the speed of the Earth through the aether